Environmental Assessment Checklist

Project Name: 5h Ranch Fuel Reduction
Proposed Implementation Date: October 2024
Proponents: Big Sky Land Management, GCEM, 5h Ranch, Bozeman Unit, CLO
Landowner: 5h Ranch
County: Gallatin
HRA #: 16-B-49464
Expiration Date: 9/6/2026

Type and Purpose of Action

Description of Proposed Alternative Practice Action

Ian Moore/ Big Sky Land Management is proposing an alternative practice. The harvest area is located 7 aerial miles south of Bozeman within the following section: NE4 SW4 and NW4 SE4 of Sec.11 T3S 5E. The owner's property is located at the mouth of hyalite canyon and sits partially along Hyalite Creek, a class 1 stream.

Ian Moore representing Big Sky Land Management opened an HRA for this project on September 6th, 2024, to conduct a fuels reduction project on behalf of Gallatin Emergency Management. Unit D is a five-acre section that borders hyalite creek in the map provided to Ian Moore by Gallatin Emergency Management. The planned treatment was to remove the understory fuels and thin overstory trees to create fuel breaks

The objective of this alternative practice is to remove the slash deposited into the SMZ to fulfill the original objective of the fuels reduction project and the HRA. The majority of slash was deposited on the boundary of the 50ft SMZ buffer and equipment should not be operated within 25ft of OHWM. Big Sky Land Management plans to use a mini excavator to remove the slash.

Objectives of this project include,

- Ian Moore is requesting an alternative practice to remove slash on 3 100ft segments of SMZ.
    1. Operate Equipment in the SMZ (Rule 4: 36.11.304).
- According to MCA 77-5-301 through 307, DNRC is authorized to administer and enforce the provisions of the SMZ Law. This Law was developed to protect the public interest of water quality and quantity within forested areas; provide for standards, oversights and penalties to ensure forest practices conserve the integrity of SMZ's; provide voluntary guidelines for wildlife management within SMZ's; and allow operators necessary flexibility to use practices appropriate to site-specific conditions in the SMZ. ARM

36.11.301 through 313 further specify the design of SMZ boundaries, allowable activities, and prohibitions within the SMZ, penalties and other related provisions.

- According to MCA 77-5-304 and ARM 36.11.310, DNRC *may* approve alternative practices that are different from practices required by the SMZ Law only if such practices would be otherwise lawful and continue to conserve or not significantly diminish the integrity and function of the SMZ.

Mitigation measures associated with this AP would include:

1. *Ground conditions would be dry to less than 20% moisture content or frozen conditions.*
2. *Equipment should not be operated closer than 25 feet from ordinary high-water mark*

Proposed activities include:

Rule	Action	Quantity
	Proposed Alternative Practices	
2	Operation of Equipment in SMZ	300 feet
Duration of Activities:	Fall	
Implementation Period:	10/2024-	

The MT-DNRC's implementation of the Streamside Management Zone (SMZ) law and rules protects and maintains the functions of a SMZ. The six functions of an SMZ, as identified in the SMZ law (77-5-301[1] MCA), are:

- Acts as an effective sediment filter to maintain water quality.
- Provides shade to regulate stream temperature.
- Supports diverse and productive aquatic and terrestrial riparian habitats.
- Protects the stream channel and banks.
- Provide large woody debris that is eventually recruited into a stream to maintain riffles, pools, and other elements of channel structure.
- Promotes floodplain stability.

Alternatives Considered:
No-Action Alternative: No equipment would be operated within the SMZ of the Class 1 Stream. Slash retrieval would be implemented outside of the SMZ and as far as the excavator reach allows within the SMZ.

Action Alternative: Use excavator to operate inside the marked SMZ and remove slash.

Impacts on the Physical Environment

VEGETATION: Forest type is categorized as an aspen and mixed conifer forest. This site is dominated by Douglas-fir, Engelmann spruce and quaking aspen.

Insects and Diseases: No major I&D attacks observed

SOIL DISTURBANCE AND PRODUCTIVITY:

Soil Disturbance and Productivity Existing Conditions:

Soil consists of loam to sandy clay-loam; it is very well drained, and the area of violation has low amounts of soil disturbance. There is some evidence at draw bottoms of occasional flow that likely haven't had flow in a long time.

