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Implementing Outcome-Based Performance Measures aligned with the Forest Service's Shared Stewardship Strategy

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About the Ecosystem Workforce Program: EWP is a bi-institutional program of University of Oregon's Institute for a Sustainable Environment and the College of Forestry at Oregon State University. We conduct applied social science research and extension services at the interface of people and natural resources. Our publications aim to inform policy makers and practitioners, and contribute to scholarly and practical discourse.

About the Rural Voices for Conservation Coalition: RVCC promotes new approaches to the ecological and economic problems facing the rural West. We are committed to developing practical solutions through collaborative, place-based work that recognizes the inextricable link between the long-term health of the land and the well-being of communities. We work together to improve issues that affect rural communities, public and private land management, and the continuation of a natural resource-based economy in the West, advocating for the inclusion of comprehensive community interests.

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Executive summary

The USDA Forest Service's Shared Stewardship Strategy was launched in 2018. It directs the agency to work in collaboration with state agencies and local partners to identify priorities for landscape-scale treatments, convene to reach shared decisions, and work across boundaries to improve forests, grasslands, and watersheds at scale. The purpose of this report is to help the Forest Service consider options for implementing a new set of outcome-based performance measures that align with the intent of the Shared Stewardship Strategy to work in greater partnership with external stakeholders. While the emphasis of this report is on measuring partnership, it has useful implications for measuring broader outcomes (i.e., ecological, social, economic outcomes) as well. This work is intended to be a first effort to compile relevant considerations from existing literature and key stakeholder feedback for the Forest Service to use as they proceed with modifying performance measures to evaluate the use of partnerships and collaborations.

Approach

Our work relied on four main components: (1) academic and applied managerial literature review about outcome-based performance measures and partnership, (2) a stakeholder feedback workshop with 23 diverse stakeholder attendees at the 2020 Rural Voices for Conservation Coalition Annual meeting to gather from community partners perceptions, ideas, and concerns about performance measures and accountability, (3) targeted consultations with nine key academic partners and practitioners, and (4) the authors' experience working with all levels of the agency.

Recommendations and next steps

We suggest 10 guiding principles and potential next steps that we believe should underpin the agency's work to revise performance measures (Table 1, p. 16). Guiding principles include:

- effective agency leadership
- structured decision processes
- clear and consistent communication with stakeholders
- inclusive and accountable representation
- collaborative design and implementation
- strategic use of performance measures
- sufficient resources
- appropriate data collection and management processes and evaluation
- thoughtful dissemination of information
- adaptive management

We also offer potential supporting data sources the agency could use to compile or collect existing and new data to measure performance. We do not offer a prescriptive list of measures; rather, our suggestions are intended to support the agency and stakeholder partners as they begin thinking about possible performance measures that may be meaningful for them in their local context.



Mountain Lupine in the sagebrush on the Dubois Ranger District. Photo Credit: Sarah Wheeler, CTNF Public Affairs

1. Introduction

The Forest Service, a division of the U.S. Department of Agriculture, Shared Stewardship Strategy was launched in 2018 and directed the agency to work in collaboration with state agencies and local partners to identify priorities for landscape-scale treatments; convene to reach shared decisions; and work across boundaries to improve forests, grasslands, and watersheds at scale. The agency also pledged to develop and use meaningful performance measures to track progress toward the complex, multi-dimensional outcomes the agency seeks to accomplish through the strategy (USFS 2018).

Performance measures are quantifiable expressions of an agency's work that can indicate progress toward attaining organizational goals or objectives when monitored over time. Discussion of performance measurement can be complex; a glossary of key terms is provided (Appendix A) for reference. There is an important distinction to be made between performance measures and monitoring. Performance measures are a bureaucratic accountability tool, while monitoring measures impacts on the ground. Monitoring is complex and must be considered on longer time horizons than performance measures, which tend to be annual and tied to the budget process.

Performance is currently measured on an annual basis within the Forest Service through over 100 "performance measures," five "key performance indicators" (KPI) and two primary "targets."¹ Performance measures are developed by the agency and approved by the President's Office of Management and Budget (OMB). These measures, some of which come with required levels of accomplishments (i.e., "targets"), create incentives to conduct certain activities and maintain accountability in the face of

agency discretion (Heinrich 2003 and Joyce 2005 as cited in Schultz et al. 2018; Radin 2006). Congress appropriates agency budgets, in part, based on past performance and anticipated ability to meet targets. The Shared Stewardship Strategy indicated a need to transition the agency's performance measures from focusing on "outputs" (the activities, services, or amount of something produced) to focusing on "outcomes" (level of performance or achievement that occurred) (USFS 2018).

The purpose of this report is to help the Forest Service consider options for implementing a new set of outcome-based performance measures in accordance with the Shared Stewardship Strategy. A robust framework of outcome-based performance measures that evaluate the agency's performance as a partner will help the Forest Service and partners understand whether the agency is working effectively to make meaningful progress toward shared goals. The ability to demonstrate accountability and progress in partnerships are core components of collaborative forestry, successful trust building, and effective partnerships (e.g., Butler and Schultz 2019, Stern and Coleman 2015, Davis et al. 2017). Furthermore, development of performance measures represents an important evolution of the Shared Stewardship Strategy, helping to provide a lasting bureaucratic structure to support shifts in agency priorities. Codifying performance measures' focus on partnership is a means for external partners affected by agency actions to be considered more formally in agency performance evaluations. Ideally, this will support the agency in more deeply considering external partners and their needs when prioritizing agency resources.

¹ Over 100 performance measures are tracked in the Forest Service's geo-enabled performance accountability system (gPAS). Current KPIs and targets are outlined in the FY21 Budget Justification, p. 141.

2. Approach

Rural Voices for Conservation Coalition (RVCC) and the Ecosystem Workforce Program (EWP) leveraged our long histories of working to improve collaborative decision-making to gather and vet stakeholder ideas and reflections about how to align performance measures with the Shared Stewardship Strategy. Our work was also informed by RVCC and EWP's combined 45 years of experience working with the agency and many of its partners.² Our work had four main components:

1. **Literature review** in which we reviewed and synthesized existing literature on outcome-based performance measures and partnership. We compiled and reviewed more than 60 peer-reviewed journal articles and practitioner reports related to the theory and practice of using performance measures, lessons learned by other agencies and processes about performance measures, participatory processes for performance measurement, and other related topics. Literature consulted is included in a bibliography (p. 19).
2. **Stakeholder workshop** at the 2020 RVCC Annual Meeting in which we solicited input on how to better align the Forest Service's performance measures with the Shared Stewardship Strategy. Twenty-three participants representing state and federal agencies, nonprofits, local government,

forest collaborative groups, and universities offered their perceptions, ideas, and concerns about performance measures and accountability.

3. **Targeted consultations with nine academic partners and practitioners** who specialize in United States public lands forest governance and policy (Appendix B). We solicited input about how to design performance measures, identify gaps in data systems, and better comprehend barriers to accomplishing and reporting on desired outcomes. Consultants also helped to develop the literature review and topics for consideration, and they provided feedback on an early draft of this report; their advice is woven throughout the report.
4. **The authors' experience working with all levels of the agency**, including collaboration at a district- and forest-level, and extensive partnership with regional offices and the Washington Office. The authors have also discussed performance measures with political appointees and congressional appropriations committee staff through their past work.

In this document we summarize: 1) potential benefits and limitations of developing and implementing performance measures; 2) stakeholder feedback regarding the development of performance measures that align with the Shared Stewardship Strategy; and 3) potential recommendations and next steps for the agency.



YCC Crew members hike atop Council Mountain, near the town of Council, ID, Payette National Forest.
Photo credit: Forest Service photo by Kelly Martin

²These experiences include for example, piloting social and economic performance measures for the agency (Moseley & Huber-Stearns 2017), evaluating the Integrated Resource Restoration budget line item pilot (Schultz et al. 2015b), developing social and economic monitoring metrics and plans (e.g., Huber, Santo, Steinkruger 2020 and Ellison and Huber-Stearns 2019), analyzing and recommending changes to agency performance measures (RVCC 2006, RVCC 2007), and hosting partner listening sessions on Shared Stewardship (RVCC 2019).

Considerations: This work is not a comprehensive review of performance measures nor an explicit or prescriptive framework that we recommend the Forest Service adopt; rather, it is a first effort to compile relevant considerations from existing literature and key stakeholder feedback for the Forest Service to use as they proceed with modifying their performance measures. Our suggestions are meant to be adapted after further development by the agency and partner involvement. This report is limited to performance measures related to the agency's partnerships and collaborations under the Shared Stewardship Strategy. Other potential performance measures (e.g., ecological or economic measures) not specific to partnerships are not included in this work, although observations presented here have wider applicability in developing other performance measures. Furthermore, the emphasis of this report is on measures for evaluating the agency's performance as a partner, not the reciprocity of partners. This report makes recommendations that we believe are applicable within all units of the Forest Service; however, most stakeholders and academic partners who provided input on this report work in the US West. Further directed consultation with stakeholders who partner with national forests in other regions of the country could provide additional relevant insights. A final consideration is that the recommendations put forth in this document may not fully capture the depth and extent of the agency's responsibility to partner with tribes. Tribes are sovereign nations and as such are entitled to government-to-government relationships and any measure of partnership should not be regarded as sufficient commitment to consideration of tribal concerns.

