Spruce Beetle Epidemic Aspen Decline Management Response (SBEADMR) Community Report

Fiscal Year 2023

History of SBEADMR and Adaptive Management Group (AMG)

In the Grand Mesa, Uncompahgre and Gunnison (GMUG) National Forests, approximately 40 percent of Engelmann spruce and aspen forests have been affected by insects and disease over the past decade. The Spruce Beetle Aspen Decline Management Response (SBEADMR) Environmental Impact Statement (EIS) was created to address a decade of disturbance issues and improve forest health for roughly 120,000 acres on the GMUG.

The purpose of SBEADMR is three-fold: minimize threats from falling, dead trees and better manage wildfires (safety); improve the resiliency of stands at risk to insects and disease (resiliency); and treat affected stands via recovery of salvageable timber and re-establishment of desired forest conditions (recovery).

Launched by the GMUG in 2016, SBEADMR is designed to allow a more

The SBEADMR Adaptive Management Group circles up at a pre-treatment review field trip for the Big Park Timber sale, August 2019

nimble "adaptive management" response to rapidly changing forest conditions associated with insect and disease outbreaks than is typically possible under U.S. Forest Service's (USFS) planning process. Conventional planning processes for forest treatments like timber harvesting can take years to complete. Although insect and disease outbreaks are part of natural disturbance cycles, the epidemic level outbreaks occurring over the last decade have produced significant mortality in the time it can take to complete the planning and analysis process for a forest treatment. Given the rapid rates of changes on forest landscapes, resiliency treatments frequently need to be redesigned into salvage treatments, a process that traditionally would require restarting the entire planning process. SBEADMR avoids this problem by using an adaptive management approach that allows the USFS to designate large swaths of land as priority treatment areas and then target specific stands of trees on an annual basis, based on current conditions.
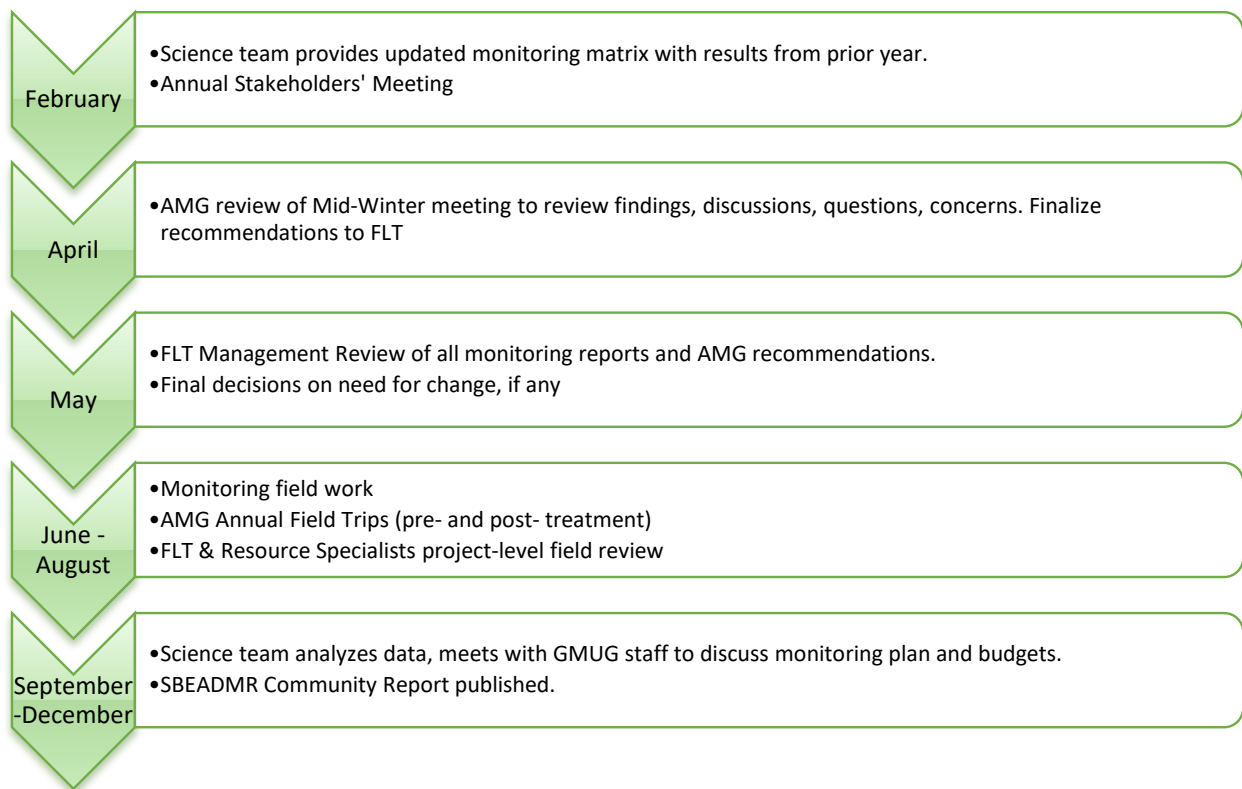
While this novel approach provided flexibility for management response, it also generated concerns from local stakeholders because of the lack of specificity about the proposed projects and the areas that would be treated. Moreover, stakeholders wanted to see more science-driven management decisions and had concerns about the impacts of temporary logging roads, disruption to recreational users, impacts on wildlife and lack of public input on specific projects. To address these concerns the USFS agreed to fund an independent science advisory team to help identify treatment