Soil Disturbance and Productivity	Impact												Can Impact Be Mitigated?
	Direct				Secondary				Cumulative				
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High	
No-Action													
Physical Disturbance (Compaction and Displacement)	X				X					X			
Erosion	X				X					X			
Slope Stability	X				X					X			
Action													
Physical Disturbance (Compaction and Displacement)		X				X				X			Y
Erosion		X				X				X			Y
Slope Stability		X				X				X			Y

Soil mitigation measure:

1. Equipment would be allowed no closer than 20 feet from the ordinary high-water mark.
2. Equipment operation would be limited to periods of dry soil, generally 20% or less.
3. No turning of equipment inside the marked SMZ. Straight in-straight out to minimize the risk of soils disturbance.

WATER QUALITY AND QUANTITY:

Water Quality and Quantity Existing Conditions: Proposed action would take place along approximately 300 feet of Class 1 Hyalite Creek. Water quality will not be affected.

Water Quality & Quantity	Impact												Can Impact Be Mitigated?
	Direct				Secondary				Cumulative				
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High	
No-Action													
Water Quality	X				X					X			N
Action													
Water Quality		X				X				X			Y (1)

(1) *Water Quality & Quantity Mitigations:* By restricting equipment operation to dry conditions, and prohibiting equipment use within 25 feet of the OHWM as well as turning within the SMZ, the risk of disturbing soils would be minimized. Existing vegetation would be protected to serve as an adequate filter.

FISHERIES:

This section of stream does contain fish, removing slash will likely not impact the stream any further

WILDLIFE:

No impacts anticipated. Action Alternative 1 will likely have no impact on any threatened or endangered species.

AIR QUALITY:

Air Quality	Impact												Can Impact Be Mitigated?
	Direct				Secondary				Cumulative				
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High	
No-Action													
Smoke		X				X			X				N
Dust		X				X			X				N
Action													
Smoke		X				X				X			N
Dust		X				X							N

Comments: The action alternative would result in a minimal increase in slash burning. Dust levels may also increase minimally.

Air Quality Mitigations: None

ARCHAEOLOGICAL SITES / AESTHETICS / DEMANDS ON ENVIRONMENTAL RESOURCES:

Will Alternative result in potential impacts to:	Impact												Can Impact Be Mitigated?
	Direct				Secondary				Cumulative				
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High	
No-Action													
Historical or Archaeological Sites	X				X				X				
Aesthetics	X				X				X				
Action													
Historical or Archaeological Sites	X				X				X				
Aesthetics	X				X				X				

Comments: No historic sites identified. Aesthetics would be improved with slash removal

OTHER ENVIRONMENTAL DOCUMENTS PERTINENT TO THE AREA: List other studies, plans or projects on this tract. Determine cumulative impacts likely to occur as a result of current private, state or federal actions in the analysis area, and from future proposed state actions in the analysis area that are under MEPA review (scoped) or permitting review by any state agency.

None

Impacts on the Human Population

Evaluation of the impacts on the proposed action including **direct, secondary, and cumulative** impacts on the Human Population.

Will Alternative result in potential impacts to:	Impact												Can Impact Be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
No-Action														
Health and Human Safety	X				X				X					
Industrial, Commercial and Agricultural Activities and Production	X				X				X					
Quantity and Distribution of Employment	X				X				X					
Local Tax Base and Tax Revenues	X				X				X					
Demand for Government Services	X				X				X					
Access To and Quality of Recreational and Wilderness Activities	X				X				X					
Density and Distribution of population and housing	X				X				X					
Social Structures and Mores	X				X				X					
Cultural Uniqueness and Diversity	X				X				X					
Action														
Health and Human Safety	X				X				X					
Industrial, Commercial and Agricultural Activities and Production	X				X				X					
Quantity and Distribution of Employment	X				X				X					
Local Tax Base and Tax Revenues	X				X				X					
Demand for Government Services	X				X				X					
Access To and Quality of Recreational and Wilderness Activities	X				X				X					

Will Alternative result in potential impacts to:	Impact												Can Impact Be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
Density and Distribution of population and housing	X				X				X					
Social Structures and Mores	X				X				X					
Cultural Uniqueness and Diversity	X				X				X					

Finding

Alternative Selected

The Action 1 Alternative is selected for implementation.

Significance of Potential Impacts

Overall impacts of slash removal will be minimal, majority of impact to SMZ has already occurred through the violations. Mitigation efforts in the form of planting trees will minimize further erosion and sediment deposition.

