Annual Interdisciplinary Team Treatment Review
Cathedral salvage sale
July 10, 2018 – Internal Forest Service ID Team Review
July 24, 2018 – Adaptive Management Group

Introduction

In accordance with the Record of Decision for the Spruce Beetle Epidemic and Aspen Decline Management Response (SBEADMR) Final Environmental Impact Statement (FEIS), a treatment review was completed on the Cathedral salvage sale on the Gunnison Ranger District. Appendix D of the FEIS was used to guide the process which consists of a review by a Forest Service Review Team followed by a second trip with members of the SBEADMR Adaptive Management Group (AMG). The stated purpose of the SBEADMR AMG is to assist the Grand Mesa, Uncompahgre, Gunnison National (GMUG) in applying the adaptive management framework over a multi-year timeframe in accordance with the SBEADMR Final Environmental Impact Statement (FEIS) and Record of Decision (ROD). The goal of these reviews is to improve desired outcomes of the project through an adaptive management process (Appendix E of the FEIS).

Review Teams

Forest Service Team:

Name	Role on IDT
• Clay Speas	SBEADMR Team Lead
• Drew Stroberg	Gunnison RD Timber Management Assistant
• Ashley Hom	Gunnison RD Hydrologist
• Suzie Parker	Gunnison RD Wildlife Biologist
• Pat Medina	Gunnison RD Fire Management Officer
• Garth Gant	Gunnison RD Engineering Technician
• David Phillips	GMUG Forest Service Representative
• Lauren Rupipper	Gunnison RD Harvest Inspector
• Mary Keeler	GMUG Timber Contracting Officer
• Pam King	Gunnison RD NEPA Coordinator
• Ben DeBlois	GMUG Timber Program Lead (Acting)
• Tara Steadman	Gunnison RD Pre-Sale Forester

- Martin Chavez Gunnison RD Pre-Sale Forester

Adaptive Management Team:

Name	Role on AMG
Molly Pits	Non-member
Chris Miller	Public Lands Partnership and SBEADMR/AMG Coordinator
Craig Grother	Wildlife and Fish
Andy Goldman	Community member at large
Ralph Files	Recreation Users
Hilary Cooper	San Miguel County Commissioner
Norm Birtcher	Forestry processor
Mike Ganroth	Forestry logger

Rating Scale used by Teams:

- *3- Full Evidence that the specified action occurred.*
- *2- Partial Evidence that the specified action occurred.*
- *1- Insufficient evidence that the specified action occurred.*

PROCESS

Step 1 – Was the Treatment Checklist Completed with all Appropriate Signatures?

a. Was the Treatment designed to meet the Purpose and Need as stated in the SBEADMR EIS?

- Rating: 3- Full Evidence. Treatment was designed to remove hazard trees along road and salvage dead and dying material to reduce fuel loading and provide economic benefits to local communities through sale of merchantable material. The Checklist was completed and signed by all specialists having a resources that could be affected by the Cathedral Treatment. The District Ranger reviewed the Checklist and concurred with its contents. The Timber Contracting Officer also reviewed the Checklist and ensured all requirements were tied to appropriate contract provisions.

b. Was the Treatment Design Checklist completed with all appropriate signatures and approval from Line Officers and the Timber Contracting Officer?

- Rating: 3 – Full Evidence. Checklist was completed by all applicable resource specialists, Line Officer and Timber CO.

AMG Comments: Concur with finding.

Step 2 – Treatment Level Review of Design Features

a. Were Design Features (DF) applicable to the treatment identified on the checklist and incorporated into mechanisms (contract clauses) to ensure they are followed during treatment Implementation?

- Rating: 3- Full Evidence. The Checklist was completed by all applicable staff on the District or Supervisors Office. Each specialist identified what specific DF should be applied. The Timber Contracting Officer reviewed the checklist for consistency with SBEADMR environmental documents and ensured all DF were linked appropriately to timber sale

contract clauses. Any discrepancies were returned to the District for correction before the final contract package was advertised for sale.

b. Is there evidence that design features were implemented as specified in the contract or other authorizing document?

