Environmental Assessment Checklist

Project Name: Boyd – Three Mile Creek Conifer Encroachment Treatment Project
Proposed Implementation Date: 2024
Proponent: Dillon Unit, Central Land Office, Montana DNRC
County: Madison

Type and Purpose of Action

Description of Proposed Action:

The Dillon Unit of the Montana Department of Natural Resources and Conservation (DNRC) has received an Improvement Request Form from the Elis Boyd Ranch proposing to conduct sage grouse habitat restoration work on state land by removing conifer encroachment over approximately 250 acres of state-owned range land. The proposal is being funded through a Natural Resource Conservation Service (NRCS) EQIP program grant. The NRCS will pay Elis Boyd Ranch $28,500 once the project is completed. The ranch will contribute $500 to the proposal. Conifer encroachment has been identified as a considerable threat to sage grouse conservation (80 FR 59858, October 2, 2015), and reducing the prevalence of rangeland-invading trees has been identified as an important objective for this region of southwest Montana.

The project is located approximately 1 air mile southeast of Virginia City Montana (see Attachments A-1 and A-2), on DNRC-managed section: **36, T6S, R3W**. This section is a Common Schools grant section.

Objectives of the Project:

Elis Boyd Ranch is proposing removal of low, density encroaching conifers on up to 260 acres of range land on section: 36, T6S, R3W located in Madison County. The project is based on the expansion of Douglas-fir and Rocky Mountain juniper into historical sagebrush habitats. Conifer encroachment is considered a significant factor in lek extirpation due to conifers providing subsidy to common terrestrial and avian predators of sage grouse.

The NRCS mapped conifer encroachment in the project area using a combination of aerial photography and site inspections. They identified 260 acres of Phase 1 conifer encroachment. Phase 1 encroachment class is dominated by sagebrush with scattered conifers typically less than 2 meters tall. Work crews would cut all visible conifers within the treatment boundaries. The project would be of short duration and would be completed within two spring/summer operating seasons. Removal of encroaching conifers would be expected to restore and enhance habitat values in this area for several decades.

Duration of Activities:

The initiation of project-related activities would begin in the spring of 2024 and continue for up to 5 years.

Project Development

SCOPING AND PUBLIC INVOLVEMENT:

A specific project scoping notice was sent to individuals and organizations likely to have an interest in the proposal and project area. Notices were sent out on May 10, 2022. The comment deadline was May 24, 2022. For this proposal, three comments were received. These included comments from MT Fish Wildlife & Parks Wildlife Biologist, Dean Waltee and MT DNRC Archeologist, Patrick Rennie.

SUMMARY OF COMMENTS RECEIVED:

MT FWP Wildlife Biologist Dean Waltee commented that he had no concerns with the project. He worked closely with the NRCS in the planning phase of the project and the proposal will be a benefit to wildlife and the sage grouse population for years to come. He provided overall support for the proposal but voiced concern regarding potential fuel loading in areas where conifer encroachment is heavy. If there is significant fuels loading, he would like to see some form of fuels reduction to avoid impacting the sagebrush grass community.

MT DNRC Archeologist Patrick Renee commented that a class I level review was conducted by the DNRC staff archeologist for the areas of potential effect (APE) on DNRC administered School Trust Land. This entailed inspection of project maps, geologic maps, the CRIS and CRABS databases, DNRC's TLMS data base, and General Land Office Survey Plats. The Class I search revealed that no formally recorded cultural or paleontological resources are in the APEs. The project will have no effect to state owned Heritage Properties.

OTHER GOVERNMENTAL AGENCIES WITH JURISDICTION, LIST OF PERMITS NEEDED: *(Conservation Easements, Army Corps of Engineers, road use permits, etc.)*

- **No other government permits are required for this proposal**.

ALTERNATIVES CONSIDERED:

During the development of this project two distinct alternatives were considered, which include the Proposed Action Alternative and the No Action Alternative.