locations and inform the adaptive approach and management decision making. The GMUG also supported stakeholders' interest in convening a community based collaborative working group, which later evolved into the SBEADMR Adaptive Management Group (AMG).

The AMG is a citizen-based working group composed of individuals representing diverse local and regional interests and perspectives. Members are self-selected by stakeholder category except for the community at-large representatives, who are appointed by their respective county commissioners. Stakeholder categories include county commissioners, forestry processors, forestry loggers, conservation groups, water resources, recreation, wildlife and fish, education, Colorado State Forest Service and at-large members. The primary purpose of the AMG is to assist the GMUG in applying the adaptive management framework over a multi-year timeframe in accordance with the SBEADMR Record of Decision.

February
- Science team provides updated monitoring matrix with results from prior year.
- Annual Stakeholders' Meeting

April
- AMG review of Mid-Winter meeting to review findings, discussions, questions, concerns. Finalize recommendations to FLT

May
- FLT Management Review of all monitoring reports and AMG recommendations.
- Final decisions on need for change, if any

June - August
- Monitoring field work
- AMG Annual Field Trips (pre- and post- treatment)
- FLT & Resource Specialists project-level field review

September -December
- Science team analyzes data, meets with GMUG staff to discuss monitoring plan and budgets.
- SBEADMR Community Report published.

An overview of a typical year of engagement in the SBEADMR adaptive management process

The goals of the AMG are to:
- Provide comments on proposed treatment sites.
- Help with articulating monitoring questions.
- Participate in post-treatment evaluations.
- Review monitoring to make recommendations for adaptive management for future projects.
- Anticipate local roadblocks that may arise and work to resolve them.
- Strive for consensus of diverse interests on recommendations submitted to the GMUG.

In addition, the AMG appointed a Monitoring Committee to identify, organize, observe and monitor the following:

- Community understanding and engagement.
- Socio-economic data and impacts.
- Collaborative adaptive management process and outcomes.
- Tracking science studies and monitoring efforts.

The AMG also works directly with the SBEADMR Science Team to determine questions that need to be answered using the best available science. Comprised of researchers with expertise in forest ecology, silviculture, wildlife biology and natural resource socioeconomics, the Science Team designs rigorous studies and collects and analyzes data. The results of these scientific studies can then be used to guide management policies and projects on the ground.

SBEADMR Science Team Updates

The Science Team presented the 2022 monitoring results at the April 2023 SBEADMR Annual Meeting. Presentation summaries are listed below by project title.

Impacts of sudden aspen decline and subsequent harvest in aspen forests on forest structure and tree regeneration

Lead: Dr. Mike Battaglia, US Forest Service Rocky Mountain Research Station

Background

As SBEADMR treatments in aspen have begun, stakeholders have expressed interest in science team monitoring focused on green treatments. As such, we re-sampled plots from the Terror Creek Applied Silviculture Assessment on the Paonia Ranger District (originally led by Dr. Wayne Shepperd)

2022 Monitoring

We re-sampled 156 regeneration plots and 117 overstory plots in aspen stands at Terror Creek that were last sampled in 2012.

2022 Results

- Live aspen overstory tree density decreased from 37 to 14 square feet/acre between 2012 and 2022
- Regeneration density was higher in cut stands relative to uncut stands in low mortality stands
- Regeneration density was higher (but NOT statistically) in cut stands relative to uncut stands in moderate mortality stands
- Regeneration density was not statistically higher in cut stands relative to uncut stands in high mortality stands
- Regeneration density in high mortality cut stands was statistically not different from any uncut stands across all mortality levels
- Stem heights were higher in cut vs uncut stands in low and moderate mortality levels in 2022
- Stem heights in cut stands in high mortality were not statistically different from uncut stands across all mortality levels

Interpretation

Overall, aspen sprouting regeneration density decreased as the stands developed over the past 12 years. This was expected since density dependent mortality happens as sprouts compete with each other.

After 12 years, aspen regeneration density was still significantly higher in the areas that had low SAD mortality and was clearfelled. In contrast, while the initial sprouting density was higher initially in the clearfelled moderate severity SAD areas, by 12 years post-treatment that significance went away even though the average density was a few thousand stems greater.