The following design features were selected for review by the ID Team. These design features were selected at random or because they represented completed work, since the sale is still on-going.

Design Feature Reviewed	**Resource Affected**	**Evidence of implementation**	**Evidence of Effectiveness (readily observable)**
WQSP-2. Wetlands: No harvest or mechanical travel within 50 ft from edge of wetland.	Watershed	**Describe design feature, including year implemented.** Maintain a 50 foot buffer from the edge of riparian/wetland free of heavy equipment. **Evidence:** An administrative use only road was used to access the unit as suggested by the SBEADMR EIS. The riparian area in question is below the road so the decision was made to allow harvest and creation of a landing above the road. From the up-slope side of the road, the landing and associate slash pile is 15-50 feet from the edge of riparian vegetation. David Philips who is the FSR on the project indicated that the location for the landing was logical since the road was already in place and the only other landing location was several hundred feet upslope requiring construction of additional temporary road. The Team agreed, that while the location of the	**If Implemented, was the design feature-in a readily observable way, effective?** **Evidence:** There was no evidence of sheet or rill erosion into riparian vegetation. Beyond the existing Administrative Road, no additional riparian vegetation was disturbed by Cathedral treatment actions. **Rating:** *2- Partial Evidence. While mechanized equipment was allowed within 50 feet of riparian vegetation, it was appropriate due to the presence of an exist road.* The Team recommends follow-up after a normal snowpack year. **AMG Comments:** Concurred with ID Team findings.

Design Feature Reviewed	Resource Affected	Evidence of implementation	Evidence of Effectiveness (readily observable)
		landing and where equipment was allowed to harvest was within 50 ft, the use of the admin road was logical and resulting in less environmental damage. *Recommendations:* *The wetland was not identified on the Sale Area Map. The Team determined that additional field time and/or GIS work (use of FWS wetland maps) is needed. All wetlands should be ID on sale area maps. In addition, a more detailed logging plan will be developed for each sale (see attached example).* *Improved training for field crews to ID wetland/riparian areas.* *No changes to DF at this time.* **Rating:** *2- Partial Evidence. While mechanized equipment was allowed within 50 feet of riparian vegetation, it was appropriate due to the presence of an exist road.* **AMG Comments:** Concurred that the decision to utilize the existing road was the least environmental impactful alternative to access the unit.	

Design Feature Reviewed	Resource Affected	Evidence of implementation	Evidence of Effectiveness (readily observable)
WQSP-7B: Skid trail locations will be agreed to by the Forest Service in advance of construction; spacing will be approximately 100 feet apart,	Watershed	**Describe design feature, including year implemented.** Maintain 100 foot spacing on all skid trails except where they converge in a landing. **Evidence:** Skid trails reviewed where approximately 100' apart and showed little evidence of soil impacts due to the use of winter logging operations. **Recommendations:** Maintain DF as written. **Rating:** *3- Full Evidence. DF was implemented as designed.* **AMG Comments:** Concurred with ID Team findings.	**If Implemented, was the design feature-in a readily observable way, effective?** **Evidence:** No adverse soil impacts or sheet or rill erosions were observed. **Recommendations:** None **Rating:** *3- Full Evidence.* **AMG Comments:** Concurred with ID Team findings.
WFRP-2: At a minimum, in spruce-fir forest types maintain 90 to 225 snags per 100 acres, 10 inches in diameter at breast height (dbh) or greater (where biologically feasible). In aspen forest types, maintain 120 – 180	Wildlife	**Describe design feature, including year implemented.** Maintain 90-225 snags per 100 acres. DF was implemented in winter 2018.	**If Implemented, was the design feature-in a readily observable way, effective?** **Evidence**: While little blow down was observed in the leave groups, only one season has lapsed since implementation.