Proposed Action Alternative – Under the Action Alternative, DNRC would allow the Ellis Boyd Ranch to implement conifer removal activities on state trust lands.

No Action Alternative – Under the No Action Alternative, the DNRC would not authorize the Ellis Boyd Ranch to implement the project on state trust lands.

Impacts on the Physical Environment

Evaluation of the impacts on the No-Action and Action Alternatives including **direct, secondary, and cumulative** impacts on the Physical Environment.

VEGETATION:

The NRCS mapped conifer encroachment in the project area using a combination of aerial photography and site inspections. Phase 1 encroachment class is dominated by sagebrush with scattered conifers typically less than 2 meters tall. In the proposed treatment area, NRCS and the Ellis Boyd Ranch identified approximately 250 acres of Phase 1 encroachment was identified on the state section.

Vegetation	Impact												Can Impact Be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
No-Action														
Noxious Weeds	**x**													
Rare Plants	**x**													
Vegetative community	**x**					**x**				**x**			**No**	**1.**
Action														
Noxious Weeds	**x**												**Yes**	**2.**
Rare Plants	**x**				**x**				**x**					
Vegetative community		**x**				**x**				**x**			**Yes**	**3.**

Comments:

1. Under the No Action Alternative, conifer encroachment would continue into sagebrush/grassland dominated vegetation community types. As no activities would occur or be possible under this alternative, no mitigations would be possible to reduce this occurrence.

2. A data query was conducted by the Montana Natural Heritage Program (MNHP) for the project (March 1, 2017) to identify possible endangered, threatened and sensitive plants in the proposed treatment area. No sensitive plants records were found for DNRC lands included in the project area.

3. Under the Action Alternative beneficial effects to native plant communities in the area would be expected from conifer removal treatments.

SOIL DISTURBANCE AND PRODUCTIVITY:

Soil Disturbance and Productivity	Impact												Can Impact Be Mitigated?	Comment Number
	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**					
Nutrient Cycling	**x**				**x**				**x**					
Slope Stability	**x**				**x**				**x**					
Soil Productivity	**x**				**x**				**x**					
Action														
Physical Disturbance (Compaction and Displacement)	**x**				**x**				**x**					
Erosion	**x**				**x**				**x**					
Nutrient Cycling	**x**				**x**				**x**					
Slope Stability	**x**				**x**				**x**					
Soil Productivity	**x**				**x**				**x**					

Comments:

WATER QUALITY AND QUANTITY:

Water Quality & Quantity	Impact												Can Impact Be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
No-Action														
Water Quality	**x**				**x**				**x**					
Water Quantity	**x**				**x**				**x**					
Action														
Water Quality	**x**				**x**				**x**					**1.**
Water Quantity	**x**				**x**				**x**					

Comments:

1. Three Mile Creek a perennial stream runs through a portion of the proposed project area. Conifer encroachment in the SMZ will be removed to improve deciduous plants in the riparian area. Given the project requirements, measurable direct, indirect and cumulative impacts to water quality and water resources would not be expected.

FISHERIES:

Fisheries	Impact												Can Impact Be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
No-Action														
Sediment	**x**				**x**				**x**					
Flow Regimes	**x**				**x**				**x**					
Woody Debris	**x**				**x**				**x**					
Stream Shading	**x**				**x**				**x**					
Stream Temperature	**x**				**x**				**x**					
Connectivity	**x**				**x**				**x**					
Populations	**x**				**x**				**x**					
Action														
Sediment	**x**				**x**				**x**					
Flow Regimes	**x**				**x**				**x**					
Woody Debris	**x**				**x**				**x**					
Stream Shading	**x**				**x**				**x**					
Stream Temperature	**x**				**x**				**x**					
Connectivity	**x**				**x**				**x**					
Populations	**x**				**x**				**x**					

Comments:

WILDLIFE:

Wildlife	Impact												Can Impact be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
Threatened and Endangered Species														
Grizzly bear *(Ursus arctos)* Habitat: Recovery areas, security from human activity	**x**				**x**				**x**				**Yes**	**1.**
Canada lynx (*Felix lynx)* Habitat: Subalpine	**x**				**x**				**x**					**2.**

Wildlife	Impact												Can Impact be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
fir habitat types, dense sapling, old forest, deep snow zone														
Wolverine *(Gulo gulo)*	**x**				**x**				**x**					**3.**
Sensitive Species														
Bald eagle *(Haliaeetus leucocephalus)* Habitat: Late-successional forest within 1 mile of open water	**x**				**x**				**x**					
Black-backed woodpecker *(Picoides arcticus)* Habitat: Mature to old burned or beetle-infested forest	**x**				**x**				**x**					
Black-tailed prairie dog (*Cynomys ludoviscianus*) Habitat: grasslands, short-grass prairie, sagebrush semi-desert	**x**				**x**				**x**					
Flammulated owl *(Otus flammeolus)* Habitat: Late-successional ponderosa pine and Douglas-fir forest	**x**				**x**				**x**					
Gray Wolf *(Canis lupus)* Habitat: Ample big game populations, security from human activities	**x**				**x**				**x**					
Harlequin duck *(Histrionicus histrionicus)* Habitat: White-water streams, boulder and cobble substrates	**x**				**x**				**x**					

Wildlife	Impact												Can Impact be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
Northern bog lemming *(Synaptomys borealis)* Habitat: Sphagnum meadows, bogs, fens with thick moss mats	**x**				**x**				**x**					
Mountain plover (*Charadrius montanus*) Habitat: short-grass prairie & prairie dog towns	**x**				**x**				**x**					
Peregrine falcon *(Falco peregrinus)* Habitat: Cliff features near open foraging areas and/or wetlands	**x**				**x**				**x**					
Pileated woodpecker *(Dryocopus pileatus)* Habitat: Late-successional ponderosa pine and larch-fir forest	**x**				**x**				**x**					
Greater Sage grouse (*Centrocercus urophasianus*) Habitat: sagebrush semi-desert	**x**					**x**				**x**			**Yes**	**4.**
Townsend's big-eared bat *(Plecotus townsendii)* Habitat: Caves, caverns, old mines	**x**					**x**				**x**				
Big Game Species														
Elk		**x**				**x**				**x**			**Yes**	**5.**
Whitetail		**x**				**x**				**x**			**Yes**	**5.**
Mule Deer		**x**				**x**				**x**			**Yes**	**5.**
Other		**x**				**x**				**x**			**Yes**	**5.**

Comments:

1. Grizzly Bear – The project area lies approximately 20 miles from the nearest recovery zone (Greater Yellowstone Ecosystem), however it is possible that a grizzly bear could occasionally wander through the vicinity of the project area. No new roads would be constructed as a part of this proposed action. Short-term and temporary disturbance activities that effect grizzly bears, should one be in the area, would primarily be associated with noise disturbance from chainsaws and vehicle traffic while slashing conifers. Given: 1) the relatively low likelihood that a bear would be found in this area; 2) the limited scope, scale and duration of the proposed activities; and 3) the relatively low value of the habitats that would be affected for grizzly bear foraging; any potential direct, indirect, or cumulative effects to grizzly bears or their habitat would be minor.

2. Canada Lynx – The project area falls within the distribution of lynx in Montana. However, grassland and young encroaching conifer stands that would be affected by proposed treatments provide poor habitat conditions for lynx and their primary prey – snowshoe hares. Given that suitable habitat for lynx would not be treated under the proposed action, no direct, indirect, or cumulative effects to lynx would be anticipated.

3. Wolverine – The project area falls within the distribution of wolverines in Montana. However, high elevation peaks and basins that possess late persistent snowpack in spring are not present in the project area. Given that preferred denning habitat for wolverines would not be treated under the proposed action, no direct, indirect, or cumulative effects to lynx would be anticipated.

