Environmental Assessment Checklist

Project Name: Dillon DNRC Trust Land Encroachment Removal Buffalo, Coyote and Reservoir Creeks
Proposed Implementation Date: Fall 2025 -2030
Proponent: Dillon Unit, Central Land Office, Montana DNRC
County: Beaverhead

Type and Purpose of Action

Description of Proposed Action:

The Dillon Unit of the Montana Department of Natural Resources and Conservation (DNRC) has received a request from the SW Montana Sagebrush Partnership (SMSP) for conifer encroachment removal projects in the Buffalo, Reservoir and Coyote Creek drainages areas of Beaverhead County (T8S R13W Section 13, 14,15, 21, 23, 25). There are approximately 940 acres of conifer encroachment removal projects proposed in 3 locations (see attached maps). The project will primarily benefit sage grouse habitat and other sage brush dependent species by removing scattered Douglas fir and juniper from sagebrush-grassland habitat. This project could begin as early as fall of 2025 and could take up to 5 years to complete. The DNRC along with SMSP, & MT FWP will be monitoring the project to see how the treatments are working and if improvements/changes need to be made.

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. Most of the proposed conifer encroachment work will occur in core Greater Sage Grouse habitat with the remainder in general habitat.

Objectives of the Project:

1. Removal of low-density conifers that are encroaching into sage brush habitat across several identified areas in Southwest Montana. Conifers to be removed include Douglas-fir, and Rocky Mountain juniper. All five-needle pine will be reserved.

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 subsidies to common terrestrial and avian predators of sage grouse. The goal of this project is to prevent Douglas-fir from invading and degrading core and general sage grouse habitat. Sage grouse nest habitat use has been documented to diminish at 3% infestation by conifers. The principal citation supporting this work is Severson et al. 2017.

Severson, J.P., Hagen, C.A., Maestas, J.D., Naugle, D.E., Forbes, J.T. and Reese, K.P., 2017. Effects of conifer expansion on greater sage-grouse nesting habitat selection. *The Journal of Wildlife Management*, *81*(1), 86-95.

Duration of Activities:

The initiation of project-related activities would begin approximately June 2023. Treatments may continue up to November 2028 depending on individual project funding.

Project Development

SCOPING AND PUBLIC INVOLVEMENT:
A specific project scoping notice was sent to individuals within a mile of the proposed projects and organizations likely to have an interest in the proposal and project area. Notices were sent out on 7/18/2025. The comment deadline was August 15,2025.

DNRC Web Page
Southwest Montana Sagebrush Partnership
Beaverhead County Commissioners
Horse Prairie Livestock
Steve Hirschy
Denhan Ranch Inc.
Roger Peters
Clark Canyon Ranch LLC
Welborn Brothers
Kelly Motichka Ag & Grazing Bureau Chief
Dan Rodgers FMB Bureau Chief
Patrick Rennie, DNRC Archeologist
MT FWP Wildlife Biologist, Jessy Newby

SUMMARY OF COMMENTS RECEIVED:

How many: No public comments were received about this proposal.

In accordance with the Montana Environmental Policy Act, public concerns about the project and potential environmental impacts must be considered and analyzed prior to making the decision of whether to allow permission for this proposal to be approved.

Accommodations were also made for the public to submit comments electronically using letters, phone calls and the email account tegan@mt.gov

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

- **Permission from the Montana Sage Grouse Habitat Conservation Program**

ALTERNATIVES CONSIDERED:

During 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 Southwest Montana Sagebrush Partnership (SMSP), to implement conifer removal activities on State Trust Lands.

No Action Alternative – Under the No Action Alternative, the DNRC would not authorize the Southwest Montana Sagebrush Partnership (SMSP), 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 conifer encroachment in the project area was mapped using a combination of aerial photography and site inspections. Phase 1 and Phase 2 encroachment class is dominated by sagebrush with scattered conifers. In the proposed treatment area, the SMSP and Montana DNRC identified approximately 940 acres of Phase 1 and Phase 2 encroachment that was on the state sections in the Buffalo, Reservoir and Coyote Creek watersheds.

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**				**x**				**x**					
Rare Plants	**x**				**x**				**x**				**Yes**	**2.**
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 (July 2025) to identify possible endangered, threatened, and sensitive plants in the proposed treatment areas. Several potential sensitive plants were identified across the ten tracts that were identified for treatment. Because the proposal will not allow motorized travel off designated roads, and the project requirements of hand crews cutting with chainsaws and loppers, the project will not create any measurable ground disturbance direct, indirect, and cumulative impacts to sensitive plants are not anticipated.

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**					**2.**
Erosion	**x**				**x**				**x**					**2.**
Nutrient Cycling	**x**				**x**				**x**					**2.**
Slope Stability	**x**				**x**				**x**					**2.**
Soil Productivity	**x**				**x**				**x**					**2.**
Action														
Physical Disturbance (Compaction and Displacement)	**x**				**x**				**x**					**3.**
Erosion	**x**				**x**				**x**					**3.**
Nutrient Cycling	**x**				**x**				**x**					**3.**
Slope Stability	**x**				**x**				**x**					**3.**
Soil Productivity	**x**				**x**				**x**					**3.**

Comments:

1. The NRCS soil survey identifies a variety of different soil types present on the 6 sections of state land that would be treated under this proposal.