In the areas that had high SAD mortality, both the initial and post-12 years measurements demonstrate that there was no significant difference in sprouting density with or without clearfelling.

Overall, based on the sprouting density metric alone, early identification of aspen stands that are starting to show symptoms of SAD and clearfelling them would provide opportunities to get substantial initial sprouting AND maintain high levels of sapling density (9500 stems/acre) at least 12 years post treatment. Those stands that had moderate SAD mortality (20-60% SAD mortality) did initially produce substantial higher initial sprouting after clearfelling than the uncut stands, but that difference narrowed through time. In these stands, clearfelling could be used to initiate a high amount of sprouting to offset browsing pressure and reduce future woody fuel loads. In areas that had high SAD mortality (>60% mortality), clearfelling didn't appreciatively increase the sprouting initially or 12 years post. Clearfelling would be appropriate if attempting to reduce surface fuel loads.

The trend of taller stems in the clearfelled low and moderate SAD impacted stands versus the uncut areas continued 12 years post-harvest. On average, these stems were about 5 to 6 meters tall (16 to 20 feet tall) compared to 2 to 3 meters (5 to 10 ft) tall in the uncut areas that experienced SAD low to moderate mortality. The high mortality SAD areas didn't have differences in aspen sprout heights initially or after 12 years. After 12 years, the sprouts were on average 4 meters tall (13 feet).

Overall, clearfelling in the low and moderate SAD impacted stands allowed faster growth of the sprouts than that observed in the uncut stands. This faster growth initially and 12 years post-harvest and the increase in sprout density ensures sufficient recruitment into the overstory and reduces the impact of browsing. A similar trend of fast height growth was observed in the high mortality SAD stands whether they were cut or not. It seems that removing the overstory via harvesting or through high levels of SAD mortality provides more resources (I.e. more light) for sprout growth.

Landscape-scale Impacts of Spruce Bark Beetle and Climate on Forest Change
Lead: Dr. Jason Sibold, Colorado State University

Background

Understanding how the Engelmann spruce is reacting to changing temperatures and snowpack conditions and identifying specific landscape features that may be suitable for more successful regeneration in the future will be critical to guide treatment site selection. This data can tell us which areas on our landscape are more resilient to climate change and where spruce forests are more likely to persist in the coming decades.

2022 Monitoring

We collected data from temperature loggers in salvaged and unsalvaged spruce forests.

Dr. Jason Sibold speaks to field trip participants at the Big Park pre-treatment review, August 2019

2022 Results

Surface temperature sensors indicate a statistically significant difference in snow melt dates between harvested and non-harvested control sites. Snowmelt is later in harvested sites Surface temperature sensors indicate a statistically significant difference in average summer temperatures with harvested sites being cooler during the growing season as compared to non-harvest control sites. Air temperature sensors indicate a statistically significant difference in average summer air temperatures, with harvest sites being cooler than non-harvest control sites.

Interpretation

Overall, salvage sites have later snowmelt and cooler temperatures (surface and 2m). The overall influence is a shorter growing season. Moreover, the combination of later snowmelt and cooler conditions would be expected to decrease soil moisture stress on seedlings. These conditions would be expected to mitigate recent and projected warmer temperatures and decreased precipitation and facilitate spruce establishment. However, spruce establishment is a complicated process with more influences than summer season weather conditions.

Assessment of socioeconomic impacts of SBEADMR

Lead: Jarod Dunn and Dr. Tony Cheng, Colorado Forest Restoration Institute

Background

One of the goals of SBEADMR is to increase economic efficiency of planning and executing of treatments. While the original SBEADMR analysis cost over $1.0 million dollars this was a one-time cost as that analysis allowed treatments to occur over an 8-12 year period with no additional NEPA. Through 2020, 24 large sales and numerous small sales have been sold treating over 16,000 acres across all five districts of the GMUG. In the past, numerous NEPA documents would have to be written to complete this much work. Current average cost of to complete a single EA is approximately $250,000-$300,000 for a single large timber sale.

While SBEADMR did reduce NEPA workload and costs, SBEADMR does require an Interdisciplinary Team (IDT) to compete resource surveys, required clearances, plan treatments and oversee project layout. These steps are documented on treatment design checklists completed for each treatment. The final designed treatment is then written into a contract or other mechanisms for implementation. Finally, Forest Service inspectors oversee project implementation to insure all requirements identified on the checklist and supporting contract provisions are accomplished.

2022 Monitoring

We gathered data from USFS personnel on administrative costs of SBEADMR implementation for resiliency treatments in the North Zone, updated revenue data for harvest, gathered wood products data from producers, gathered employment data for logging and trucking operations working on SBEADMR treatments (2017-2020), and interviewed loggers for treatment cost data.

2022 Results

North Zone (Resiliency: 2022)		
Administrative Cost	**Cost per acre treated**	**Cost per CCF sold**
Treatment Implementation - Contract administration	$43	$2

Admin Cost Breakdown North Zone	**% of total cost**
Contracting officer	11.79%
Sale Administrator	86.17%
Sale Accounting	2.03%

Year	**Timber Revenues**	**$ Revenue/CCF**
2017	$551,008	$9
2018	$1,338,810	$19
2019	$321,862	$4
2020	$400,641	$7

Wood Products		
Fiscal Year	**Timber Volume Produced (CCF)**	**% Studs from Timber Volume**

2017	59,818	97%
2018	72,131	100%

Employment:

Year	# Logging Companies	Combined Employees
2017	5	40
2018	5	35
2019	1	12
2020	3	16

# Trucking Companies	3
Combined Employees	12

Interpretation

Administrative costs were less for North Zone estimates than in previous years when cost estimates were gathered for the East Zone. East Zone estimates were for salvage harvest and North Zone is a resiliency treatment. The estimates for North Zone were based on data availability that was limited to one completed project, so it is difficult to draw conclusions with small sample size. We will gather more data on administrative costs for resiliency treatments for 2024 and gather data on administrative costs of non-commercial sales and prescribed fire.

Timber industry data shows large number of employees in the trucking and logging sectors supported by SBEADMR projects. Loggers interviewed also made large equipment purchases (3 machines) for SBEADMR projects.

Assessing progress and performance of the SBEADMR collaborative monitoring and adaptive management process
Lead: Tyler Beeton and Dr. Tony Cheng, Colorado Forest Restoration Institute

Background

One of the goals described in the SBEADMR FEIS is to "Continue the public participation and collaborative learning that occurred during the planning phase, encourage and support the continuation of collaborative workgroup efforts throughout implementation" (FEIS Appendix E, Public Engagement in Adaptive Implementation, Goal p. 2). In order to evaluate achievement of this goal, the SBEADMR Science Team is looking at the following questions:

- Is the collaborative adaptive management process functioning as it was originally intended/expected by participants?
- To what extent has stakeholder participation changed over the project timeframe?
- What adaptations have been made based on the results of administrative studies?

2022 Monitoring

We continued our assessment of the collaborative adaptive management process, which was informed by the following research questions:

- To what extent has AMG stakeholder participation changed over the project timeframe?
- What adaptations have been made based on the results of administrative studies?
- Is the collaborative adaptive management process functioning as it was originally intended/expected by participants?

GMUG staff, AMG members, and interested public learn about the planned Muddy Aspen timber sale on a 2022 field trip.

2022 Results

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

In 2021, 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 administered to all SBEADMR participants in late October. We received 58 usable responses. Results were presented at the 2022 Annual stakeholder meeting. We subsequently facilitated several collaborative discussions during AMG meetings in

2021 and 2022 to identify and prioritize recommendations to improve the collaborative process that we heard from interview and survey participants. At the AMG meeting in October 2022, we facilitated a discussion on recommendations related to four key themes for improvement. The four themes were increase public engagement and outreach; shared learning, understanding, and transparency; collaboration throughout the process; and outputs and outcomes. Within each theme, we highlighted the many steps that had already been taken or were being considered to improve the process, and we assessed which, if any, additional recommendations from the collaborative adaptive management process evaluation should be prioritized in the short-term.

The key discussion points and suggestions for improving the process along these four thematic areas can be found in the meeting notes from the October 2022 AMG meeting and they are listed again here:

➢ *Theme: Increase public engagement and outreach*:
- Make a conscious effort to re-engage Colorado Parks and Wildlife (CPW) in SBEADMR meetings/activities. The agency would like advance notice and an opportunity to comment on sales or other Forest Service projects that will occur on lands CPW is responsible for managing the wildlife. Suggestion that District Ranger could reach out to Wildlife Officer in his/her district in advance of an upcoming project in that district.
- Ask District Rangers to reach out to local groups/entities that would have an interest in an upcoming project in their district, e.g., recreational groups for trail closures; counties, tourism, chamber offices for road closures, etc.; at the Annual Stakeholder meeting when out-year projects are introduced, ask attendees to identify such groups or interests that should be contacted.
- Begin tracking any special meetings, field trips or other outreach efforts by District to acknowledge the outreach/engagement efforts being made.
- Create an index of definitions of acronyms to help communication with the public.
- Consider adding or increasing seats on AMG to improve opportunities for collaboration and coordination, e.g., recreation, community wildfire mitigation collaboratives.

➢ *Theme: Shared learning, understanding and transparency*
- Given a general misunderstanding of what is meant by "resiliency", it is important to have a shared understanding of what resiliency means in the context of SBEADMR; have a presentation/discussion at the Annual Stakeholder meeting to clarify what treatments and why are they considered "resilient" and what are the desired future conditions. Helpful to connect the "dots" between work of the Science Team and "resiliency".
- Be more transparent about how science informs lynx management and mitigation, e.g., when lynx thresholds are exceeded what is the plan to mitigate that from happening in the future and how is "best available science" being used.

➢ Theme: *Collaboration throughout the process*

- Provide opportunity for AMG members to attend the annual FLT meeting when it considers the AMG's recommendations for adaptations.
➢ Theme: *Outputs and Outcomes*
- Create an inventory of community wildfire collaboratives and forest health initiatives in the GMUG to understand their purpose/processes and if there are opportunities to collaborate – better communication and coordination.

Source – 10.24.2022 AMG meeting notes.

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

We analyzed meeting attendance notes from AMG meetings – June 2017 – April 2022 (n=11). We delineated the following metrics based on attendance data:

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

Findings

Frequency

We analyzed the frequency of attendance (either the regular or alternate member) for each designated seat of the AMG. There were 11 approved meetings notes with published attendance records at the time of this analysis. Some seats were represented at every meeting (e.g., environmental/conservation interests; west zone), others were intermittently present. The east zone representative was not present/vacant for the time analyzed. An education representative was only represented in the first meeting.

Level of participation

We defined active participants, partial and non-participants by each seat category – Active participants were those where the regular or alternate were present at 6 or more meetings

(n=11 seats); Partial participants were present at 2-5 meetings (n=4), and non-participants were present at 1 or less meetings (n=1).
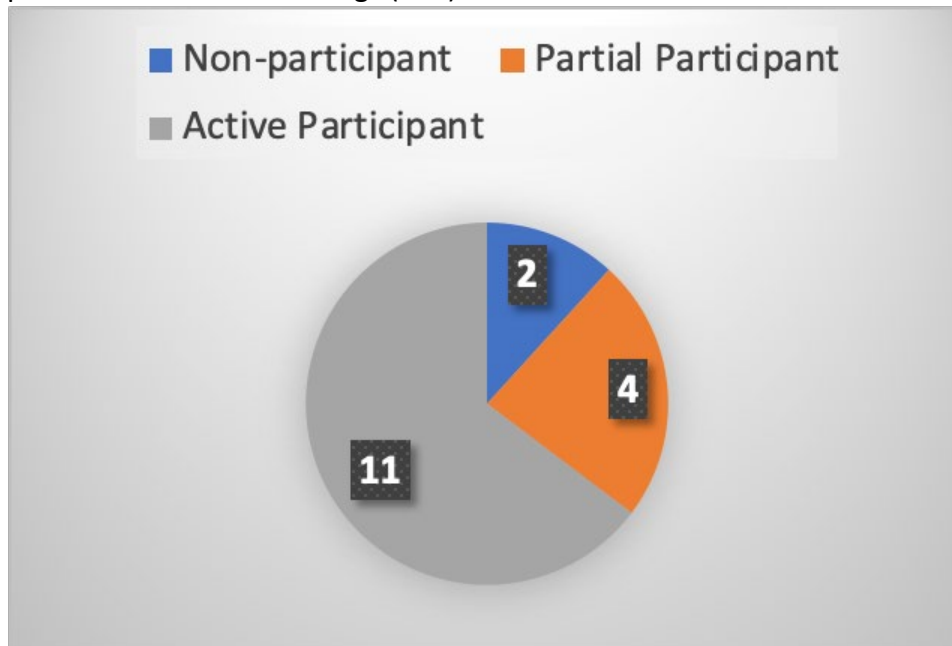

Meeting diversity, redundancy, and vacancy

We assessed the percentage of seats (regular or alternate member) present at each meeting, while taking into account vacant positions, which we have called diversity. 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, and has remained relatively lower.

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 low since April 2021, meaning that either the regular or alternate members attend meetings, but not both. This can have implications for institutional memory, especially 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).

