

## SBEADMR Science Team 2021 summary report

February 1, 2022

### Developing and implementing resiliency treatments in Engelmann spruce and Engelmann spruce-aspen forests of the Grand Mesa and Gunnison National Forest

What did we do in 2021?

In conjunction with GMUG Timber staff, we developed resiliency focused prescriptions for the Bald timber sale. Prescriptions are modified shelterwood and group selection cuts, randomly assigned across the 11 units within the project area.

We also established pre-treatment monitoring plots. Ten plots were established for the shelterwood units, and 15 plots were established for the group selection and control units. We will return in 2022 to establish 5 more group selection/control unit plots once sale layout is finalized.

New results

None at this point. The harvest of Rainbow TS will not likely occur until 2023 due to Hwy 50 construction. Bald TS will most likely be implemented in 2023 as well. Results will be available after post-treatment monitoring occurs (2024 or later).

Interpretation of results for AMG

No results yet.

Landscape-scale impacts of spruce bark beetle and climate on forest change

What did we do in 2021?

New results

Interpretation of results for AMG

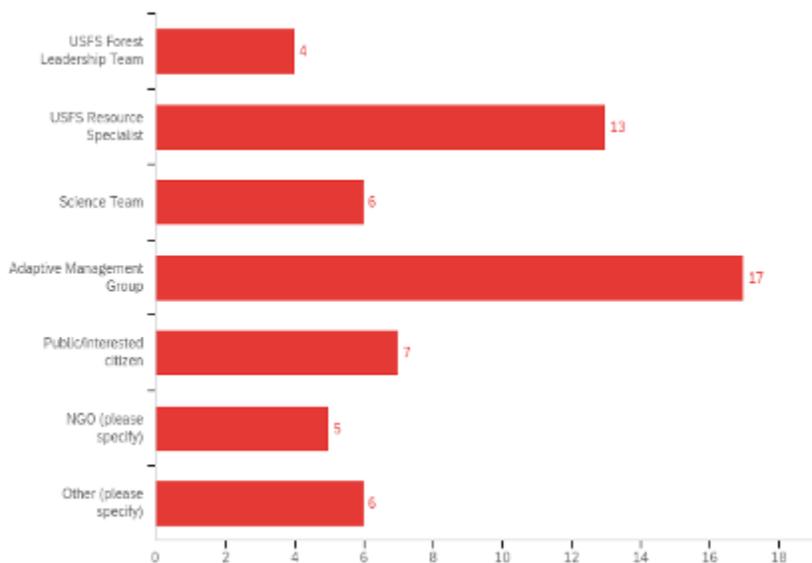
## Assess progress and performance of the SBEADMR collaborative monitoring and adaptive management process

What did we do in 2021?

We developed a scope of work which was reviewed and approved by the SBEADMR sub-committee in May 2021. This assessment was informed by the following research questions:

### 1. Is the collaborative adaptive management process functioning as it was originally intended/expected by participants?

To address this question, we conducted key informant interviews in June and July 2021 with members of the AMG, Science Team, FLT, Resource Specialists, and public at large (n=12). Findings from these interviews were analyzed to inform the development of a questionnaire to assess expectations, successes, challenges, and recommendations for improvement from all participants engaged in SBEADMR. The questionnaire was first piloted by several SBEADMR AMG members, and then administered to all SBEADMR participants in late October. We received 58 usable responses:



### 2. To what extent has stakeholder participation changed over the project timeframe?

To address this question, we conducted a document analysis of meeting notes to track participation in the AMG meetings over time. We analyzed meeting attendance notes from AMG meetings – June 2017 – April 2021. We delineated the following metrics based on attendance data:

- Frequency
- Level of participation
- Diversity
- Redundancy
- Vacancy
- Longevity and turnover

This provides an indicator of the “collaborative-ness” of the process. **This will be updated annually.**