4. Greater Sage Grouse – Conifer encroachment has been identified as a considerable threat to sage grouse conservation (80 FR 59858, October 2, 2015), and reducing the prevalence of rangeland-invading trees has been identified as an important objective for this region of Montana. Proposed treatments would be planned and implemented in a coordinated fashion with conifer removal efforts on nearby state land and private lands. The positive effect of treating the Boyd's private land would be greater, given the treatments will be conducted concurrently with work conducted on other cooperating ownerships across the larger landscape. The project is based on the expansion of Douglas-fir and Rocky Mountain juniper into historical sagebrush habitats. The primary objectives of the treatments are to: 1) remove encroaching conifers from Phase 1 density class areas to maintain the acreage of healthy sagebrush-rangeland communities for sage grouse, and reduce the presence of potential perch sites for avian predators near known leks; 2) force back conifer seed walls near sagebrush community types for maintenance and reduce the source of conifer seed and its abundance in sagebrush/grassland areas. In the overall proposed treatment area, the NRCS identified approximately 250 acres of conifer encroachment in a 350 acre area of the section that is not timbered. Roughly 350 acres was identified as Phase 1 density, (See attached map – Boyd Angus/DNRC Trust Land Conifer Removal Plan Map 2017). Of these acreages, on DNRC land there would be approximately 250 acres of Phase 1 density. Removal of young conifers using chainsaws across approximately 350 acres of state trust lands proposed for treatment would temporarily (several decades) reduce the abundance and prevalence of Douglas-fir and juniper

that is beginning to invade sagebrush rangelands in the area providing a longer-term cumulative benefit to the abundance and availability of sage grouse habitat.

5. Other Terrestrial and Avian Wildlife Species – Vegetation communities on the project area likely provide suitable habitat for numerous other terrestrial and avian wildlife species. Such species would likely include elk, deer, forest carnivores, small mammals, prairie and forest associated neotropical migrant birds, raptors, black bears, etc. Treatments could remove vegetative cover usable by some species, and during treatments, motorized disturbance treatment associated with conifer removal could disturb and displace wildlife in the area for up to two months. Generally, species associated with native rangeland and sagebrush habitats would benefit, whereas species more associated with coniferous forest for meeting life requisites would not benefit. Given the types of proposed treatments, the acreage that would be treated, and the short duration activities would occur (approximately 2 months in spring/summer2017), minor adverse direct, indirect and cumulative effects to resident species would be expected.

Linkage, Corridors, and Habitat Connectivity – The project area is focused on edge habitat situated along a forest-grassland ecotone. As such, forest cover is patchy and likely occurred in a patchy fashion under historical conditions. The project area does not occur within any known linkage zones or corridors important for maintaining connectivity of populations or migration routes. However, the potential for both short and long term fragmentation and loss of rangeland and sagebrush habitat would be reduced, providing benefits for associated species such as sage grouse.

AIR QUALITY:

Air Quality	Impact												Can Impact Be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
No-Action														
Smoke	**x**				**x**				**x**					
Dust	**x**				**x**				**x**					
Action														
Smoke	**x**				**x**				**X**					
Dust	**x**				**x**				**x**					

Comments:

ARCHAEOLOGICAL SITES / AESTHETICS / DEMANDS ON ENVIRONMENTAL RESOURCES:

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		

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														
Historical or Archaeological Sites	**x**				**x**				**x**					
Aesthetics	**x**				**x**				**x**					
Demands on Environmental Resources of Land, Water, or Energy	**x**				**x**				**x**					
Action														
Historical or Archaeological Sites	**x**				**x**				**x**					**1.**
Aesthetics		**x**											**Yes**	**2.**
Demands on Environmental Resources of Land, Water, or Energy	**x**				**x**				**x**					**3.**

Comments:

1. Proposed Action -- The proposed action consists of cutting down and lopping of young (approximately 2-4 inch diameter) Douglas fir in localities where immature trees are typically spaced several feet or many yards apart. This would entail individuals using chainsaws, and walking from tree to tree. Trees would be cut near ground level and left to deteriorate in-place. This form of treatment has no potential to physically or visually impact any kind of cultural or paleontological resource. A class I level review was conducted by the DNRC staff archeologist for the areas of potential effect (APE) on DNRC administered School Trust Land. This entailed inspection of project maps, geologic maps, the CRIS and CRABS datat bases, DNRC's TLMS data base, and General Land Office Survey Plats. The Class I search revealed that no formally recorded cultural or paleontological resources are in the APEs. The project will have no effect to state owned Heritage Properties.

2. Conifer removal along forest fringe areas would alter existing vegetation and have a minor, temporary effect for up to several decades on the visual appearance of the affected lands and associated landscape. Treatments along the forest-grassland ecotone would appear natural and would likely be almost non-discernable to most casual observers. Minor expected changes would be cumulative to other natural and man-caused disturbances across the landscape over time.

3. The proposed treatments that would be conducted would not be expected to alter any existing traditional agricultural or ranching uses on the project area or surrounding lands.

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.

No other known environmental documents or federal actions are being examined within the project area.

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**			**Yes**	**1.**
Industrial, Commercial and Agricultural Activities and Production	**x**				**x**				**x**					**2.**
Quantity and Distribution of Employment	**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		
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**					**3.**
Density and Distribution of population and housing	**x**				**x**				**x**					
Social Structures and Mores	**x**				**x**				**x**					**4.**
Cultural Uniqueness and Diversity	**x**				**x**				**x**					

Comments:

1. Proposed tree slashing activities would require adequate safety measures to be in place to ensure the safety of workers. Safety requirements complying with OSHA standards and federal and state safety regulations would be required for all sawing operations.

2. The proposed treatments that would be conducted using project funding would not be expected to alter any existing traditional agricultural or ranching uses on the project area or surrounding lands.

3. Conifer removal along forest fringe areas would alter existing vegetation and have a minor, temporary effect for up to several decades on the visual appearance of the affected lands and associated landscape. Treatments along the forest-grassland ecotone would appear natural and would likely be almost non-discernable to most casual observers. Minor expected changes would be cumulative to other natural and man-caused disturbances across the landscape over time.

4. The proposed treatments that would be conducted using NRCS funding would not be expected to disturb or alter any native or traditional lifestyles or communities.

Does the proposed action involve potential risks or adverse effects that are uncertain but extremely harmful if they were to occur?

The proposed actions associated with this project will not involve potential risks or any adverse effects that are uncertain or extremely harmful if they were to occur.

Does the proposed action have impacts that are individually minor, but cumulatively significant or potentially significant?

The proposed actions associated with this project will not have any cumulative effects or potentially significant effects on the environment.

Environmental Assessment Checklist Prepared By:

Name: Michaela Kalinowski
Title: MT Forest Action Plan Forester
Date: April 23, 2024

Finding

Alternative Selected

Proposed Action Alternative – Under the Action Alternative, DNRC would allow the Ellis Boyd Ranch to implement conifer removal activities on state trust lands.

Significance of Potential Impacts

Restoring sagebrush steppe is a high priority for maintaining greater sage grouse habitat and other sagebrush dependent species in Southwest Montana and is prescribed in the Montana Governors 2015 executive order No. 10-2014. The order states that the state agencies shall give priority to the maintenance and enhancement of sage grouse habitats in core and state, federal and private entities working collaboratively to maintain and enhance sage grouse habitats and populations. This work will be paid for through funding from the NRCS.