Design Feature Reviewed	Resource Affected	Evidence of implementation	Evidence of Effectiveness (readily observable)
snags per 100 acres, 8 inches dbh or greater (where biologically feasible).		**Evidence**: While single trees greater than the required minimum DBH were lacking in many cutting units, groups of snags in areas with good advanced regeneration were retained. The "patches" provide for improved use by wildlife and increases wind firmness. As a result, there was little evidence of recent blow down. **Recommendations:** Maintain DF as written. Encourage grouping of snags in at least .25 acres groups. **Rating:** *3- Full Evidence. DF was implemented as designed.* **AMG Comments:** Concurred with ID Team findings.	Spot checking of these groups by Sale Administrators (SA) next summer after a second season is recommended to determine their effectiveness. **Recommendations:** None **Rating:** *3- Full Evidence.* **AMG Comments:** Concurred with ID Team findings.
WFRP-3A: Where feasible, maintain a minimum of 10-20 tons per acre of coarse woody debris within harvest units. Where possible in regeneration units, create piles of logs, stumps, or other woody debris to minimize the effects of larger openings.	Wildlife	**Describe design feature, including year implemented.** Maintain a minimum of 10-20 tons per acre of large wood post-harvest. **Evidence:** Using photo monitoring cards from Browns transects the Team determine the minimum standard was met. In fact, the Team assessed the amount of large wood to be excess of 30 tons per acre. Much of the larger wood in the cutting unit existed prior to	**If Implemented, was the design feature-in a readily observable way, effective?** **Evidence:** Retention of large wood in excess of 30 tons per acre is a benefit to soil resources and aid in tree regeneration. From a fuel loading perspective, Pat would like to see surface fuels slightly lower. Overall the team believes the amount of large wood retained is within the range expected in spruce-fir ecosystems.

Design Feature Reviewed	Resource Affected	Evidence of implementation	Evidence of Effectiveness (readily observable)
		treatment due blow-down. Additional slash from harvest is within the 10-20 tons per acre range. **Recommendations:** Maintain DF as written. Provide Brown's transect photographs to Sale Administrators (SA) to allow calibration of their eye to desired large wood levels. **Rating:** *3- Full Evidence. DF was implemented as designed.* **AMG Comments:** Concurred with ID Team findings.	**Recommendations:** None **Rating:** *3- Full Evidence* **AMG Comments:** Concurred with ID Team findings.
TSHA-4: Timber hauling operations will be restricted during wet or thawed conditions, when needed to protect the road surface. When logging occurs over snow or frozen ground, standard Forest Service practices will be followed.	Engineering	**Describe design feature, including year implemented.** **Evidence:** implemented 2018. Due to weather conditions roads were frozen during operations with minimal surface water and therefore adverse impacts to the roads did not occur. **Recommendations:** None **Rating:** *3- Full Evidence. DF was implemented as designed.* **AMG Comments:** Concurred with ID Team findings.	**If Implemented, was the design feature-in a readily observable way, effective?** **Evidence:** No evidence of rutting or excessive haul related road damage. **Rating:** *3- Full Evidence.* **AMG Comments:** Concurred with ID Team findings.

Design Feature Reviewed	Resource Affected	Evidence of implementation	Evidence of Effectiveness (readily observable)
SP-4: While recognizing the high variability of treatment unit conditions and prescriptions, slash piling should be limited as follows to minimize impacts to soils: slash piles at landings should generally be limited to 1500 square feet or less. After landing piles are burned, rehabilitate burned area by scarification. Interior piles should generally be limited to 400 square feet or less. Minimize the placement of green material exceeding 8'' in diameter in piles. *Gunnison Modification from 2017 Management Review:* Slash piles at landings will be generally limited to 3000 sq ft or less and interior piles will be limited to 600 sq ft. **Rationale -** these pile sizes are what have been used in sale units under the La Garita EA. They have been more successful at burning and easier to administer. Rehabilitation: Burn scars will be rehabilitated by ripping and reseeding to a level commensurate to the original piles rehab expectations.	Fuels	**Describe design feature, including year implemented.** Slash piles are limited to 3,000 sq. feet and cannot be taller than 6 feet high. The DF was implemented in 2018. **Evidence:** Sale Administrators (SA) are having difficulty implementing this DF because it varies from what has been historically used on timber sales. As a result operators create shorter (height) and longer piles which are actually increasing the amount of soil exposed to impact during burning. **Recommendation**: Re-write DF to allow SA more flexibility to create piles with a smaller footprint but increased height to accommodate the volume of slash. Large diameter material would still be cut up into smaller lengths to reduce their impact to soils during burning. Use dimensions (50' x 50') instead of sq ft and increase height . **Rating:** *3- Full Evidence. DF was implemented as designed but we are not achieving the desired outcome (see evidence of effectiveness).*	**If Implemented, was the design feature-in a readily observable way, effective?** **Evidence:** No, due to confusion with purchasers, we are actually impacting more soil resource than what has occurred historically. The Team recommended changing the DF to read as follows: ***To facilitate complete burning, piles shall be compact in size and shape, and free of soil. Piles will not be less than 12 (twelve) feet in height. Piles shall not be constructed as windrows, rather the size of each pile's footprint shall be minimized. The size of each pile's footprint shall not exceed 50 feet in any dimension. Flexibility will be afforded to the Forest Service to vary pile size with the goal of reducing environmental impacts. Piles shall be of a size and location which will not impair road use or result in damage to residual timber. Piles shall be located at least 50 feet from residual timber.***

Design Feature Reviewed	Resource Affected	Evidence of implementation	Evidence of Effectiveness (readily observable)
Rehabbed burn scars from the La Garita EA sales have been successful.		**AMG Comments:** Concurred with ID Team findings.	These changes will afford greater flexibility to SA to break piles up into reasonably sized piles that are taller and therefore less overall surface acre of soil resources affected. Once reviewed by the Forest Leadership Team the revised standard will be used on all future timber sales. **Rating:** *2- Partial Evidence. DF was implemented as designed but we are not achieving the desired outcome (see evidence of effectiveness). The updated DF will be re-evaluated on future sales to ensure desired outcomes are achieved.* **AMG Comments:** Concurred with ID Team findings including recommended wording changes to SP-4.
Road decommissioning – No roads have been decommissioned on the sale since operations are continuing. However, the group did discuss the use of Level 1 admin roads versus construction and use of temporary roads. **Definitions:** *Temporary Roads* – Native surface road constructed temporarily for the purpose of completing management actions.	Watershed and wildlife.	**Evidence:** The SBEADMR FEIS analyzed the effects of all existing roads to wildlife and watershed health. This includes roads open to the public and Level 1 administrative use only roads. When Level 1 roads exist in a sale area, they are being used to the greatest extent possible to minimize construction of temporary roads. Once management actions are complete, Level 1 roads are returned to custodial status including hydrological stabilization. While not	**NA**

Design Feature Reviewed	Resource Affected	Evidence of implementation	Evidence of Effectiveness (readily observable)
These roads are not part of the Forest Service transportation system. Under SBEADMR, these roads will be decommissioned within 5-years of sale closure. *Level 1 Forest Service Administrative roads* – part of the Forest Service transportation system but are closed to the public. Roads are maintained in custodial care being used as needed to complete management actions. Once management actions are complete the road is hydrologically stabilized when put back into storage. At no time are they open to the public.		open to the public they are retained as part of the official transportation system. **Rating:** NA. **AMG Comments:** Information provided to AMG for clarification only.	

Step 3 – Monitoring Score card

Was identified treatment level monitoring completed?

Pages 64-66 of the treatment design checklist identifies seven monitoring items to be completed over the life of the project (one for cultural resources, two for fuels, one for invasive plants, one for road decommissioning and two for silviculture.

Cultural

Cultural resource sites that were required to be avoided during treatment implementation will be monitored for effectiveness of the protection measures following treatment completion (Per 2015 Bark Beetle Programmatic Agreement w/SHPO).

Finding: SHPO concurrence was received on January 27, 2017. (See attached letter)

AMG Comments: Concurred with ID Team findings.

Fire and Fuels

A Post-Treatment Fuel Loading Surveys in WUI and/or around infrastructure values.

B. Monitor a sample of pile burn scars for bare soil and, on scars located on slopes and in swales, for the presence of rills, gullying, or soil movement. If >100 sq. ft. of burn scar consists of bare soil; minor rilling or gullying present within or adjacent to burn scar; minor deposition of soil downslope of scar, then treat bare soil and erosion according to District protocols, which may include one or two of the following: addition of mulching, scarification, inoculation with adjacent soils, seeding, etc. If monitoring reveals >200 sq. ft. of burn scar consisting of bare soil, multiple rills or gullying, gullying 2-3" deep within burn scar, or significant deposition of soil downslope of scar, then elevate treatment application.

Finding: Treatment has not been completed. The District will re-evaluate the need to assess fuel loading in WUI since it is very limited in the project area.

Range and Weeds

A. Post-treatment invasive plant species:

Inspect and document all limited term ground-disturbing operations in infested areas for at least three (3) growing seasons following completion of the treatment.

Finding: Areas of weed infestation were inventoried and treated prior to logging. Approximately 200 acres were treated in proposed harvest areas. Post logging inventories will be completed to identify and treat new infestation if they occur.
Monitoring will continue post sale for at least three growing season to ensure effectiveness of treatments.

AMG Comments: Concurred with ID Team findings.

Transportation

A. All newly constructed roads in treatment area will be decommissioned within 5-years of sale closure (WQSP-8). Complete monitoring to ensure this has been completed and report inappropriate database of record.

Finding: Sale has not been completed and therefore all temporary roads are still needed. Road closure will be assessed as it happens by sale administration. Temporary roads are being tracked by sale as they are sold. When access is needed following sale closure, road will be tracked in FACTS. All temporary roads will be decommissioned within 5-year of sale closure.

AMG Comments: Concurred with ID Team findings.

Silviculture

A. First and third year plantation survival surveys will be conducted to determine planting survival rates in areas that were planted after harvest

B. Complete stocking surveys in order to certify treatment unit fully stocked. This includes species composition and age class as required by National Forest Management Act (NFMA).

Finding: The sale has not been completed and therefore monitoring under A and B has not been completed**.** These surveys will be completed at a later date.

AMG Feedback on process

This questionnaire is intended to receive input from participants in multiparty field reviews of SBEADMR projects about:

1) Whether treatment goals are being met
2) Whether design features were implemented and in a readily observable way, effective.
3) Whether the monitoring were implemented and if applicable, applied to treatment design or evaluation.

The questionnaire was distributed to all members of the public on the trip. Five completed forms were turned in. Results are shared below.

SBEADMR Goal Indicator	**Average Rating 1= Strongly disagree, 2 = Disagree, neither disagree or agree, 4 = agree; 5- strongly agree**	**Number of responses**	**Comments**
Did the Forest Service demonstrate evidence that actions identified on the Checklist were implemented as designed and in a readily observable way, effective?	4.8	6	Helps demonstrate compliance with ROD during project implementation Observations need to continue long-term to determine overall effectiveness.
Did the Forest Serve demonstrate openness to public comments and a willingness to adjust management actions toward the goal of improved environmental performance?	4.9	6	Forest Service was very open to public comment and discussion. We focused on IDT review and process and bridge to sale contract and small changes to design features and not overall environmental performance.
Did the review provide you information that the SBEADMR project is being implemented in accordance with completed NEPA and specifically the Treatment Design Checklist?	4.9	6	Continued long-term monitoring is needed to ensure intentions of BMPs are met. Overall logging operations and planned reforestation yes, but some confusion on post-sale road decommissioning (admin road versus temporary roads).
Did the format of the review facilitate your understanding of treatment actions and design features implemented to minimize adverse	4.7	6	Recommend change for slash pile size to 50 x 50 feet. Very beneficial to be able to interact with district staff and timber sale operators.

impacts and/or achieve a desired outcome?			Would have been helpful to have the Forest Service Representative on the field trip. **Forest Service Response**: Acting FSR was planning to attend but due to an issue on another sale cancel the morning of July 25.
Do you have other suggests that would strengthen the review process toward the goal of continual learning and improved environmental outcomes?	NA	6	Review of sale areas in the future after completed monitoring would be helpful and interesting. Keep in mind recreational use including area for camping when considering road closures. Continue to learn and adapt. Select more design features for review on field trips as the sales continue over time.

Calvin C. Speas
Resource Staff Officer/SBEADMR Lead
July 26, 2018