3. Potential benefits and limitations of developing and implementing performance measures

3.1 Potential benefits of performance measures

For a land management agency that operates 155 national forests and 20 national grasslands on 193 million acres across the nation, performance measures are a critical way to incentivize and track ongoing and accomplished work. Performance measures communicate the desired mix of activities to staff and create incentives for agencies to focus their efforts on particular priorities (Schultz et al. 2015a). They also provide a mechanism to demonstrate accomplishments, which can support the agency in allocating future budgets and maintain the agency's accountability with leadership and public expenditures (Henrich 2003 and Joyce 2005 as cited in Schultz 2015). The monitoring completed in accordance with performance measures can produce consistent information about trends and conditions on a forest; help improve coordination, collaboration, and communication with partners and stakeholders; and support forest planning decisions (Wurtzbach et al. 2019). Finally, performance measurement can be used to identify potential cost-savings and other needed shifts in agency efforts (Radin 2006).

3.2 Limitations of performance measures

There are important drawbacks and difficulties in designing and implementing performance measures. Performance measures can lead to unintended consequences, especially where multiple values, complex goals, and fragmented decision-making processes are in play (Schultz et al. 2015a). Wilson (1989) explained that 'Work that produces measurable outcomes tends to drive out work that produces unmeasurable outcomes' (p. 161, as cited in Schultz et al. 2015a). The assumption is that agencies will prioritize work that has a clear measurement requirement and is easiest to achieve, and work that is not associated with a performance measure or target, that is relatively more expensive, or that leads to accomplishments that are difficult to communicate but



are nonetheless important will be deemphasized over time (Biber 2009). The development of or monitoring for performance measures may be cut if budgets are limited and measurement is deemed non-essential (Wurtzbach et al. 2019). Furthermore, performance measures alone may not suffice to incentivize work that is complex or that will result in accomplishments that are qualitative in nature (Schultz et al. 2015).

Further challenges relate to the expense and administrative burden of implementing performance measures and analyzing their data. Agencies may lack staff or expertise to design, manage, analyze, and integrate performance measures and data into decision-making (Wurtzbach et al. 2019). It is therefore important to minimize the cost and complexity of performance measures while also ensuring they are not overly simplistic or do not omit priority aspects of an agency's work (Fontalvo-Herazo et al. 2007). The structure and culture of the organization implementing performance measures can create further challenges

(Wurtzbach et al. 2019). For example, some staff may resist performance measures if they are used to reduce resources or power for individual units or programs (Schultz et al. 2016). Career civil servants may even be inclined to noncompliance or to “wait out” or resist changes in performance measurement until another administration takes power (Schultz et al. 2016). Decentralized decision-making structures can further create challenges for planning and consistently implementing performance measures across temporal and spatial scales (Wurtzbach et al. 2019). Performance measurement can also create additional work that impacts staff by limiting innovation and creativity, draining professional spirit, and veiling real but unmeasurable performance or achievements (Radin 2006).

3.3 Performance measurement within the Forest Service: current limitations

The Forest Service's process to revise performance measurement in accordance with the Shared

Stewardship Strategy faces several important limitations due to the nature of the agency's work and the structure and culture of the agency itself.

- **The Forest Service's "multiple use" mandate legally obligates the agency to manage for diverse goals that are sometimes difficult to define and are often competing.** The agency exhibits what Chun and Rainey (2005) define as high goal ambiguity, or "the extent to which an organizational goal or set of goals allows leeway for interpretation." Ambiguity in goals incentivizes agencies to focus on work that will produce measurable outcomes on short timelines, that is less expensive, or that will produce outcomes that are easier to communicate (Biber 2009; Schultz et al. 2015a).
- **Designing performance measures for forest restoration is particularly challenging** because the selected suite of measures must incentivize both short-term (e.g., annual timber output needed to support mill infrastructure) and long-term (e.g., developing fire resilience at a landscape scale) outcomes (Schultz et al. 2018). Annual appropriations and performance reporting incentivize pursuing "easy" acres over multi-year or difficult to achieve, but strategically important, objectives.
- **The Forest Service's limited budget, budget appropriations, and performance evaluation systems do not clearly incentivize working in partnership.** Partnership work that is not associated with accomplishing targets, is expensive and time-consuming, or is difficult to communicate may receive less emphasis or funding (Schultz et al. 2015a).
- **Data management is a notable limitation for the agency.** Many agency databases are difficult to manage and may require significant overhaul. Data management skill development is not an agency priority and therefore many staff do not have database management training.

Furthermore, there is limited funding to support monitoring data collection when it is not a legal requirement. Data collection and storage is often inconsistent, and data management and sharing are difficult given a lack of communication structures within the agency and persistent staff vacancies (Wurtzbach et al. 2019).

- **The universe of possible partners is difficult to define.** Performance measures can help evaluate the strength of existing partnerships, but it is more difficult to evaluate the diversity of partnerships. Most of the discussion to follow focuses on new or existing partnerships, but consideration should be given to determining if the agency is partnering with the right organizations or being inclusive in partnership.

The move towards creating new performance measures can be informed by previous pilots of new business models within the Forest Service. Three key efforts included: the Collaborative Forest Landscape Restoration (CFLR) Program, the Integrated Resource Restoration (IRR) pilot, and the 2012 Planning Rule (National Forest Management Act). Lessons learned and key takeaways from the development and application of these programs and efforts (and associated research, monitoring, and partner feedback) are summarized in Appendix B and can provide key insights worth considering in the development of performance measures aligned with the Shared Stewardship Strategy.

4. Stakeholder perspectives and feedback on performance measures

RVCC and EWP staff collected feedback from partners during a workshop at the 2020 Rural Voices for Conservation Coalition annual meeting and through targeted consultations with key academic partners and practitioners. Twenty-three stakeholders participated in the workshop (excluding presenters). They represented federal

and state agencies, nonprofits, universities, local government, and forest collaborative groups. They were provided with background information on current performance measures and their importance. Several key questions were posed to participants to develop an understanding of what they would like to see the Forest Service incorporate into a new framework for incentives and performance measures. They were asked to consider factors that had strengthened or weakened partnerships in which they had previously been involved, and how these factors might be measured. They reviewed a draft framework of performance measures and contributed ideas for adding to or adapting the framework to make it more meaningful to them in their work with the Forest Service.

The conversation demonstrated that discussing performance measures can be difficult, with varying understandings of the term and awareness of the agency's existing system for measuring performance. The discussion was fluid, with participants offering observations on the current project planning and implementation process, and project monitoring, as well as insights about developing performance measures. The continued emphasis on project planning may indicate a greater degree of familiarity with the planning process but may also suggest that partners would like to see more feedback memorialized in the planning process, if not in more broadly applicable performance measures.

Partner feedback

Partners provided feedback around three main themes: 1) performance measure selection process; 2) preferred attributes of performance measures; 3) collection and use of performance measure data.

4.1 Performance measure selection process

Partners provided feedback that, in the performance measures selection process, they would encourage the agency to:

- **Provide greater clarity of the purpose of the current efforts to develop performance measures.** Participants requested better articulation of the rationale and intent of the Washington Office's effort to develop new performance measures. They wanted to understand short-, medium-, and long-term steps in the agency's process, as well as clarify which decisions the agency planned to make differently with new performance measures.
- **Involve partners in the process of developing performance measures.** Participants discussed the importance of having long-term partners help develop the agency's vision and strategy for partnerships, particularly given the rapid turnover in leadership within the Forest Service. It was important to them that partners co-lead so that they share commitment to and ownership over the performance measurement process. Participants also expressed that partners need signals that the agency will follow through on commitments to integrate their feedback into decision-making to motivate partners to stay engaged.
- **Develop and use shared language with partners for discussion of performance measures.** Participants recognized that discussing performance measures was complicated and suggested that establishing clear terminology was critical to success.
- **Invite honest feedback from partners.** Participants stressed the importance of creating a system where partners feel comfortable providing honest feedback on the quality of agency efforts to work with partners without concern for damaging relationships.
- **Look to previous efforts for lessons learned.** Participants repeatedly suggested that the agency consider using the stakeholder-developed monitoring programs developed for the Collaborative Forest Landscape Restoration Program (CFLRP) as a model for developing customizable performance metrics (see Appendix B for more details on lessons learned from previous efforts, including CFLRP).

- **Include partners throughout the entire life of projects.** Participants indicated an interest in being included at all stages of projects including: pre-scoping, prioritization, contract selection, the transfer of planning documents into contract language, project implementation, long-term planning (e.g., five-year plans), and in discussions about tradeoffs in decision-making. Performance measures could reflect this interest by assessing inclusion of partners at all stages of interest.