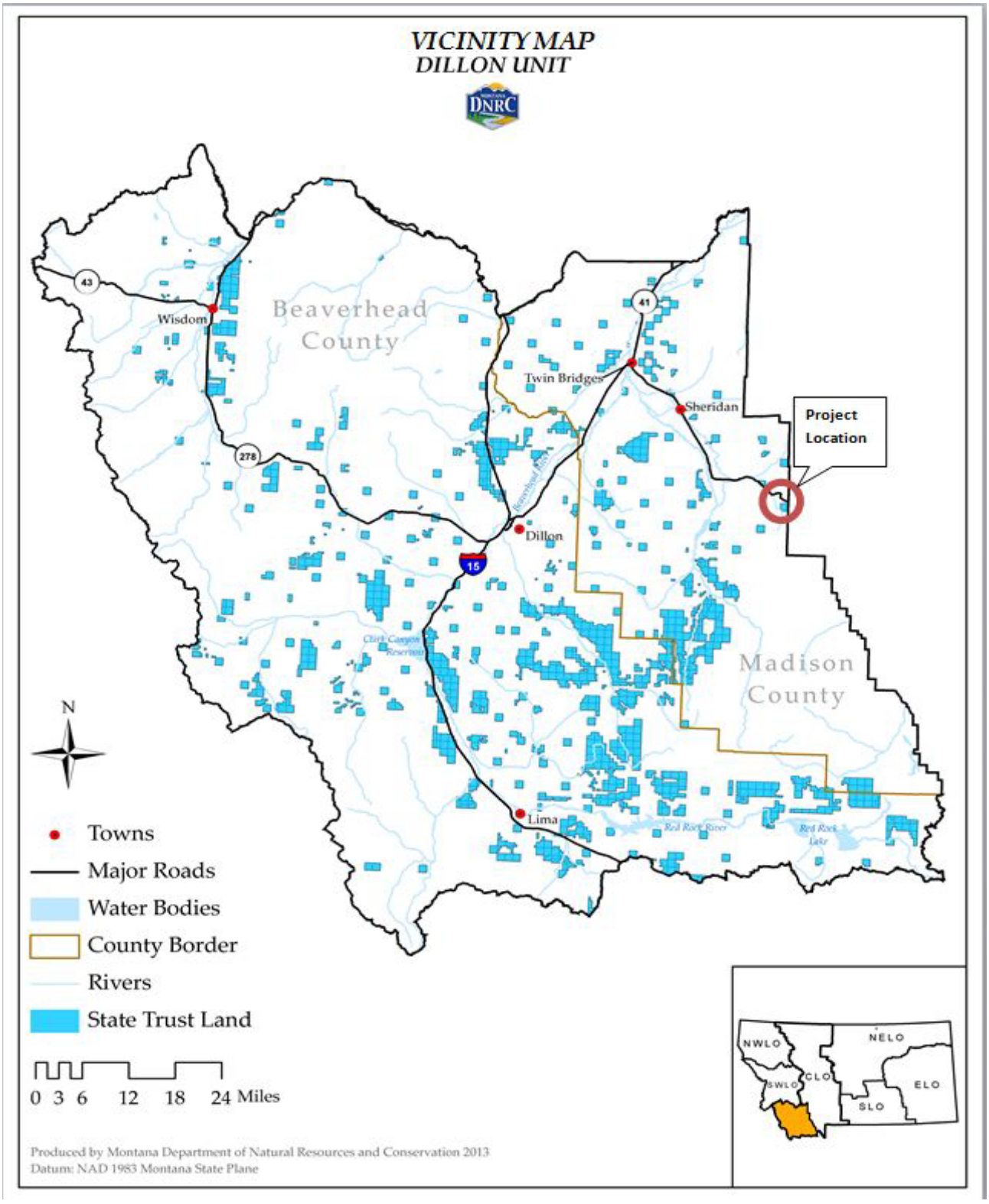
Need for Further Environmental Analysis

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

Environmental Assessment Checklist Approved By:

Name: Timothy Egan
Title: Dillon Unit Manager
Date: April 23, 2024
Signature: /s/ Timothy Egan

Maps Attachment A-1: Ellis Boyd Ranch Conifer Encroachment Treatment



Attachment A-2: