

**Annual Interdisciplinary Team Treatment Review
Rainbow TS
July 20,2023**

**Adaptive Management Group (AMG) Review
August 3, 2023**

Review Team:

Name	Position
Carlyn Perovich	Forest Ecologist
Lauren Rupiper	East Zone Timber Management Assistant
Arthur Haines	East Zone Silviculturist
Mike Battaglia	Research Forester, Rocky Mountain Research Station
Lance Asherin	Forester, Rocky Mountain Research Station
Dayle Funka	Gunnison District Ranger
Gina Rone	Forest Soil Scientist
Virginia Hudspeth	Climate Adaptation Resource Assistant
Sarah Lowe	Gunnison District Wildlife Biologist
Chris Olson	Forest Service Representative
Kyle Rogers	Sale Admin/Forest Service Representative

Name	Position
Dave Carr	Fuels Specialist
Pat Medina	East Zone Fire Management Officer
Matt Quinn	Gunnison RD Rec Management Specialist
Dusty Jager	Gunnison RD Rangeland Management Specialist
Jack Starkebaum	Gunnison RD Forester
Hank Lochhead	Gunnison RD Harvest Inspector
Jake Jaraczeski	Gunnison RD Forester
Chad Wellman	Gunnison RD Civil Engineer
Emily Nutgrass	Gunnison RD Environmental Coordinator
Ashley McCay	Wildlife Tech
Scott Lahey	Gunnison RD Forestry Tech

Rating Scale:

- *3- Full Evidence*
- *2- Partial Evidence*
- *1- Insufficient evidence*

Step 1 – Was the Treatment Checklist Completed with all appropriate signatures?

Evidence

The Checklist was completed and signed by all specialists having a resource 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

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

AMG Comments:

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

Evidence:

- The Rainbow TS is a green-tree resiliency treatment. Prescriptions were carried out in accordance with the Silvicultural Prescription Matrix (Appendix A of the FEIS).
- The treatment met the purpose and need of SBEADMR, specifically:
 - Resiliency to increase the forest ability to respond to multiple and interacting stresses by promoting regeneration and create multiple age classes of trees.
 - Recovery to provide commercial products to local dependent industries at levels commensurate with Forest Plan direction.
 - Design features were applied where needed to minimize environmental impacts and/or to achieve desired outcomes.

Rating: 3 – Full evidence

AMG Comments:

Step 2 – Treatment level Review of design features

Were Design Features 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 design features (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.

AMG Comments:

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 and AMG. These design features were selected because they would be readily visible in the field, relevant to this project, and/or of particular interest to the ID Team and AMG.

Design Feature Reviewed	Evidence of implementation	Evidence of Effectiveness (readily observable)
<p>Wildlife, Fish, and Rare Plants WFRP-12</p> <p>Areas supporting live advanced regeneration with >35% Dense Horizontal Cover in blocks greater than 0.3 acres will be avoided to the extent possible during layout [and during harvest operations], while allowing feasible operations.</p>	<p>Describe design feature, including year implemented.</p> <p>Evidence: DHC in areas between groups looks good; we expect it was probably higher prior to spruce budworm.</p> <p>Recommendations: None</p> <p>Rating: 3 – full evidence AMG Comments:</p>	<p>If Implemented, was the design feature-in a readily observable way, effective?</p> <p>Evidence: Generally yes, though DHC has decreased due to spruce budworm. It is challenging to mitigate this though, as DHC/multi-storied stands are conducive to spruce budworm population success/reproduction.</p> <p>Recommendations: Continue to look for ways to mitigate spruce budworm impacts.</p> <p>Rating: 3 – full evidence AMG Comments:</p>
<p>Water Quality and Soil Productivity WQSP-1A</p> <p>Maintain the organic ground cover of each activity area so that pedestals, rills, and surface runoff from the activity area are not increased. The amount of organic ground cover needed will vary by different ecological types and should be commensurate with the potential of the site.</p>	<p>Describe design feature, including year implemented.</p> <p>Evidence: Organic ground cover and soil within groups looks good; landings are more highly impacted; you can see effects to soil where tracked equipment turns.</p> <p>Recommendations: Landings are generally just more highly impacted areas. Continue to re-use landings as much as possible. Soil Scientist recommends waiting for at least 1 winter season after piles are burned to allow landings to recover before doing detrimental soil disturbance monitoring</p> <p>Rating: 2 – partial evidence AMG Comments:</p>	<p>If implemented, was the design feature-in a readily observable way, effective?</p> <p>Evidence: There is a good balance of ground cover for soil health and exposed mineral soil that is conducive to spruce regeneration.</p> <p>Recommendations: Revisit landings after piles are burned, ripped, and seeded to re-assess soil impacts.</p> <p>Rating: 3 – full evidence AMG Comments:</p>