4.2 Preferred attributes of performance measures

Partners offered specific measurable performance measures for consideration, such as: longevity of partnerships, whether existing partnerships had leveraged new partnerships or scaled up in size, how many jobs or contracts resulted from partnerships, local capture of economic benefits, whether all treatment data was being entered into databases, and how forest treatments corresponded to socioeconomic conditions. They further suggested conditioning existing performance measures to be more meaningful in local contexts (e.g., board feet of timber volume sold to support existing local infrastructure).

Partners also provided more generalized feedback that encouraged the agency to select performance measures that:

- **Track inclusive decision-making.** Participants suggested performance measures that track decision-making processes, such as: whether partners and potentially affected stakeholders were included in decision-making processes, whether outreach to stakeholders had occurred, at what stages stakeholder input was solicited, and whether decisions were reported back to stakeholders. They also wanted measures to incentivize staff to collaborate with partners in all phases of work, from long-term planning to project implementation.
- **Adapt to local conditions.** Participants discussed the tension of needing performance measures that are both standardized but also scalable to

different locations and projects. They emphasized that one rigid set of performance measures may not be appropriate for all projects or places given the diverse goals, contexts, and economic realities that communities face. They suggested creating a template with modifiers that allow it to scale by project size and by community, add geographic priorities, and identify whether projects are being completed in areas of social agreement.

- **Reflect expansive values.** Participants indicated a need for more emphasis on social and economic outcomes, preservation of traditional ecological knowledge, culturally important plants, and ecological conservation outcomes. Participants also suggested that measures should explore equitable distribution of benefits from forest management.
- **Create meaningful outcomes for communities.** Participants expressed hope that new performance measures could increase the accountability of the agency toward partners, especially beyond the planning phases of their work. They wanted new performance measures to incentivize decisions that would result in meaningful outcomes to communities, such as: socioeconomic outcomes, fire risk reduction, and strong partnerships. Participants recognized that current performance evaluations reward work accomplished on the ground and suggested that collaboration and prioritization of collaboratively developed goals should be rewarded as well.

4.3 Collection and use of performance measure monitoring data

Partners provided feedback on the collection and use of performance measure monitoring data, specifically how they would encourage the agency to:

- **Improve monitoring.** Participants thought it was important to use longitudinal assessments and multiple evaluative pieces of evidence to document the attainment of desired outcomes.

They wanted monitoring to characterize how working in partnership created additive impacts, as compared to a baseline of non-partnership work that had occurred before or in other places. They also noted that partners can help with monitoring but need a template of standardized questions and modifiable metrics that take into consideration the specific objectives of each project. CFLR projects that have developed robust monitoring plans unique to their project could offer useful, modifiable templates.

- **Consider the practicality of adding new data collection requirements.** Participants recognized that Forest Service staff already have heavy workloads and questioned whether they would be able to collect additional monitoring data to support new performance measures. Participants pointed out that the data currently collected by the Forest Service and partners are not consistently used or shared, and they wondered how data collected to track new performance measures would be different. They wanted a strategic approach to performance measures that would be durable without being overly constraining on long-term project plans or overly burdensome on the agency.
- **Share project implementation accomplishments and limitations.**
- Participants wanted information about project implementation, in particular the extent to which collaboratively planned projects are actually implemented and the distribution of treatments across the landscape. They explained that it was more important to them that the agency, “Paint an honest picture, rather than a good picture.” Transparency about limited accomplishments was preferred over silence from the agency. They said that having more information about what is happening within the agency would allow partners to be better advocates for their shared work.
- **Improve data tracking systems.** Participants identified a need to characterize the limitations of the Forest Service’s data systems. They felt this would help them understand the limitations of the

agency’s transparency about accomplishments. Some participants suggested there may be a need to overhaul internal tracking systems and associated technology. Participants suggested that there could be checkboxes in the Forest Service Activity Tracking System (FACTS) and Timber Information Manager (TIM) databases and an incentive for meeting the criteria, such as double the credit toward targets for projects done in accordance with the Shared Stewardship Strategy.

- **Change the budget allocation and performance reviews process associated with the existing performance measurement system.** Participants recognized that the agency already has a set of Key Performance Indicators (KPIs) in place, but that KPIs do not increase the agency’s capacity to deliver on a diverse set of outcomes. They questioned how new performance measures would be different. They felt it was necessary to concurrently revamp the performance measures as well as their impact on budget allocations and performance evaluations to effectively alter line officers’ and other staff members’ behavior.

5. Guiding principles and recommended next steps

In this section our goal is to provide guidance to the agency for moving forward with revising performance measurements in accordance with the Shared Stewardship Strategy. Our suggestions are derived from recommendations from the literature, stakeholder feedback, and our own experiences working with the agency.

5.1 Internal agency considerations to prepare for performance measure redesign

The agency must define and communicate a clear purpose and audience for new performance measures prior to moving forward. We suggest that the agency consider the following questions and recommendations before requesting input from stakeholder partners.

- *What decisions and changes are new performance measures intended to inform? Whose behavior will change, and at what levels of the agency, as a result of the new performance measures?* Be cautious of defining too many goals for performance measures. Composite priorities, such as those that are often referenced together in Shared Stewardship (e.g., cross-boundary, geographic prioritization, partnership), may require distinctly different performance measures.
- *Will new performance measures replace or complement existing measures?* New performance measures will not exist in a vacuum independent of existing measures, particularly timber volume and fuels reduction acre targets. As noted in the literature review, easily measured and defined goals and associated performance measures are likely to crowd out those with more complexity. Furthermore, if new performance measures have no connection to budgets or staff performance reviews, they are unlikely to motivate or institutionalize new bureaucratic behavior. The distinction between performance measures should be clarified internally within the agency and externally for partners prior to moving forward.
- *Who are the intended audiences (e.g., WO, Congress, OMB, states, community partners) and what would be meaningful to them?* A single performance measure is unlikely to meet the needs of all possible audiences. Counts of partnership agreements, for instance, may help signal progress to Congressional audiences, but are unlikely to be particularly meaningful to local stakeholders or state implementation partners. We encourage dialogue with intended audience(s) to ensure performance measures are meaningful to those parties.
- *What investments will the agency be able to make in data collection and management?* Utilizing existing data may be necessary and preferable in the short term; however, new performance measures will likely require some level of new data collection. We encourage the agency to recognize that updating existing databases and creating

new fields, if not whole new data systems, is likely needed to meaningfully report on partnership outcomes.

- *At what scale does the agency want to implement new performance measures?* The recommendations and considerations offered below apply broadly across most or all scales, but performance measure design and implementation will look different at varying scales. For instance, the principle of inclusivity may look different if a performance measure is intended to evaluate a District or District Ranger compared to a Region or Regional Forester.

We also recommend that the agency make revised performance measures one part of a broader strategy to ensure that incentives and policies within the agency align with the intent of the Shared Stewardship Strategy. In particular, we suggest the agency convene a series of workshops for academic partners and practitioners who specialize in United States public lands forest governance and policy to consider options for broader reform efforts within the agency (e.g., reforming the National Forest Management Act, incentive structures within the agency, long-term visioning). We further recommend that the agency convene a structured meeting of national partners to further develop recommendations for implementing revised performance measures.

Survey of partner satisfaction

Another approach to measuring the agency's ability to partner and quality of partnership is to utilize a periodic, standardized survey of partners to solicit feedback on various elements of partnership. Annual survey results could provide a longitudinal assessment of how partners feel about the agency's capacity and willingness to partner. Alternatively, pre-, during-, and post-project surveys could provide useful information about the value of partnerships and could be used to document evolving relationships over the life of a project. A similar approach, the "Partnership Capacity Assessment Tool," was proposed by the National Partnership Office (NPO 2002), although that approach was an internal assessment from agency staff.

5.2 Examples of new approaches to measuring partnerships

Partnership evaluation framework

One possible approach to measuring partnership in the short- to medium- term is the application of a framework to measure progress towards the goal of working in partnership. This approach was utilized by the U.S. Fish and Wildlife Service to record multi-year progress for the National Landscape Conservation Cooperative Network (Science Investment and Accountability Schedule 2.0). The approach emphasizes identifying critical steps in partnership development, working with partners to identify issues of concern, and assigning a rough quantitative score for progress on each step. For instance, if establishing an appropriately scaled agreement is considered important (e.g., a state

Memorandum of Understanding), then a unit could be evaluated on a three-point score based on 1. Full accomplishment of the task, 2. Progress, but not full accomplishment of the task, and 3. Failure to initiate the task. See below for a detailed example. The Forest Service and partners would develop guidance on what is necessary to claim success under each step and the agency would conduct periodic self-evaluations that would then be validated by those partners previously identified in the process. This approach is recorded in detail in the Washington Office draft performance measures (Development of a Shared Stewardship Performance Framework) as the third performance measure option.

Step 1: Demonstrate work to identify partners whose priorities or values of concern you wish to be responsive to

- 0 = not started
- 1 = started, not finished
- 2 = finished

Step 3: A system is in place to report information on values of concern and goals to partners on a set schedule, and partners and the agency collectively assess progress towards goals

- 0 = not occurring
- 1 = started, not finished
- 2 = completed and ongoing

Step 2: Work with partners to identify values of concern and goals, and develop protocols to report on these items

- 0 = not started
- 1 = started, not finished
- 2 = completed and ongoing

Step 4: Agency and partner(s) adapt planning and implementation to reflect learning as projects or programs proceed.