### 3. What adaptations have been made based on the results of administrative studies?

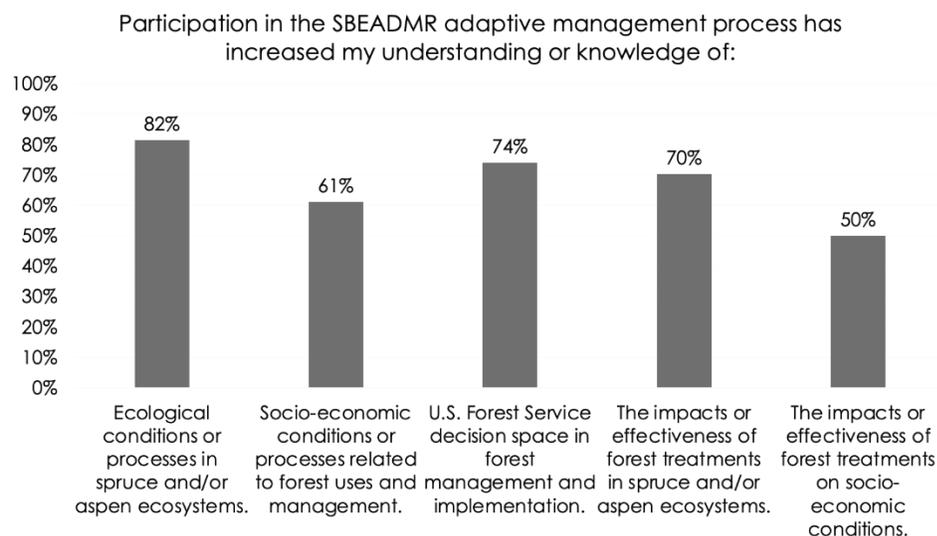
To address this question, we began to conduct a document review of the annual AMG Science matrix, Adaptive Implementation Annual Reports, FLT Management Reviews, community reports, and interviews. **This will be updated annually.**

#### New Results

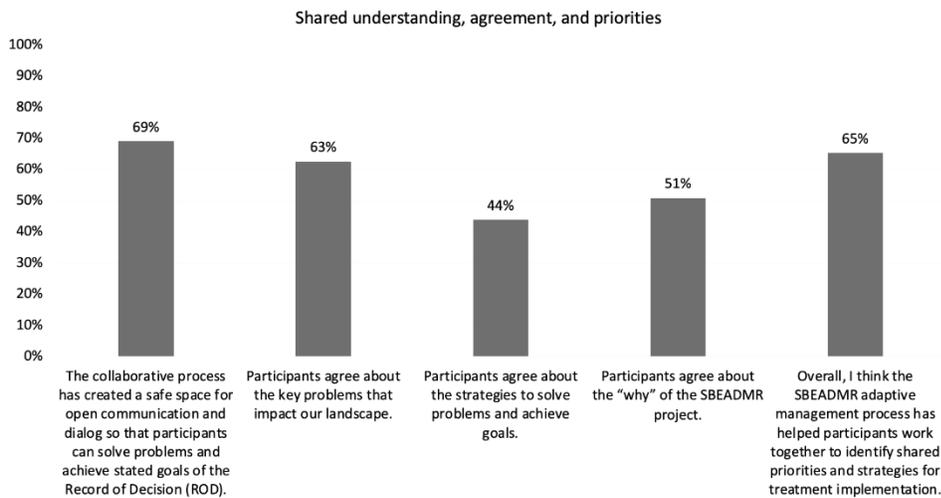
##### 1. Is the collaborative adaptive management process functioning as it was originally intended/expected by participants?

**Diverse participation:** 66% of respondents agreed or strongly agreed that the right people were engaged in the process (representative cross-section). The history of collaboration in the region, brought on by previous efforts by the PLP, and development of the AMG with seats designed to be representative helped support this. 25% disagreed to strongly disagreed that the right people were involved. While respondents emphasized the role of a core collaborative group of “doers” that have been involved since the beginning as a key factor for success, others reported that there seemed to be waning participation and enthusiasm outside the core group, and turnover in key positions that have impacted performance, trust, and led to diminished institutional memory. The logistical challenges of a large project spread out across a large geography, unpaid volunteers supporting efforts, and time required to fully engage in all annual activities was prohibiting. Further, there are currently several forest restoration initiatives in the region that compete for participants’ time and energy (CFLRP, RMRI, Taylor AMG).

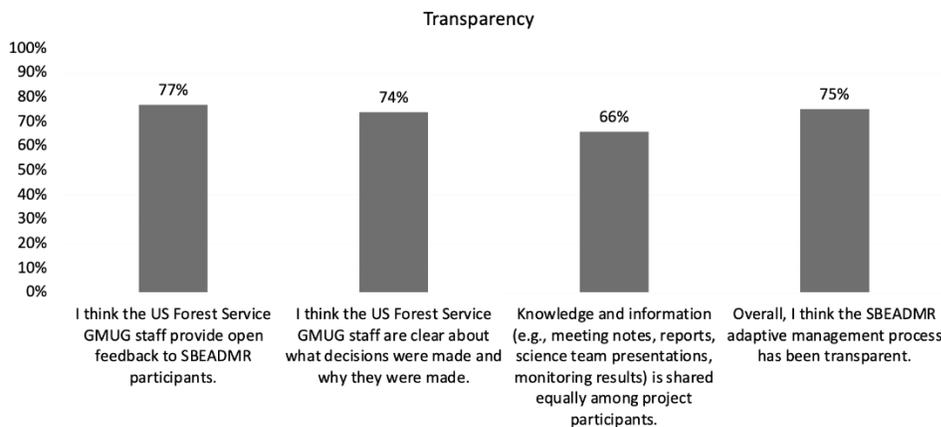
**Continued learning:** A majority of respondents reported that the SBEADMR process increased their understanding or knowledge of ecological processes in spruce-fir and aspen systems (82%), the effects of treatments on ecological systems (70%), and the USFS decision-space in planning and implementation (74%). With respect to socio-economics, 61% agreed or strongly agreed that the SBEADMR processes increased their understanding of socio-economic conditions and processes related to forest management, while only half agreed or strongly agreed that the process increased their knowledge of the impacts of treatments on socio-economic conditions.



**Shared priorities and understanding:** A majority of respondents felt that: a) the collaborative process created a space for open communication and dialogue to achieve the stated goals of the record of decision (69%); b) participants agree about the key *problems* that impact their landscape (63%); and c) on the whole, the process has helped participants identify shared priorities and strategies for treatment implementation (65%). Less agreed that participants agree about the *strategies to solve problems and achieve goals* (44%) and the “why” of the SBEADMR project (51%). There could be several reasons for diminished agreement. Respondents indicated that getting agreement around the need for salvage treatments was less difficult than coming to agreement around the purpose, need, and approaches for green tree “resiliency” treatments. Also, respondents noted that turnover has been a challenge that has complicated shared agreement and understanding of the “why” of the SBEADMR project.



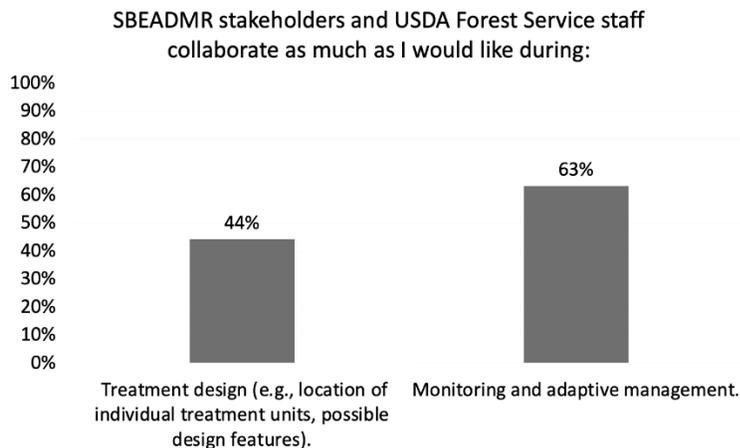
**Transparency:** A majority of respondents agreed or strongly agreed that the SBEADMR collaborative adaptive management process has been transparent, particularly regarding the GMUG’s commitment to provide open feedback to participants (77%), being clear about what decisions were made (74%), and the accessibility of knowledge and information for interested participants (66%). Both the CFRI website and Story Map were new additions to SBEADMR, which respondents noted should help with accessibility of knowledge and information.



**Responsiveness:** A majority of respondents agreed or strongly agreed that the GMUG staff were responsive to collaborative and public input (74%), new scientific information (82%), changing conditions on the ground (77%), and whether they use lessons learned from monitoring and adaptive management to improve their management actions (77%). One challenge that may warrant consideration was what the role was for, and the process within, SBEADMR in incorporating new scientific information that may be of concern to local participants but may be outside the scope of SBEADMR, not pertinent to the unique ecology and context on the GMUG, or not clear how it fits into the project.

**Shared motivation (trust, relationships, commitment):** More than 70% of respondents agreed or strongly agreed the process supported trust (77%), relationship-building (77%), and mutual respect (73%), while 79% and 73% felt that they and their colleagues, respectively, were committed to the process. Key factors to building trust, relationships, and respect reported were the open, inclusive meeting environments where participants had the opportunity to listen and learn about others' concerns, and voice their own. Strong leadership and facilitation was key to this. Additionally, trust and relationships are built by showing up, following through, being transparent, and responsive. Still, some respondents indicated some factors that have led to distrust and strained relationships among some participants, including failure in some cases to document agreed upon adaptations among the AMG, and a lack of documentation of, and follow-through on, discussions and agreements made during field trips.

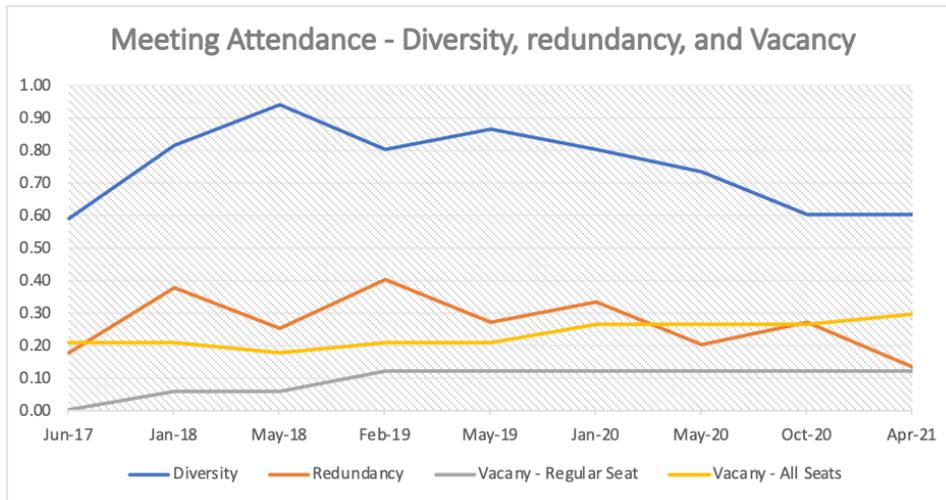
**Collaboration throughout treatment design, monitoring, and adaptive management:** 44% and 63% of respondents agreed or strongly agreed that GMUG staff and other stakeholders collaborated as much as they would like in treatment design and monitoring and adaptive management, respectively. They suggested that details provided during out-year planning allowed for identification of, and comment on, where treatments would occur, but details were not specific enough to allow for participants to meaningfully engage and inform discussions related to the treatment design. In the same vein, questionnaire respondents perceived that there was little room for modification once the sale was proposed and the period for public comment was active.



## 2. To what extent has AMG stakeholder participation changed over the project timeframe?

**Level of participation:** We defined active participants, partial and non-participants by each seat category – Active participants were present at 5 or more meetings (n=12 seats); Partial participants were present at 1-4 meetings (n=4), and non-participants did not participate in meetings (n=1).

**Meeting diversity, redundancy, and vacancy:** We assessed the percentage of seats (regular or alternate member) present at each meeting, while taking into account vacant positions. Diversity rose after the first meeting and stayed relatively high until Jan 2020. Representation decreased following the January 2020 meeting, potentially a result of COVID-19 pandemic.



Redundancy refers to the number of seats that had both the regular and alternate member present at a meeting. Redundancy varied across meetings. It has remained relatively low since May 2020. This can have implications for institutional memory if members of designated seats do not communicate about meeting outcomes.

Vacancy refers to the percent of vacant positions among all seats and regular seats (out of 34 and 17 possible seats, respectively).

- Vacancy - All – Relatively stable at 20% of seats vacancy until Jan 2020, where saw increase up to 30% by April 2021 meeting.
- Vacancy – Regular – Since February of 2019, 2 regular seats have been vacant and remain so today.

**Longevity and turnover:** We assessed changes in members representing each seat (when both regular and alternate changed). Membership has been relatively stable. The AMG witnessed an early change in the environmental/conservation seat. A change in the forest processor representative occurred in early 2020. A change in Hinsdale County representation occurred in May 2020, with no subsequent participation of that seat.