<p>Water Quality and Soil Productivity WQSP-7B</p> <p>Skid trail locations will be agreed to by the Forest Service in advance of construction; spacing will be approximately 100 feet apart, allowing for topographic variation and skid trail convergence. Spacewater bars as appropriate on skid trails according to slope and soil type as indicated below: (see Unified Soil Classification - ASTM D 24871)</p>	<p>Describe design feature, including year implemented.</p> <p>Evidence: Skid trails generally go from group to group, so no convergence needed. Spacing for skid trails is greater than 100' apart; skid trail visited has low/no slope so water bars not needed.</p> <p>Recommendations: None Rating: 3 – full evidence</p> <p>AMG Comments:</p>	<p>If Implemented, was the design feature-in a readily observable way, effective?</p> <p>Evidence: Yes, no undesirable impacts to soil and water due to skid trail location or spacing were observed.</p> <p>Recommendations: None Rating: 3 – full evidence</p> <p>AMG Comments:</p>
<p>Slash Piles SP-4</p> <p>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. 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.</p>	<p>Describe design feature, including year implemented.</p> <p>Evidence: All observed slash piles are > 12 feet high. Some piles do have one side that is > 50 ft long (one pile measured in Unit 4 has a 60' long side)</p> <p>Recommendations: IDT agrees that while intent of SP-4 is good, it is not always possible to meet the 50' limit specified, and is better to have one pile that is slightly long than 2 piles that meet the 50' max. Recommend modifying SP-4 to remove "The size of each pile's footprint shall not exceed 50 feet in any dimension." Also recommend continuing to look for opportunities to use air curtain burners (biochar) – though this will not be feasible in all situations.</p>	<p>If Implemented, was the design feature-in a readily observable way, effective?</p> <p>Evidence: While we have not yet burned these piles, fuels & fire staff agreed that they looked well-constructed and were likely to burn well.</p> <p>Recommendations: Assess after piles are burned.</p> <p>Rating: 3 – full evidence. While SP-4 was not followed exactly, IDT agreed that it was followed as well as possible given the amount of wood material.</p> <p>AMG Comments:</p>

	<p>Rating: 2 – partial evidence.</p> <p>AMG Comments:</p>	
--	---	--

Step 3 – Monitoring Score card

Was identified treatment level monitoring completed?

Pages 64-66 identifies treatment level monitoring. Items selected for monitoring are listed below.

Fire and Fuels

Monitor a sample of pile burn scars for bare soil and, on scars located on slopes and in swales, for the presence of rills, gullyng, or soil movement. **If** >100 sq. ft. of burn scar consists of bare soil; minor rilling or gullyng 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 gullyng, gullyng 2-3" deep within burnscar, or significant deposition of soil downslope of scar, **then** elevate treatment application.

Finding: *Piles have not yet been burned; monitoring will occur after burning.*

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: Not applicable - there are no known areas of invasive plant infestation within the treatment area.

Transportation

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 in appropriate database of record.

Finding: All temporary roads have been fully decommissioned as of July 2023. Sale admin has ensured that this is completely. There is no official database of record for temporary road decommissioning.

Soil and Water

Pre and post-sale soil monitoring will be conducted.

Finding:

Pre-sale soil monitoring was completed in 2018. Post-sale monitoring will occur 2-3 years after piles are burned.

Silviculture

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: Stocking surveys will occur to certify stands are fully stocked over the next 5-years (year 1,3 and 5 post-closure).

Adaptive Management Group Review

Date: 8-3-2023

AMG Members attending the review

Member	Organization or Interest Group	Regular member or alternate

General Public Attending (Non-AMG)

At the conclusion of each treatment review AMG members are asked to evaluate how the Forest Service is doing based upon SBEADMR goal indicators.

SBEADMR Goal Indicator	Number of AMG Responses	Range and Average of all responses	Additional Comments
		1 = Strongly disagree, 2 = Disagree, 3 = Neither agree or disagree, 4 = Agree, 5 = Strongly agree, NS = Not sure. Provide	
Did the Forest Service demonstrate evidence that actions identified on the Checklist were implemented as designed and in a readily observable way, effective?		Average:	Comment: Forest Service response:
Did the Forest Serve demonstrate openness to public comments and a willingness to adjust management actions toward the goal of improved environmental performance?		Average:	Comment: Forest Service response:
Did the review provide you information that the SBEADMR project is being implemented in accordance with complete NEPA and specifically the Treatment Design Checklist?		Average:	Comment: Forest Service response:
Did the format of the review facilitate your understanding of treatment actions and		Average:	Comment: Forest Service response:

<p>design features implemented to minimize adverse impacts and/or achieve a desired outcome?</p>			
<p>Do you have other suggests that would strengthen the review process toward the goal of continual learning and improved environmental outcomes?</p>			<p>Comment:</p> <p>Forest Service response:</p>