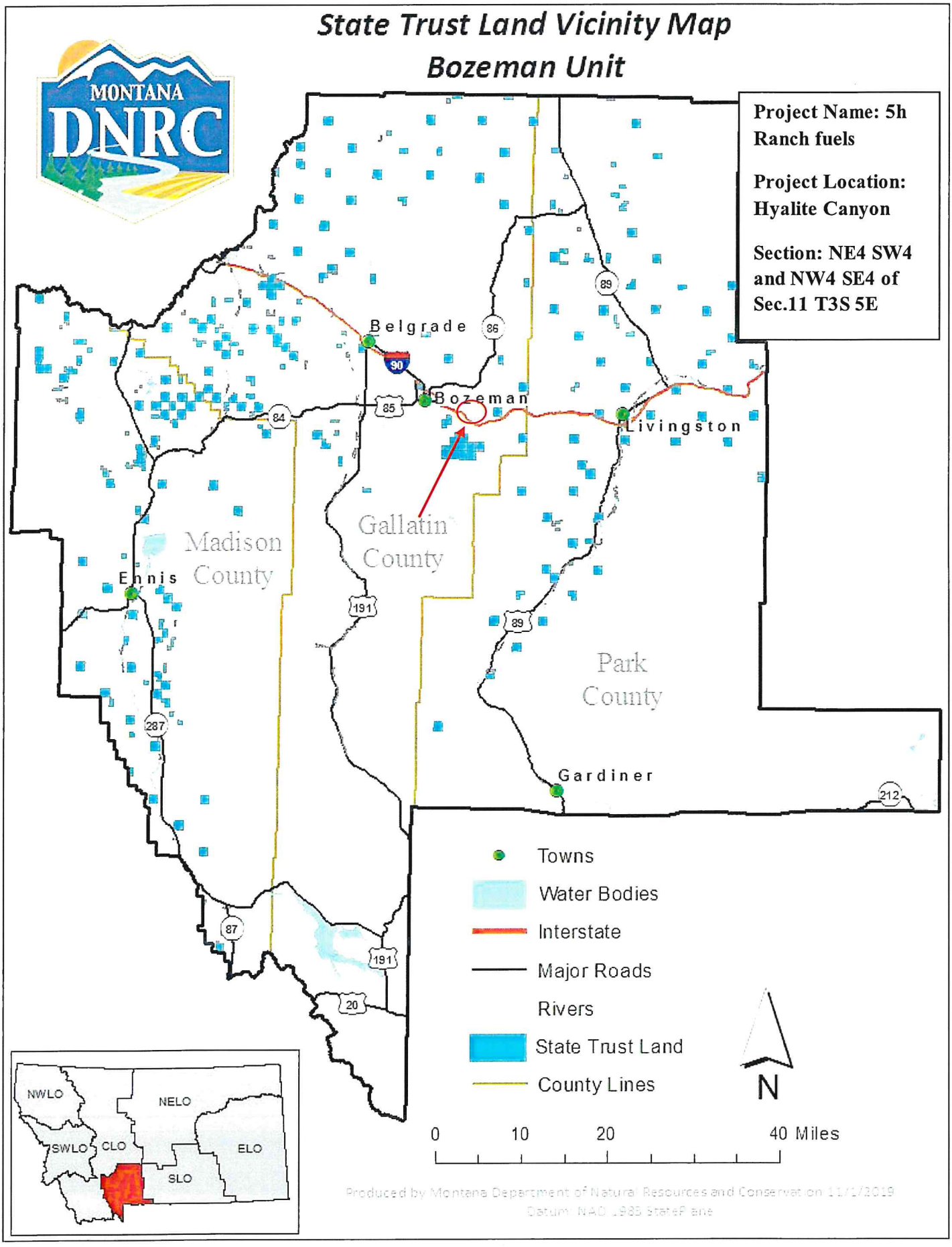
Need for Further Environmental Analysis

[ ] EIS [ ] More Detailed EA [X] No Further Analysis

Environmental Assessment Checklist Approved By:

Name: Kara Huyser
Title: Bozeman Unit Manager
Date10/11/2024

Signature: 


State Trust Land Vicinity Map
Bozeman Unit
MONTANA
DNRC
Project Name: 5h Ranch fuels
Project Location: Hyalite Canyon
Section: NE4 SW4 and NW4 SE4 of Sec.11 T3S 5E
Belgrade
Bozeman
Livingston
Ennis
Gardiner
Madison County
Gallatin County
Park County
90
86
89
84
85
191
287
87
20
212
Towns
Water Bodies
Interstate
Major Roads
Rivers
State Trust Land
County Lines
N
0 10 20 40 Miles
NWLO
NELO
SWLO
CLO
ELO
SLO
Produced by Montana Department of Natural Resources and Conservation 11/1/2019
Datum: NAD 1983 StatePlane