### 3. What adaptations have been made based on the results of administrative studies?

No new results to share – Results are forthcoming. They will be posted to CFRI website and updated annually.

## Interpretation of results for AMG

- Collaborativeness of AMG - Core group of 'doers' has remained invested and committed to the collaborative adaptive management process. Some vacancies in key positions and intermittent participation in the AMG were observed.
- The SBEADMR process is generally meeting its goals of diverse participation, collaborative learning, developing shared understanding and agreement, transparency, responsiveness, trust- and relationship-building, and a participatory collaborative process.
- Yet, participants identified some areas that need improvement. For example:
  - Participants suggested a number of individuals/organizations to invite or consult with on projects
  - Learning and understanding of socio-economic forest management context
  - Shared understanding and agreement around the priorities for achieving goals, and the "why" of the SBEADMR project. This may be due to turnover, shifts to resiliency treatments, among others.
  - More opportunities to understand and inform annual implementation cycle – particularly treatment design and annual adjustments or adaptations that are made.

## Recommendations for improving the process:

1. *Increased involvement and/or consultation with the following groups:*
  - a. Colorado Parks and Wildlife, Tribes, the West Region Wildfire Council, water resources and water districts, WUI community groups, fisheries and aquatic resources groups, and other NGOs (e.g., the Great Old Broads, sierra club, western Colorado alliance).
  - b. Increase work with other organizations conducting similar work, for example: CO DNR; CO Fire Commission; CO Forest Health Council
2. *Enhance opportunities for public outreach and engagement:*
  - a. Continue to invest and/or enhance new and continue traditional modes of communicating SBEADMR updates, e.g.,:
    - i. Newspaper, radio, website
    - ii. Press release and targeted distribution to local, regional and state media
    - iii. Additional opportunities for community engagement with district rangers/staff (open houses; informal field trips, community functions [e.g., Paonia Cherry Days])
  - b. Hire a communication specialist
3. *Opportunities for learning and shared understanding*
  - a. Conduct pre- and post-treatment field trips in same location when applicable
  - b. Provide field-trip de-briefs with GMUG staff, AMG, and interested participants.
  - c. Facilitate greater learning around the fuels management component of SBEADMR
  - d. Identify a common definition and understanding of resilience among the group, especially as move into green tree "resiliency" treatments
  - e. Develop onboarding processes for new and existing personnel by periodically revisiting the sideboards of the project as stated in the EIS, and articulating the extent to which groups can inform planning, implementation, and adaptive management. This could be done by spending extra time at meetings, and/or developing designated workshops or products for new personnel to attend or review.

4. *Transparency and responsiveness*

- a. Make explicit connections between what design features are being used to mitigate the impacts to snowshoe hare, how science has informed that decision, and the outcomes of treatment in areas lynx and snowshoe hare may be impacted.
- b. Consider how to integrate new scientific information brought to the group that may be of concern to local participants but may be outside the scope of SBEADMR.
- c. Continue investing in note-taking during field trips.

5. *Collaboration throughout the process*

- a. Consider opportunities to provide more detail on planned treatments during out-year planning (year 2) so that participants can more meaningfully contribute to and inform treatment design and implementation.
- b. Increase opportunities for dialogue among AMG and FLT regarding what recommendations were considered, what adaptations were made, and why or why not.
- c. Enhance communication internally with GMUG staff so that all resource specialists are aware of and onboard with new projects prior to public meetings.

6. *Outputs to work towards in next two years:*

- a. Over 70% of respondents felt that evaluating the successes and challenges of the process and recommendations for improvement was a moderate to high priority.
- b. Over 70% of respondents felt that documenting the success and failures of the SBEADMR process as a model for public lands collaboration through reports, briefs, publications was a moderate to high priority.
- c. Over 70% of respondents considered the need to go after increased state and federal funding to support wildfire mitigation was a moderate to high priority. In that vein, interview and questionnaire respondents noted the need to better link SBEADMR treatment decisions to rapidly changing climate conditions and wildfire modeling, consider how SBEADMR overlaps with adjacent wildfire response planning and risk assessment work in the region (e.g., Potential operational delineations), and prioritize and pivot toward wildfire mitigation efforts to protect communities and critical infrastructure.