- 0 = not occurring
- 1 = started, not finished
- 2 = need for change assessed and needed taken, with ongoing dialogue

Such a survey could be systematized for use across all units to allow for local evaluations, but also aggregated to provide a national partnership score. Alternatively, such an approach could be used on select case study projects if agency-wide implementation is overly burdensome administratively. Survey participants could include groups with any form of contract or partnership agreement, including Good Neighbor Authority agreements, stewardship contracts and agreements, collaborative participants, and industry partners. In this approach, the agency should consider ways to integrate feedback from potential partners as well as non-partners to understand how and why particular interest groups were excluded from Forest Service partnership processes. Although the agency may need to consider limitations set in the Paperwork Reduction Act (44 U.S.C. §§ 3501), external partners may be able to administer such a survey without triggering the requirements of the act. See Appendix D for an example of a simple assessment survey based on principles identified in this work.

5.3 Guiding principles, next steps, and resources for selecting performance measures

Below we suggest guiding principles and next steps for the agency's work to revise performance measures based on our literature review, stakeholder feedback, and academic partner review. "Principles" are top-level action statements sometimes used to structure and guide performance evaluation frameworks (Fontalvo-Herazo et al. 2007). Our "guiding principles" therefore represent the key themes that we believe should underpin the process of developing outcome-based performance measures in accordance with the Shared Stewardship Strategy, as identified in our literature review and validated by partner feedback. We emphasize that this is not a prescriptive list; rather, it is intended as a tool for the agency and partners to begin thinking about possible performance measures that may be meaningful in their local context. We do not provide a high level of specificity on suggested measures because one of our strongest recommendations to the agency is that they



work with their partners at different scales to select the exact performance measures they plan to use for particular partnerships or projects. Partnership-based performance measures must therefore be flexible enough to apply at different scales. The partnership framework offered above is one approach, although there are likely many others. At the core of any approach is the formulation of a performance measure that offers credit to a unit for engaging in the process of working with partners to identify and work towards locally relevant outcomes.

Table 1. Ten guiding principles to underpin the process of developing outcome-based performance measures in accordance with the Forest Service’s Shared Stewardship Strategy. Recommended next steps provide tangible actions that the agency can take toward ensuring the development and implementation of new performance measures is done in collaboration with partners. Some data sources exist to support the agency in monitoring performance measures related to each guiding principle. Potential supporting data sources or approaches to monitoring are presented. Text colors in the data sources column indicate anticipated relative ease of collecting monitoring information from proposed sources: green (data already collected); yellow (information exists but would need to be compiled); and red (would need to conduct new data collection).

Guiding principles	Recommended next steps ³	Potential supporting data sources or approaches for evaluating performance measures
Effective agency leadership	<ol style="list-style-type: none"> 1. Hire, train, and support leaders who will build willingness to use new performance measures in decision-making within the agency, among partners, and with Congressional staff 2. Hire, train, and support leaders who express willingness to strategically challenge prevailing norms, be adaptive and transparent, and who will consider short- and long-term outcomes simultaneously while developing new performance measures 3. Evaluate leaders and reward those who score well on partnership measures 	<ul style="list-style-type: none"> • Annual review of directives from forest leadership to see if support for partnerships is clear and consistent • Qualitative data collection about if and how leadership supports agency staff engagement in collaborative work (e.g., survey) • Annual review of leadership capacity (budgets, staff, and training) to deliver on commitments to partnerships
Structured decision processes	<ol style="list-style-type: none"> 4. Articulate participant roles and responsibilities, evaluation systems, decision processes, support tools, and how feedback from partners will be utilized in publicly available documents 	<ul style="list-style-type: none"> • Annual review of MOU aligns with annual partnership reporting (e.g., FS Project Progress Report 1500) • Annual review of project websites, collaborative charters, agreements, or operating rules to determine if they clearly articulate decision processes • Partnership framework
Clear and consistent communication with stakeholders	<ol style="list-style-type: none"> 5. Establish a communication plan for performance measures, including how frequently the agency will communicate results with stakeholders. Involve partners early and often 6. Actively reach out to partners and audiences to communicate why goals may or may not have been met 7. Create a glossary of key terms to develop a shared vocabulary and understanding 	<ul style="list-style-type: none"> • Annual review of how often and through which formats agency communicate with stakeholders about performance measures • Annual partner qualitative review of the agency’s inclusion and transparency processes • Presence/absence of a collaboratively created glossary of key terms used in project development and communication • Partnership framework

³ Suggestions adapted from USFS Partnership Assessment Tool, Doremus 2008, Schultz et al. 2015, Schultz et al. 2016, Schultz 2018, Wurtzbach et al. 2019

Guiding principles	Recommended next steps ³	Potential supporting data sources or approaches for evaluating performance measures
Inclusive and accountable representation	<p>8. Define population of partners who will be considered in developing new performance measures</p> <p>9. Support stakeholders that need support to be able to engage in evaluations to ensure equitable opportunities to participate</p> <p>10. Ensure stakeholders who represent groups or organizations effectively speak for the interests they represent</p> <p>11. Report back to partners who are interested but not included in performance measure design</p>	<ul style="list-style-type: none"> • Annual review of databases for the types, locations, duration, and diversity of partners engaged: <ul style="list-style-type: none"> • Grants and Agreements (G&A) • NatureWatch, Interpretation and Conservation Education (NICE) • Volunteer Service Reports (VSR) • Planning, Appeals and Litigation System (PALS) • Annual review of agency efforts to make processes more inclusive (e.g., moving public meetings around geographically, holding listening sessions, recruiting new partners who have an interest in performance measure redesign) • Partner satisfaction survey
Collaborative design and implementation	<p>12. Clearly articulate in Forest Service policy the agency's commitment to include and act upon partner feedback</p> <p>13. Actively utilize input from collaborative groups, agreement holders, and interest groups (e.g., counties)</p> <p>14. Allow external partners to review the agency's performance directly</p>	<ul style="list-style-type: none"> • Presence/absence of defined roles for collaborative group(s) and other stakeholders in design and implementation of performance measures • Annual reporting of implementation versus planned and agreed-upon work. Crosswalk NEPA documents with FACTS and Timber Information Manager (TIM) database
Strategic use of performance measures	<p>15. Collaboratively develop a clear rationale/theory of change for how performance measures will incentivize desired outcomes</p> <p>16. Assess the role new performance measures will play in the context of existing performance measures, personnel evaluations, and incentives</p> <p>17. Relax the timber volume and acres treated targets and tie new outcome-based performance measures to consequential incentives</p> <p>18. Select performance measures related to biophysical, economic, social outcomes of the agency's work in tandem with partners</p> <p>19. Triangulate multiple sources of evidence to measure performance outcomes whenever possible</p>	<ul style="list-style-type: none"> • Presence/absence of rationale for/theory of change explicitly noted in project plans, websites, reports, or other collaborative group documents • Partnership framework

Guiding principles	Recommended next steps ³	Potential supporting data sources or approaches for evaluating performance measures
Sufficient resources	<p>20. Tie new performance measures to budget allocation or additional funding</p> <p>21. Ensure new performance measures are supported by sufficient technical and administrative resources necessary to succeed</p> <p>22. Support partners who are asked to provide input into performance measures</p>	<ul style="list-style-type: none"> • Annual review of agency funding, FTEs, personnel policies, and training dedicated to collaborative work • Annual review of partner cash and in-kind contributions to collaborative work through databases such as G&A, Watershed Improvement Tracking, Volunteer Service Reports, and qualitative interviews • Presence/absence of designated position to support partnership work • Periodic review of skills and specializations of agency staff related to partnership
Appropriate data collection and management processes and evaluation	<p>23. Identify and acquire data systems that are needed to be able to track and organize data collected</p> <p>24. Invest in developing standardized performance measurement protocols and training. Consider hiring dedicated staff for tracking performance measurement and linking to forest planning</p>	<ul style="list-style-type: none"> • Annual review of adequacy of data systems to support monitoring of performance measures and decision-making • Presence/absence of monitoring coordinator whose task is to manage data and adaptive management process • Review data periodically to ensure accurate measurement and recording
Thoughtful dissemination of information	<p>25. Develop a clear plan for what, how, when, and where performance measurement data will be reported back to partners and agency staff. Archive information in accessible places and usable formats</p> <p>26. Establish communication links with the public, Congress, and other decision makers</p> <p>27. Include more Key Performance Indicators in the annual budget justification, as had been previous standard practice</p>	<ul style="list-style-type: none"> • Annual review of tracking and dissemination of information about all performance measures • Presence/absence and frequency of communication through any established communication mediums (e.g., regular newsletters, blogs, press releases) • Partner satisfaction survey regarding dissemination of information about performance measures • Presence/absence of a mutually agreed-upon framework for reporting accomplishments back to external partners
Adaptive management	<p>28. Consider new performance measures to be pilots that can be adjusted through iterative decision-making. Conduct post-hoc evaluations of new measures</p> <p>29. Reward creativity, innovation, and willingness to be adaptive through performance measures</p> <p>30. Monitor progress jointly with partners and make changes based on evaluation system</p>	<ul style="list-style-type: none"> • Presence/absence of monitoring coordinator whose task is to manage data and adaptive management process • Presence/absence and quality of monitoring plans and monitoring reports • Annual review of Forest Service units' discussion of lessons learned from past experience and incorporation into work • Annual review of implementation accomplishments relative to planned work, including a discussion of needed adaptation

6. Conclusion

The intent of this report is to help the Forest Service consider options for implementing a new set of outcome-based performance measures that align with the Shared Stewardship Strategy. Overall, we emphasize that performance measures have the power to focus agency efforts and improve collaboration with stakeholders; however, their effectiveness is constrained by several key considerations.

First, performance measures must be considered in the context of other incentives within the agency. Neither the existing timber volume nor “acres treated” targets are well-suited to the complex mission of working in partnership. Performance measures will be only as impactful as the consequences associated with them. We therefore recommend that the agency relax the timber volume and acres treated targets and tie new outcome-based performance measures to consequential incentives. Furthermore, we encourage the agency to consider that performance measures alone may not suffice as a tool for ensuring the agency is meeting the objectives of the Shared Stewardship Strategy. Consistent and additional work may be necessary to counter some of the undesired effects of performance measurement that can occur, as noted in Section 3 of this report.

Second, performance measures will require leadership commitment and sufficient resources for design and implementation. We recommend that this include dedicated staff who are responsible for and trained appropriately in managing work done in partnership and monitoring progress toward performance measures. These efforts will also require adequate funding and technical and technological support, such as improving data management systems.

Finally, the Shared Stewardship Strategy's charge to work more closely in partnership is a complex, multi-dimensional goal. It is important to select performance measures that can be realistically monitored; however, we urge the agency to resist implementing highly simplified measures (e.g., number of partnerships, duration of partnerships) in lieu of working with partners to design performance measures that will capture whether or not the agency is engaging in meaningful, inclusive, shared decision-making and project implementation. Developing measures that are meaningful to the agency and partners across contexts will require ongoing, thoughtful engagement with stakeholders.



Bibliography

- Abrams, J. (2019). The emergence of network governance in US National Forest Administration: Causal factors and propositions for future research. *Forest Policy and Economics*, 106, p. 101977.
- Abrams, J., Huber-Stearns, H., Gosnell, H., Santo, A., Duffey, S., & Moseley, C. (2020). Tracking a governance transition: identifying and measuring indicators of social forestry on the Willamette National Forest. *Society & Natural Resources*, 33(4), p. 504-523.
- Biber, E. (2009). Too many things to do: How to deal with the dysfunctions of multiple-goal agencies. *Harvard Environmental Law Review*, 33, p. 1.
- Biber, E. (2011). The problem of environmental monitoring. *University of Colorado Law Review*, 83, p. 1.
- Brand, D. G. (1997). Criteria and indicators for the conservation and sustainable management of forests: progress to date and future directions. *Biomass Bioenergy*, 13(4-5), p. 247-253.
- Brown, S. J., & Nie, M. (2019). Making forest planning great again? Early implementation of the Forest Service's 2012 national forest planning rule. *Natural Resources & Environment*, 33(3), p. 3-7.
- Butler, W. H., & Schultz, C. A. (2019). *A new era for collaborative forest management: policy and practice insights from the Collaborative Forest Landscape Restoration Program*. Routledge.
- Carman, J. G. (2010). The accountability movement: What's wrong with this theory of change? *Nonprofit and Voluntary Sector Quarterly*, 39(2), p. 256-274.
- Chun, Y. H., & Rainey, H. G. (2005). Goal ambiguity in US federal agencies. *Journal of Public Administration Research and Theory*, 15(1), p. 1-30.
- Davis, E. J., & Moseley, C. (2013). Socioeconomic monitoring of public lands management: a compilation of measures. University of Oregon, Ecosystem Workforce Program Briefing Paper #55. Available at: http://ewp.uoregon.edu/sites/ewp.uoregon.edu/files/BP_55.pdf
- Davis, E. J., White, E. M., Cervený, L. K., Seesholtz, D., Nuss, M. L., & Ulrich, D. R. (2017). Comparison of USDA Forest Service and stakeholder motivations and experiences in collaborative federal forest governance in the western United States. *Environmental management*, 60(5), p. 908-921.
- Davis, E. J., Cervený, L. K., Ulrich, D. R., & Nuss, M. L. (2018). Making and breaking trust in forest collaborative groups. *Humboldt Journal of Social Relations*, 40, p. 211-231.
- Derr, T., Moote, A., Savage, M., Schumann, M., Abrams, J., McCarthy, L., Lowe, M. (2005). What is Multiparty Monitoring? Collaborative Forest Landscape Scale Restoration Handbook One. *USDA Forest Service*. Available at: https://www.fs.fed.us/rm/pubs/rmrs_gtr292/2005_derr.pdf
- Doremus, H. (2008). Data gaps in natural resource management: sniffing for leaks along the information pipeline. *Indiana Law Journal*, 83, p. 407.
- DuPraw, M. E., Bedell-Loucks, A., Enzer, M. J., Lyon, K. M., Silvas, D., Thorpe, L. A., & Williams, P. B. (2015). From Personality-Driven to Institutionally Driven Collaboration by the US Forest Service. *Conflict Resolution Quarterly*, 33(2), p. 149-176.
- Elliot, S., Boyd, C., Nevins, E., Robertson, J. (2017). *The Work Finance Principle: using new financial policy to achieve restoration goals*. National Forest Foundation. Available at: <https://www.nationalforests.org/collaboration-resources/tools-search/results?q=Work%2BFinance%2BPrinciple&type=peer-learning-sessions&topic=>
- Ellison, A., and Huber-Stearns, H. (2019). *Social and Economic Monitoring for the Lakeview Stewardship CFLR Project*:

- Fiscal Years 2016 and 2017*. University of Oregon, Ecosystem Workforce Program Working Paper #98. Available at: https://ewp.uoregon.edu/sites/ewp.uoregon.edu/files/WP_97.pdf
- Emerson K., Nabatchi T., and Balogh, S. (2011). An Integrative Framework for Collaborative Governance. *Journal of Public Administration Research and Theory*, 22, p. 1-29.
- Esch, B. and Waltz, A. E. M. (2019). *Assessing Metrics of Landscape Restoration Success in Collaborative Forest Landscape Restoration Program Projects*. Ecological Restoration Institute White Paper. Available at: <https://cdm17192.contentdm.oclc.org/digital/collection/p17192coll1/id/1015/rec/1>
- Floress, K., Connolly, S., Halvorsen, K. E., Egan, A., Schuler, T., Hill, A., ... & Karriker, K. (2018). Implementing landscape scale conservation across organizational boundaries: lessons from the central Appalachian Region, United States. *Environmental management*, 62(5), p. 845-857.
- Hardigg, K., Bertone-Riggs, T., 2019. Shared Stewardship: Recommendations for Partnering with Community-based and Collaborative Groups. *Rural Voices for Conservation Coalition*. Accessed at: https://www.ruralvoicescoalition.org/s/2020-SharedStewardship_final-3-2020.pdf
- Fontalvo-Herazo, M. L., Glaser, M., & Lobato-Ribeiro, A. (2007). A method for the participatory design of an indicator system as a tool for local coastal management. *Ocean & Coastal Management*, 50(10), p. 779-795.
- Heinrich, C. J. (2003). Measuring public sector performance and effectiveness. *The SAGE Handbook of Public Administration*, p. 24-38.
- Huber-Stearns, H., Santo, A., & Steinkruger, E. (2020). *Social and economic monitoring of the Tongass National Forest and southeast Alaska communities*. University of Oregon, Ecosystem Workforce Program Working Paper #98. Available at: https://ewp.uoregon.edu/sites/ewp.uoregon.edu/files/WP_98.pdf
- Joyce, P. G. (2005). Linking performance and budgeting: Opportunities in the federal budget process. *Managing for results*, p. 83-140.
- Lynn, K., Snyder, D., Gerlitz, W., 2006. Performance Measures Issue Paper. *Rural Voices for Conservation Coalition*. Accessed at: <https://www.ruralvoicescoalition.org/s/2006-Performance-Measures.pdf>
- Lynn, K., Gerlitz, W., 2007. Performance Measures Issue Paper. *Rural Voices for Conservation Coalition*. Accessed at: <https://www.ruralvoicescoalition.org/s/2007-Performance-Measures.pdf>
- Magagna, J., & J. May. (2018). Final Recommendations to the Secretary of Agriculture and the Chief of the Forest Service – February 3, 2018. National Advisory Committee for Implementation of the National Forest System Land Management Planning Rule. Available online at: https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd575909.pdf. Last accessed 06/20/2020.
- Maier, C., & Abrams, J. B. (2018). Navigating social forestry—A street-level perspective on National Forest management in the US Pacific Northwest. *Land Use Policy*, 70, p. 432-441.
- Mendoza, G. A., & Prabhu, R. (2000). Development of a methodology for selecting criteria and indicators of sustainable forest management: a case study on participatory assessment. *Environmental management*, 26(6), p. 659-673.
- Moseley, C., & Huber-Stearns, H. (2017). *Piloting restoration-related social and economic measures on national forests*. University of Oregon, Ecosystem Workforce Program Working Paper #82. Available at: https://ewp.uoregon.edu/sites/ewp.uoregon.edu/files/WP_82.pdf
- National Partnership Office and Resolve, Inc. (2002). Partnership Capacity Assessment Tool. Accessed at: https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5396088.pdf
- Nie, M. (2008). *Governance of Western public lands*. University Press of Kansas.

- Nie, M. (2019). The Forest Service's 2012 Planning Rule and its Implementation: Federal Advisory Committee Member Perspectives. *Journal of Forestry*, 117(1), p. 65-71.
- Ohio Interagency Forestry Team Business Plan 2019-2023: Southeast Ohio Oak Management Priority Forest Area, 2019. Natural Resources Conservation Service, US Forest Service, Ohio Division of Wildlife, Ohio Division of Forestry, The Ohio State University, Central State University.
- Paperwork Reductions Act. 44 U.S.C. §§ 3501. Accessed at: <https://digital.gov/resources/paperwork-reduction-act-44-u-s-c-3501-et-seq/>
- Prabhu, R., Colfer, C. J. P., & Dudley, R. G. (1999). *Guidelines for developing, testing and selecting criteria and indicators for sustainable forest management: a C&I developer's reference* (Vol. 1). Center for International Forestry Research.
- Radin, B. A. (2006). *Challenging the performance movement: Accountability, complexity, and democratic values*. Georgetown University Press.
- Radin, B. A. (2012). *Federal management reform in a world of contradictions*. Georgetown University Press.
- Ricco, G. M. (2017). Assessing forest plan revision under the 2012 planning rule: understanding policy implementation and organizational learning. *2000-2019-CSU Theses and Dissertations*.
- Ritchie, B., McDougall, C., Haggith, M., & De Oliveira, N. B. (2000). *Criteria and indicators of sustainability in community managed forest landscapes: an introductory guide*. Center for International Forestry Research
- Sample, V. A. (1992). Resource planning and budgeting for national forest management. *Public Administration Review*, p. 339-346.
- Santo, A., Davis, E. J., Huber-Stearns, H., & Ellison, A. (2018). *Successes, challenges, and opportunities for collaborative accelerated restoration in Oregon's Blue Mountains*. University of Oregon, Ecosystem Workforce Program Working Paper #88. Available at: https://ewp.uoregon.edu/sites/ewp.uoregon.edu/files/WP_88.pdf
- Schultz, C. A., Mattor, K., & Moseley, C. (2014). *Evaluating the integrated resource restoration line item: results from phase 1*. University of Oregon, Ecosystem Workforce Program Working Paper #47. Available at: https://ewp.uoregon.edu/sites/ewp.uoregon.edu/files/WP_47.pdf
- Schultz, C. A., Moseley, C., & Mattor, K. (2015a). Striking the balance between budgetary discretion and performance accountability: the case of the US Forest Service's approach to integrated restoration. *Journal of Natural Resources Policy Research*, 7(2-3), p. 109-123.
- Schultz, C. A., Mattor, K., & Moseley, C. (2015b). *Evaluating the integrated resource restoration line item: results from a survey of National Forest System staff*. University of Oregon, Ecosystem Workforce Program Working Paper #51. Available at: https://ewp.uoregon.edu/sites/ewp.uoregon.edu/files/WP_51.pdf
- Schultz, C. A., Mattor, K. M., & Moseley, C. (2016). Aligning policies to support forest restoration and promote organizational change. *Forest policy and economics*, 73, p. 195-203.
- Schultz, C. A., McIntyre, K. B., Cyphers, L., Ellison, A., Kooistra, C., & Moseley, C. (2017). *Strategies for success under Forest Service restoration initiatives*. University of Oregon, Ecosystem Workforce Program Working Paper #81. Available at: https://ewp.uoregon.edu/sites/ewp.uoregon.edu/files/WP_81.pdf
- Schultz, C. A., Moseley, C., Mattor, K. M., McIntyre, K., & Ellison, A. (2018). Key findings and recommendations based on the USDA Forest Service Integrated Resource Restoration Pilot third-party review. *Journal of Forestry*, 116(1), p. 5-12.
- Stern, M. J., & Coleman, K. J. (2015). The multidimensionality of trust: Applications in collaborative natural resource management. *Society & Natural Resources*, 28(2), p. 117-132.

- USDA Forest Service. (2015). *Integrated Resource Restoration 2015 report*. Available at: <https://www.fs.fed.us/restoration/documents/irr/2015IRRReportToCongressFINAL.pdf>
- USDA Forest Service. (2015). *Collaborative Forest Landscape Restoration Program 5-year report, FY 2010-2014*. Available at: https://www.fs.fed.us/restoration/documents/cflrp/CFLRP_5-YearReport.pdf
- USDA Forest Service. (2018). *Toward Shared Stewardship Across Landscapes: An Outcome-Based Investment Strategy*. Available at: <https://www.fs.usda.gov/sites/default/files/toward-shared-stewardship.pdf>
- USDA Forest Service (2020). *Development of a Shared Stewardship Performance Framework*. Draft dated 2/19/20. Internal communications and earlier draft shared at the partner listening session.
- US Fish and Wildlife Service. (2013). Science Investment and Accountability Schedule (SIAS 2.0): Commitment in Support of a National Landscape Conservation Cooperative Network.
- US General Accounting Office. (1999). *Forest Service: A framework for improving accountability*. Available at: <https://www.gao.gov/assets/160/156721.pdf>
- US General Accounting Office. (1999). *Performance Measurement and Evaluation: Definition and relationships*. Available at: <https://www.gao.gov/special.pubs/gg98026.pdf>
- US General Accounting Office. (2005). *Performance Measurement and Evaluation: Definition and relationships*. Available at: <https://www.gao.gov/special.pubs/gg98026.pdf>
- US General Accounting Office. (2011). *Performance Measurement and Evaluation: Definition and relationships*. Available at: <https://www.gao.gov/assets/80/77277.pdf>
- Waltz, A., Beinz, C., Buchanan, L., Eberle, M., Gillespie, N., Boyce, S. (2019). *Collaborative Forest Landscape Restoration Program (CFLRP) Ecological Indicator Reports Peer Learning Session*. National Forest Foundation. Accessed at: <https://www.nationalforests.org/collaboration-resources/tools-search/results/p4?q=collaborative+forest&type=&topic=>
- White, E. M., Davis, E. J., & Moseley, C. (2015). *Socioeconomic monitoring plan for the US Forest Service's Eastside Restoration efforts*. University of Oregon, Ecosystem Workforce Program Working Paper #52. Available at: https://ewp.uoregon.edu/sites/ewp.uoregon.edu/files/WP_52.pdf
- Williamson, M. A., Creech, T. G., Carnwath, G., Dixon, B., & Kelly, V. (2020). Incorporating wildlife connectivity into forest plan revision under the United States Forest Service's 2012 planning rule. *Conservation Science and Practice*, 2(2), p. 155.
- Wilson, J. Q. (2019). *Bureaucracy: What government agencies do and why they do it*. Basic Books.
- Wurtzebach, Z., Schultz, C., Waltz, A. E., Esch, B. E., & Wasserman, T. N. (2019). Broader-Scale Monitoring for Federal Forest Planning: Challenges and Opportunities. *Journal of Forestry*, 117(3), p. 244-255.
- Wurtzebach, Z., Schultz, C., Waltz, A. E., Esch, B. E., & Wasserman, T. N. (2019). Adaptive governance and the administrative state: knowledge management for forest planning in the western United States. *Regional Environmental Change*, 19(8), p. 2651-2666.

APPENDIX A: Glossary of Key Terms

“Holistic” restoration: implementation that achieves all the steps identified as important to reach a desired outcome. Forest Service projects are often implemented in stages (e.g., commercial timber harvest, piling, pile burning, broadcast burning) with additional non-vegetation projects (e.g., culvert repair). “Holistic” refers to a project that has completed all steps in the process, not just a single stage of implementation.

Integrated resource restoration (IRR) pilot: the IRR budget line item was an experiment that consolidated previously separated budget lines in Forest Service budgets in three regions. The Forest Service used it in conjunction with new performance measures to test increased flexibility to focus on priority restoration activities. The Southwestern, Intermountain, and Northern Regions were pilot regions for implementing the IRR from 2012 to 2015.

Landscape-scale restoration: implementation that achieves a desired restoration goal at a large enough scale to be meaningful in terms of ecosystem process and function. This is a spatially variable definition depending on the ecological or species issue of concern. In the context of forest restoration, it can mean restoration at a scale sufficient to provide a high degree of resilience or resistance to natural disturbance.

Key performance indicator (KPI): metrics that the agency tracks and reports annually to Congress, but that may not directly impact budget allocation within the agency (e.g., miles of stream restoration).

Monitoring: repeated measurements over time to determine if actions have caused expected or unexpected changes. As opposed to casual observation, monitoring is designed to help identify changes and determine whether these are due to planned actions (Derr et al 2005).

Outcomes: what a given effort achieves. Unlike outputs, the emphasis is on a specific accomplishment, rather than an incremental unit of work assumed to drive towards desired outcomes. The Shared Stewardship Strategy is interested in emphasizing outcomes, not only in producing outputs.

Outputs: discrete, reportable units of production (for which accounting is usually relatively easy). The most widely used and known output for the Forest Service is the volume of timber produced. Outputs are usually intended as a surrogate for a desired outcome (e.g., “acres treated” vs. landscape-scale fire risk reduction).

Performance measure (PM): a quantifiable indicator intended to evaluate achievement of an organizational goal. Performance measures, when known within an organization, may also serve to incentivize behavior rather than simply act as a post hoc evaluative mechanism.

APPENDIX A: Glossary of Key Terms, *cont.*

Principles and Indicators: elements of a structure sometimes used to frame an indicator system (e.g., Fontalvo-Herazo et al. 2007).

Principle: top-level action statements

Indicator: components or variables of principles

Shared Stewardship Strategy: The Shared Stewardship Strategy is an effort by the USDA Forest Service to focus on “working collaboratively to identify priorities for landscape-scale treatments” with “a variety of partners to do the right work in the right place and at the right scale.”^[1] Shared Stewardship proposes a “theory of change,” that if the Forest Service works with states, tribes, and other partners to set mutual priorities, work across boundaries, and create priority outcomes at scale, then they will more effectively manage catastrophic wildfire, invasive species, drought, and other forest and grassland health risks.

Target: For some performance measures, administrative units are assigned levels of accomplishments that they are obligated to achieve in any given year, called targets (e.g., a forest needs to produce X volume of commercial timber). Targets affect budget allocation, making them more impactful than other performance measures.

[1] <https://www.fs.usda.gov/managing-land/shared-stewardship>

APPENDIX B: Lessons Learned in Creating New Performance Measures through CFLR, IRR, and the 2012 Planning Rule

The move towards creating new performance measures can be informed by previous pilots of new business models within the Forest Service, some of which intersected directly with performance measures, and others that, while focused on monitoring, may have relevant lessons. Three key efforts include: the Collaborative Forest Landscape Restoration (CFLR) Program, the Integrated Resource Restoration (IRR) pilot, and the 2012 Planning Rule (National Forest Management Act). Lessons learned in the development and application of these programs and efforts, and associated research, monitoring, and partner feedback provide key insights worth considering in the development of performance measures aligned with the Shared Stewardship Strategy.

Lessons learned from monitoring the Forest Service's Collaborative Forest Landscape Restoration Program

The Forest Service's Collaborative Forest Landscape Restoration Program (CFLRP) was created in 2009 and represents a major innovation. CFLRP is an early example of a shift in agency priorities and business practices toward emphasizing ecological restoration, collaboration, and working in partnership at meaningful scales. CFLRP has proved a rich source of research on collaborative governance, accountability, implementation monitoring, and adaptive management across multiple landscapes (e.g., Butler and Schultz 2019, ongoing monitoring through the Ecological Restoration Institute at Northern Arizona University and the Colorado Forest Restoration Institute at Colorado State University). Many related resources are compiled in a Forest Service online "Resource Library" repository (<https://www.fs.fed.us/restoration/CFLRP/resource-library.php>). This research offers rich feedback and observations for the development of social and ecological performance measures. Here we focus on observations with relevance to developing outcome-based performance measures related to partnerships

Important observations and recommendations based on CFLRP monitoring:

- Existing performance measures (e.g., Key Performance Indicators and targets) do not incentivize collaboration or desired outcomes and can undercut collaborative goals.
- The Forest Service often implements only those elements of collaborative projects that align with meeting existing targets, for which funding is more readily available. For example, some partners involved in CFLRP projects were frustrated by the lack of implementation of on-the-ground restoration projects after years of planning.
- Social science and socioeconomic monitoring to date has been insufficient.
- Rapid turnover of Forest Service staff creates tension in responsibilities and accountabilities, and in continuity with mindset, goals, and objectives.
- Stakeholders want greater transparency regarding agency budgets, work plans, agency policy, project pre-planning, and targets and may require assistance in learning the complexity of these topics.
- Implementation of collaborative projects is vulnerable to budgetary fluctuations both at Congressional discretion and internal agency budgeting.
- Monitoring ecological outcomes is complex and national efforts to do so were forced to simplify locally developed indicators to qualitative descriptions of progress (e.g. red, yellow, green).
- A program at the scale of CFLRP requires an updated 'business model' for the Forest Service that moves high-quality leaders to priority projects and rewards them for effective collaboration, supports focused

investments with adequate capacity, and limits personnel turnover during the life of projects.

- New business models should integrate collaborative group participants into agency personnel processes, including developing agency job descriptions and personnel evaluations. Increasing the agency's commitment to collaboration may require additional formal rights for stakeholders in national forest governance.
- Effectiveness monitoring is needed for more robust long-term adaptive management.
- Technical capacity is needed to identify appropriate metrics for monitoring.
- Monitoring coordinators are needed to manage and standardize data collection and adaptive management processes.

Lessons learned from monitoring the Forest Service's Integrated Resource Restoration Program

The Forest Service piloted another program in 2012 in three regions to reorganize its budget and performance measurement structure to include an Integrated Resource Restoration (IRR) budget line item. The IRR consolidated multiple budget line items into a single funding stream to support integrated restoration work across resource areas. The IRR pilot program offers another example of how performance measurement and shifts in budgetary discretion and monitoring can support the achievement of complex land management goals (Schultz et al. 2015). Notable related resources include: Working Papers from the Ecosystem Workforce Program (Schultz et al. 2014; Schultz et al. 2015b), and journal articles from the Department of Forest and Rangeland Stewardship at Colorado State University (e.g., Schultz et al. 2015a, Schultz et al. 2017). Below we summarize key observations and recommendations that are transferable to efforts to develop and implement outcome-based performance measures under the Shared Stewardship Strategy.

Important observations and recommendations based on monitoring the IRR:

- Changes to the Forest Service's budgeting systems and accountability are complex and difficult to communicate.
- Performance measures are not a panacea for accountability and should be combined with oversight from collaborative partners and external stakeholders who can help provide accountability for complex projects and desired outcomes.
- Activities without "hard" output targets (e.g., timber volume, acres treated) are likely to become less emphasized over time and will suffer if budgets continue to decline.
- Agency databases and record keeping will need to be updated to provide accountability and transparency in accomplishment tracking for complex restoration projects.
- Increased clarity and communication are needed about the direction and priorities of the effort at all organizational levels.
- Forests could benefit from the development of templates or standardized processes for prioritization and integration of objectives.
- Some performance measures can effectively incentivize the achievement of holistic restoration outcomes. For example, the IRR pilot demonstrated that having the "number of watersheds moved to an improved condition class" as a performance measure effectively incentivized landscape-scale outcomes.
- Forests benefit from maintaining discretion to prioritize work at the field-level, provided that they have sufficient funding for planning and implementation.

Lessons learned from monitoring under the 2012 Planning Rule

A new set of regulations to guide forest plan revision and amendments was finalized in 2012. The rule embraced an adaptive approach for forest planning that integrates the use of best available scientific information in planning, monitoring, and adaptive management; collaboration and public engagement; and wildlife conservation (Brown and Nie 2019). A key objective of the 2012 Planning Rule is to broaden and deepen the engagement of the American public in national forest land management planning. Although many/most of the recommendations from the 2012 Planning Rule committee relate to planning and monitoring, they are still of relevance to the process of developing performance measures.⁴ Notable resources documenting lessons learned from the implementation of this rule include: 66 formal recommendations made by a Federal Advisory Committee to the secretary and chief of the Forest Service (see call-out box for highlights), as well as journal articles discussing the advantages and disadvantages of the new planning and monitoring approaches (e.g., Brown and Nie 2019, Nie 2009, Schultz et al. 2013, Wurtzbach et al. 2019).

Important observations and recommendations:

- There is tension between “flexibility” and “accountability” in forest planning. The Forest Service tends toward flexibility and more ambiguous objectives to account for the scientific uncertainty, rapidly changing conditions, or to preserve administrative discretion, but the public and Congress expect unambiguous, enforceable, and measurable plans to provide regulatory certainty and accountability.
- The Forest Service must identify key assumptions, risks, and areas of uncertainty that are relevant to decision-making and commit itself to finding the answers through purposeful monitoring that is tied back into decision-making. The best chance of success will be doing this with the public and providing clear expectations of how this information will be used to make better decisions in the future.
- Forest management is a social problem to be resolved in transparent and participatory processes where affected stakeholders are able to participate from start to finish and their views are reflected in management decisions.
- The agency may not have the staff expertise, budget allocations, political support, or ecological and social data needed to implement science-based approaches called for by the 2012 Planning Rule.
- Multi-party oversight boards or technical advisory committees can aid in the design of monitoring programs, provide science consistency checks, provide interpretations, suggest when changes to management practices are needed, and advocate for consistent funding.
- The agency’s decentralized structure and culture of local autonomy are significant issues for coordination and consistency in monitoring implementation.
- Agency databases are cumbersome, effective data management is not emphasized by leadership, and forest staff often lack sufficient training or incentives to use databases effectively. External partners could likely assist with the analysis of agency monitoring data if there was greater consistency in data management and commitment to transparency.