> o Vacancy - All – Relatively stable at 20% of seats vacancy until Jan 2020, where saw increase up to 30% by April 2021 meeting. *Another vacant position (environmental conservation) drove the rate up at the April 2022 meeting.*
>
> o Vacancy – Regular – Since February of 2019, 2 regular seats have been vacant. *An additional seat became vacant in April 2022.*
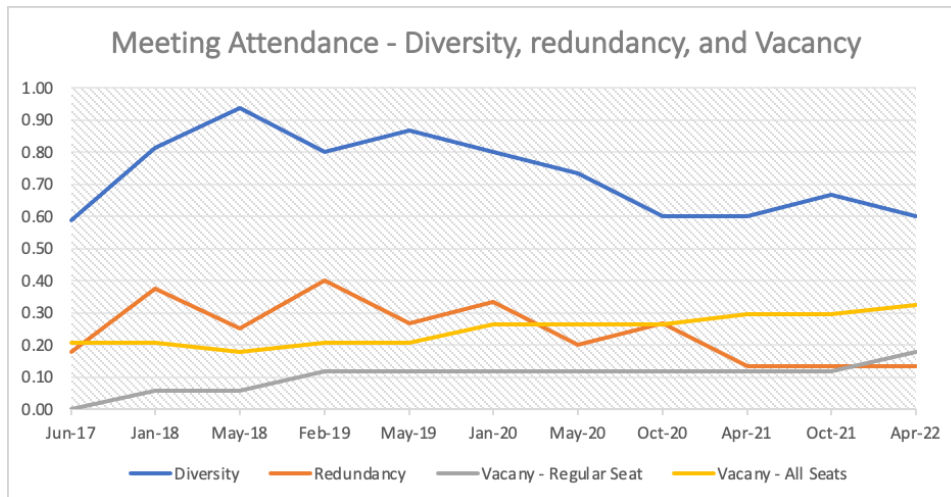
Longevity and turnover

We assessed changes in members representing both seats (i.e., when both regular and alternate seats changed). Membership has been relatively stable. The AMG witnessed an early change in the environmental/conservation seat. There is now a vacancy in that environmental 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 from that seat.

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

Purpose - The purpose of this question is to document what and how public feedback, scientific research, and/or monitoring results and findings are brought into implementation and adaptation decision-making to demonstrate a clear link between monitoring/research and adaptive management decisions.

Approach – We conducted a document review of the AMG Adaptive Implementation Annual Reports, FLT Management Reviews, community reports, and interviews to identify what adaptations have occurred post-NEPA decision. Our database includes a cumulative list of adaptations, and we have classified adaptations into five categories: administrative, planning, implementation, science and monitoring, and collaborative process adaptations. It will be updated annually after the AMG and FLT completes and publishes the Adaptive Implementation Annual Report. The document will be a living document housed on CFRI's institutional BOX account and annually uploaded to the CFRI-hosted SBEADMR website.

The database and complete list of adaptations can be found here:
https://cfri.box.com/s/w1zyrl5gjl07qinxjti3xsyfalbkep21

Interpretation

- Collaborativeness of AMG – A 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. Another seat became vacant in 2022 (environmental/conservation).
- SBEADMR has made many adaptations related to planning, science and monitoring, and implementation activities specifically, and the collaborative process more generally, since the Record of Decision was signed. These reflect adaptations based on public and AMG feedback, recommendations from GMUG staff, new scientific research, and/or monitoring results. The number of adaptations attests to the commitment of the group to the adaptive management cycle and feedback loop.
- Relatedly, results from our assessment of the collaborative adaptive management process (interviews, survey) have helped document a list of recommendations to improve the collaborative process. Using this initial list of recommendations gleaned from our assessment, we led a collaborative discussion at the October 2022 AMG meeting to refine and prioritize recommendations the AMG would like to focus on in the short term. In the 2022 Adaptive Implementation Annual Report, the AMG recommended, and the FLT approved, that the AMG review and prioritize the recommendations for improvement, and particularly recommended additional outreach from the AMG to groups identified in the survey responses. In particular, the AMG prioritized the following:
  o Increase communication and outreach to groups and develop methods to track communication channels. In this vein, developing a list of definitions and acronyms may support external communication;
  o Increase the number and type of designated seats to increase opportunities for collaboration, including but not limited to recreation interests, and community wildfire mitigation collaboratives, for example;
  o Coordinate collaborative discussions and dialog on what is meant by resiliency in the context of SBEADMR and the GMUG;
  o Increase transparency about how science informs lynx management and mitigation;
  o Allow AMG to attend annual FLT meeting AMG recommendations for adaptation are considered; and
  o Create an inventory of community wildfire collaboratives and forest health initiatives in the GMUG.
- We suggest the AMG periodically review and revise these recommendations as they address them or as new recommendations arise. It will be important to develop methods and metrics (and roles, expectations) to track progress towards addressing the recommendations. The survey instrument that was used to generate these recommendations will be readministered in 2024.

Conserving Mountain Fens in SBEADMR and Taylor Park Treatment Areas
Lead: Dr. Kate Dwire, Research Ecologist, US Forest Service Rocky Mountain Research Station

Background

The different vegetation treatments being conducted under the SBEADMR and Taylor Park Management Project could potentially impact fens and other wetlands. Fens are groundwater-supported, peat-accumulating wetlands, with characteristics distinct from other wetland types. They are high priority for conservation due to the valued ecosystem services that they provide, notably habitat for species of concern, and water and carbon storage. Wetlands occur throughout the SBEADMR and Taylor Park treatment areas, but the Grand Mesa has a particularly high density, including many fens. Current Best Management Practices (BMPs) include fixed-width buffers surrounding the wetland perimeter and groundwater sources; fen-wetlands are buffered with 100 ft, non-fen wetlands with 50 ft, and supporting spring channels with 25 ft. Concerns have been raised regarding the potential effects of vegetation treatments on fens and whether the BMPs provide adequate protection.

Within the proposed treatment areas, the aims of this project are: (1) to determine which wetlands are fens; (2) to assess groundwater resources supporting fens; (3) to select and instrument 3-4 study fens for long-term monitoring; (4) to monitor potential impacts of vegetation treatments on the hydrology and microclimate; (5) to document any changes in sediment and nutrient inputs during and following treatment implementation. The impact of forest harvest on groundwater sources as well as the effectiveness of buffers (50' or 100') in protecting groundwater sources are largely unknown.

2022 Monitoring

1) In summers 2021 and 2022, wetlands were visited and characterized within and near vegetation treatment areas in Taylor Park and on the Grand Mesa by Dwire, Gay Austin (retired BLM/USFS), and field assistants. During site visits, wetlands were determined to be fens (or not), supporting springs were identified, and any plant species of concern were noted. Water samples were collected at a subset of the sites. Candidate fens for instrumenting were identified.

2) In 2022, Grey Jay Fen on the Grand Mesa was instrumented with a meteorological station in the center of the fen, and 4 well-piezometer nests, located in each of the 4 dominant plant communities. Soils were described as part of the well installation, and vegetation was sampled near each well-piezometer nest. Grey Jay Fen is located in the Leon Timber Sale and will be re-instrumented during subsequent growing seasons (sensors were removed for the winter). Water table elevation and meteorological measurements will be recorded before, during, and for several years following forest harvest.

3) In 2022, Dwire and Gay Austin trained the USFS Enterprise Crew on fen ecology and the Groundwater Dependent Ecosystem Level 1 protocol. The crew collected data on an additional 18 wetlands on the Grand Mesa located within existing sale boundaries.

Figure 1. Grey Jay Fen (top) on the Grand Mesa (Leon Timber Sale); soil (peat) excavated to install well (center); piezometer-well nest (installed; bottom left); PVC piezometers & well prior to installation (bottom right).

Adaptive Management

The GMUG's Annual Management Reviews consider input from AMG recommendations, GMUG resource specialists, SBEADMR Science Team and other relevant research in order to make adaptive management decisions for the design and implementation of SBEADMR projects. Management Reviews are conducted by the GMUG Forest Leadership Team (FLT) who make final decisions on changes to SBEADMR implementation. The following changes were made in 2023.

FY 2023 SBEADMR Treatment Checklist Changes
No changes to the SBEADMR Treatment Checklist were made in 2023.

Other Changes
The AMG made several recommendations to GMUG FLT during the spring management review process. FLT concurred with recommendations on prioritization of aspen regeneration treatments, and facilitation of further discussion of mitigation of impacts to dense horizontal cover during timber harvest. Full text of AMG recommendations and FLT response can be found in the Adaptive Implementation Annual Report for 2023.

In FY 2022, after considerable internal discussion, the SBEADMR AMG recommended that the use of tethered cut-to-length equipment on steep slopes be allowed on a "pilot project" basis within the Telluride Ski Area. In FY 2023, it became clear that there was no longer consensus within the AMG about this recommendation. As such, GMUG NF leadership decided that a tethered cut-to-length pilot project will no longer be conducted under SBEADMR.

Log deck on the Big Willow Good Neighbor Authority timber sale

SBEADMR Timber and Fuels Treatments
Projects Awarded from Fiscal Year 2016 through Fiscal Year 2023

Sale Name	FY Awarded	Resource Zone*	Treatment Type	Acres Treated	Volume Produced (CCF)	Miles of Temporary Road	Treatment Status
Horse Mountain	2016	North	Resiliency	110	1,449	0	Complete
Cathedral	2017	East	Salvage	640	13,497	10	Complete
Nutras	2017	East	Salvage	210	5,835	1.8	Complete
Pauline	2017	East	Salvage	1,874	18,615	9.7	Complete
Skeleton	2017	East	Salvage	610	12,777	8.4	Complete
Willow Mesa	2017	East	Salvage	440	5,800	6.4	Complete
Moore Knots	2017	North	Sanitation	15	70	0	Complete
Little Cone	2017	West	Resiliency	86	1,775	0	Complete
Cooler	2018	East	Salvage	244	2,167	1.4	Complete
Divide Salvage	2018	East	Salvage	160	2,545	1	Complete
Last Tree	2018	East	Salvage	466	6,270	3.7	Complete
Millswitch	2018	East	Salvage	885	18,516	2.6	Active
Quill	2018	East	Salvage	569	6,708	4.4	Complete
Sargents Mesa	2018	East	Salvage	1,468	14,195	9.7	Complete
Crane	2018	North	Resiliency	475	8,552	1.6	Complete
High Mesa	2018	West	Salvage	320	13,178	3	Complete
Big Willow	2019	East	Salvage	2177	41,224	12	Complete
Buffalo Forks	2019	East	Salvage/ Resiliency	100	1,441	2	Sold
Ridgestock	2019	East	Salvage	1,300	28,858	12	Active
Sage Park	2019	East	Salvage	14	130	0	Complete
Jackson	2019	West	Salvage/ Resiliency	321	10,789	3.03	Active
Telski	2019	West	Resiliency	50	500	0	Complete
Overland	2020	North	Resiliency	701	18,761	4	Active
Hubbard	2020	North	Resiliency	896	16,114	7.2	Active
Rainbow	2020	East	Resiliency	956	5,418	5.6	Complete
Grouse Glade	2020	West	Resiliency	20	111	0	Complete
Big Park	2020	West	Salvage/Resiliency	1,056	16,145	1	Active
Big Creek	2021	North	Resiliency	309	2,902	3.72	Complete
Kannah	2021	North	Resiliency	345	2791	3.63	Complete
Kitson	2021	North	Salvage	21	228	0.7	Complete

Sale Name	FY Awarded	Resource Zone*	Treatment Type	Acres Treated	Volume Produced (CCF)	Miles of Temporary Road	Treatment Status
Lost 80	2021	North	Salvage	22	103	0	Sold
Muddy Aspen	2021	North	Aspen	159	4,524		Complete
Sweaty	2021	North	Resiliency	184	1,832	0.54	Active
Antelope	2021	East	Resiliency	1,258	7,680		Sold
Little Cone GNA	2021	West	Resiliency	86	1,895	0	Complete
Lone Craver	2021	West	Resiliency	545	14,142		Sold
Telski Forest Health	2021	West	Resiliency	12	746	0	Sold
Boston Peak	2022	East	Resiliency	1,010	12,984		Sold
Groundhog	2022	West	Resiliency	170	1,974		Sold
Leon	2023	North	Resiliency	668	2,584		Sold
Atkinson	2023	North	Resiliency	624	3,558		Sold
Mesa Creek	2023	North	Fuels Reduction	170	0	0	Complete
Totals				***21,746***	***329,383***	***119.12***	

*Resource Zones: East = Gunnison Ranger District, North = Grand Valley and Paonia Districts, West = Ouray and Norwood Ranger Districts

Contact Information

GMUG NF Supervisor's Office Staff:

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Carlyn Perovich, Ecologist - carlyn.perovich@usda.gov

For information about specific treatments contact your USFS District Timber Management Assistant:

East Zone (Gunnison Ranger District) – Lauren Rupiper, lauren.rupiper@usda.gov

North Zone (Grand Valley and Paonia Ranger Districts) – Christie LaDue, christie.ladue@usda.gov

West Zone (Norwood and Ouray Ranger Districts) – Wes Bice, wesley.bice@usda.gov

SBEADMR websites

Overview, Current Meeting Information, and Archives:

https://cfri.colostate.edu/projects/sbeadmr/

GMUG SBEADMR Implementation (current FY only):

https://www.fs.usda.gov/detail/gmug/landmanagement/resourcemanagement/?cid=fseprd497061

Story Map and Online Comment Platform

SBEADMR Facilitator

Susan Hansen - shansen42@gmail.com

Grand Mesa, Uncompahgre and Gunnison National Forests

SBEADMR Awarded Sales (2016 - 2023)

Ranger Districts
- Grand Valley Ranger District
- Paonia Ranger District
- Gunnison Ranger District
- Norwood Ranger District
- Ouray Ranger District

Towns
Collbran, Palisade, Clifton, Grand Junction, Whitewater, Cedaredge, Delta, Olathe, Montrose, Hotchkiss, Lazear, Crawford, Paonia, Somerset, Crested Butte, Almont, Gunnison, Pitkin, Ohio City, Nucla, Naturita, Norwood, Ridgway, Ouray, Telluride, Lake City

Sale Locations
Big Creek, Sweaty, Kitson, Kannah, Crane, Overland, Muddy Aspen, Hubbard, Antelope, Rainbow, Lost 80, Moore Knots, Buffalo Fork, Millswitch, Sargents Mesa, Skeleton, High Mesa, Big Park, Ridgestock, Jackson, Big Willow, Quill, Sage Park, Pauline, Divide, Cathedral, Nutras, Willow Mesa, Last Tree, Little Cone, Lone Craver, Telski, SMPA Settlement, Groundhog

Highways
6, 65, 133, 92, 50, 24, 141, 62, 550, 145, 149, 114

Legend
- Colorado State Boundary
- Ranger District Boundary
- GMUG Forest Boundary
- National Forest System Lands
- Non-National Forest System

Miles: 0 5 10 20 30 40