⁴ Partners consistently referenced the NEPA process when asked to consider performance measures, indicating that the planning process may be a place to address commitments to partners. Furthermore, although monitoring and performance measures are not the same, recommendations regarding monitoring have some bearing on performance measures both because data collection may look similar, and because, as with the planning process, external partners look to monitoring to answer many of the questions that might be addressed through the development of performance measures (for instance, progress towards collaboratively planned goals).

- Leveraging partners to help with data collection and interpretation may lead to efficiencies but will still require staff time and capacity.
- In February 2018, a 21-person Federal Advisory Committee submitted a set of 66 formal recommendations to the secretary and chief of the Forest Service regarding the 2012 Planning Rule.⁵ The Committee had 19 recommendations specific to Shared Stewardship. Below we have abbreviated select recommendations most relevant to performance measurement:
- Forest Service national and regional leadership should set an expectation, through performance standards, directives, and policies, that staff prioritize partnership-building, collaboration, and other forms of Shared Stewardship prior to and during the development, implementation, and monitoring of forest plans.
- The Forest Service should clearly articulate roles, responsibilities, and restrictions on any formal agreements or partnerships.
- Forest Plans should look for ways to leverage partnership opportunities as well as utilization of all authorities.
- Forests should provide continued engagement opportunities for the public, communities, partners, and governments. Consider using cooperative forestry agreements, authorities, grants, and funding to support more partner organization capacity and participation.
- Every national forest should have access to the necessary personnel, training, and skill sets to help recruit, organize, supervise, and coordinate with partners and volunteers.
- The Forest Service should seek out and incorporate knowledge from tribal, indigenous, and traditional communities; landowners; and young people.
- Where appropriate, plan content should help to facilitate an all lands management approach.
- The Forest Service should work with its partners to develop new analytical tools to enable a spatially oriented and geographically relevant approach to planning for current and future resources.
- Common goals and objectives are defined that are acceptable and achievable across multiple land ownerships, and the Shared Stewardship role of each party clearly recognizes and respects the individual capacities of each party based on available resources and legal authorities.
- The Forest Service should encourage stakeholders to help create, implement, and monitor action plans.

⁵ Available online at: https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd575909.pdf

APPENDIX C. Other resources suggested by stakeholder partners

Organizations that specialize in United States public lands forest governance and policy and key points of contact

Below we provide a preliminary list of organizations that specialize in United States public lands forest governance and/or policy that the Forest Service may consider including in future discussions about performance measure development and broader strategies to accomplish the intent of the Shared Stewardship Strategy. There are likely additional people at each organization working on these issues, but we provide a single key contact at every organization for the agency to initiate contact with each organization. All individuals listed in this Appendix are aware of this report and have consented to having their names listed as potential contacts to support the agency in performance measure redesign.

Center for Large Landscape Conservation

Zack Wurtzebach, Social Scientist - Corridors and Crossings Program Manager (zack@largelandscapes.org)

Colorado Forest Restoration Institute

Tony Cheng, Professor and Director of Colorado Forest Restoration Institute (Tony.CHENG@colostate.edu)

Public Lands Policy Group, Colorado State University:

Courtney Schultz, Associate Professor and Director of Public Lands Policy Group (courtney.schultz@colostate.edu)

Ecological Restoration Institute

Tayloe Dubay, Knowledge Specialist (Tayloe.Dubay@nau.edu)

Oregon State University

Emily Jane Davis, Assistant Professor and Extension Specialist (EmilyJane.Davis@oregonstate.edu)

Rural Voices for Conservation Coalition

Tyson Bertone-Riggs, Policy Analyst (tyson@wallowaresources.org)

University of Georgia

Jesse Abrams, Assistant Professor, Natural Resource Policy and Sustainability (jesse.abrams@uga.edu)

University of Oregon

Heidi Huber-Stearns, Assistant Research Professor and Director of Institute for a Sustainable Environment (hhuber@uoregon.edu)

APPENDIX C. Other resources suggested by stakeholder partners, *cont.*

Below we have included suggestions from stakeholders, academics, and other policy and governance experts regarding additional resources that might support the agency in the development of outcome-based performance measures.

Analytical hierarchy process: a structured technique for organizing and analyzing complex decisions. It can be used to integrate quantitative and qualitative information. For more information, see:

Saaty, R. W. (1987). The analytic hierarchy process—what it is and how it is used. *Mathematical modelling*, 9(3-5), p. 161-176.

Forest Service Partnership Capacity Assessment Tool: This Tool was designed to help Forest Service managers or units (e.g. field office staff, ranger district, forest level, or other team) to internally assess the strengths that enable them to develop partnership(s) or collaborative working relationship(s) with non-Forest Service groups; think through areas that need attention; and identify clear actions to strengthen partnerships. See, for example:

https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd493263.pdf

https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5396088.pdf

Performance measures developed in the civic sector: the civic sector has developed evaluation processes to assess progress related capacity building. See, for example:

Brown, L., LaFond, A., & Macintyre, K. E. (2001). *Measuring capacity building* (p. 51). Chapel Hill, NC: Carolina Population Center, University of North Carolina at Chapel Hill.

Wing, K. T. (2004). Assessing the effectiveness of capacity-building initiatives: Seven issues for the field. *Nonprofit and Voluntary Sector Quarterly*, 33(1), p. 153-160.

NatureWatch, Interpretation and Conservation Education (NICE): “ the Forest Service database of record for reporting outreach and education activities and sharing our accomplishments...” https://apps.fs.usda.gov/nice/f/welcome;jsessionid=lODFqfi1kl5caQe97hyZBGWsqi7K1ijF_NrCu-03y-Gz7SW0D2t8!1554036160

APPENDIX C. Other resources suggested by stakeholder partners, *cont.*

Terrestrial Condition Framework: The Terrestrial Condition Framework (TCF) is being developed to assess terrestrial ecosystem conditions through a process that is objective and consistent for all National Forests. The TCF assesses terrestrial conditions, processes, and stressors. Factors that affect composition and structure of vegetation are of particular interest in the TCF. See, for example:

https://www.fs.fed.us/soils/documents/TCF_briefingFY13_AWFA.pdf

Cleland, David; Reynolds, Keith; Vaughan, Robert; Schrader, Barbara; Li, Harbin; Laing, Larry. (2017). Terrestrial condition assessment for national forests of the USDA Forest Service in the continental US. *Sustainability*. 9(12), p. 2144. <https://doi.org/10.3390/su9112144>.

Watershed Condition Framework: is a comprehensive approach for proactively implementing integrated restoration on priority watersheds on national forests and grasslands. See, for example:

USFS. 2011. Watershed Condition Framework. FS-977. Available at: https://www.fs.fed.us/biology/resources/pubs/watershed/maps/Watershed_Condition_Framework2011FS977.pdf

https://www.fs.fed.us/naturalresources/watershed/condition_framework.shtml

<https://databasin.org/datasets/eecb20bdbb8e4ec2a9f68797381ce80d>

http://ewp.uoregon.edu/sites/ewp.uoregon.edu/files/WP_82.pdf

http://ewp.uoregon.edu/sites/ewp.uoregon.edu/files/BP_83.pdf

APPENDIX D. Template Partnership Survey

Modeled on key themes partners expressed in RVCC/EWP research.

[Agree-disagree, 5-point scale]

Effective agency leadership

1. Agency leaders express willingness to work with and include partners in projects
2. Agency leaders are transparent about why they made decisions, even if the decision was not what partners wanted
3. Agency leaders empower staff to work in partnership

Structured decision processes

4. Agency clearly articulates role of partners in decision making and projects
5. Agency grants & agreements staff are open to ideas from partners
6. Partners can raise issues and discuss differences openly and constructively without fear of reprisal

Clear and consistent communication with stakeholders

7. Agency consistently communicates with partners
8. Agency reaches out to proactively communicate with partners
9. Agency is using clear and consistent terminology with partners
10. Agency provides a clear point of contact for the partnership
11. Agency staff critical to the partnership are available as needed

Collaborative design and implementation

12. Agency includes partners in all stages of projects in which they express interest
13. Agency clearly reports accomplishments relative to what was planned with partners
14. Agency is practicing adaptive management based on partner feedback

Sufficient resources

15. Agency seems to have adequate funding to engage with partners
16. Agency seems to have adequate funding to implement partnership projects
17. Agency is transparent about funding levels relative to needs

Appropriate data collection and management processes and evaluation

18. Agency data collection and systems are adequate to answer questions of interest to partners
19. Data is shared when requested
20. Partner data is incorporated into decision making and projects



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