2. No Action Alternative, there wouldn't be any activities that would cause soil impacts or soil disturbance nor lower soil productivity.

3. Action Alternative would allow for the removal of conifers using hand crews, chainsaws, and hand loppers to lop and scatter encroaching conifers. Little or no soil disturbance would occur from these activities. There would be no mechanized equipment allowed, so compaction or soil rutting would not occur. No negative effects on soil productivity or soil disturbance are expected with this alternative.

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**					**1.**
Water Quantity	**x**				**x**				**x**					**1.**
Action														
Water Quality	**x**				**x**				**x**					**2.**
Water Quantity	**x**				**x**				**x**					**2.**

Comments:

1. No Action Alternative, there would be no new impacts to water quality or quantity.

2. There are several perennial streams that flow through portions of the proposed project areas. Conifer encroachment in the SMZ's will be removed to improve deciduous plants in the riparian area and to improve stream flows in accordance with the Montana Stream Management Zone law. Conifer trees along stream banks will be retained to allow for stream bank stabilization and future recruitment of woody debris. Given the project requirements, hand crews cutting with chainsaws and loppers will not create any measurable direct, indirect, and cumulative impacts to water quality, or introduce sedimentation to creeks or streams. No impacts on any water resources would be expected under the action alternative.

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**					**1.**
Flow Regimes	**x**				**x**				**x**					**1.**
Woody Debris	**x**				**x**				**x**					**1.**
Stream Shading	**x**				**x**				**x**					**1.**
Stream Temperature	**x**				**x**				**x**					**1.**
Connectivity	**x**				**x**				**x**					**1.**
Populations	**x**				**x**				**x**					**1.**

Fisheries	Impact												Can Impact Be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
Action														
Sediment	**x**				**x**				**x**					**2.**
Flow Regimes	**x**				**x**				**x**					**2.**
Woody Debris	**x**				**x**				**x**					**2.**
Stream Shading	**x**				**x**				**x**					**2.**
Stream Temperature	**x**				**x**				**x**					**2.**
Connectivity	**x**				**x**				**x**					**2.**
Populations	**x**				**x**				**x**					**2.**

Comments:

1. No Action Alternative, there would be no new impacts to the fisheries.

2. A data query was conducted of the Montana Natural Heritage Program (MNHP) for the project (March 3, 2023) to identify possible endangered, threatened, and sensitive fish species in the proposed treatment areas. West slope cutthroat trout may be present in several of the streams that are present on the proposed project tracts. Given the project requirements, measurable direct, indirect, and cumulative negative impacts on fisheries would not be expected.

WILDLIFE:

Wildlife	Impact												Can Impact be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
Species of Concern														
Grizzly bear *(Ursus arctos)* Habitat: Recovery areas, security from human activity	**x**				**x**				**x**				**Yes**	**1.**
Canada lynx (*Felix lynx)* Habitat: Subalpine fir habitat types, dense sapling, old forest, deep snow zone	**x**				**x**				**x**					
Wolverine *(Gulo gulo)* Habitat: Alpine tundra, and boreal and mountain forests	**x**				**x**				**x**				**Yes**	**2.**
Bald eagle *(Haliaeetus leucocephalus)*	**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		
Habitat: Late-successional Forest within 1 mile of open water														
Black-backed woodpecker *(Picoides arcticus)* Habitat: Mature to old burned or beetle-infested forest	**x**				**x**				**x**					
Westslope Cutthroat Trout (*Oncorhynchus clarkia lewisi*) Habitat: Cold, gravely, pool and cover dominated streams	**x**					**x**				**x**			**Yes**	**3.**
Brewer's Sparrow *(Spizella breweri)* Habitat: Shrubsteppe habitats dominated by sagebrush	**x**					**x**				**x**			**Yes**	**4.**
Gray Wolf *(Canis lupus)* Habitat: Ample big game populations, security from human activities	**x**				**x**				**x**					
Pygmy Rabbit (Brachylagus idahoensis) habitats dominated by sagebrush	**x**					**x**				**x**			**Yes**	**5.**
Ferruginous Hawk *(Buteo regalis)* Habitat: Sagebrush steppe	**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	**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		
foraging areas and/or wetlands														
Hoary Bat *(Lasiurus cinereus)* Habitat: forested areas, feed over water	**x**				**x**				**x**				**Yes**	**6.**
Greater Sage grouse (*Centrocercus urophasianus*) Habitat: sagebrush semi-desert	**x**					**x**				**x**			**Yes**	**7.**
Townsend's big-eared bat *(Plecotus townsendii)* Habitat: Caves, caverns, old mines	**x**				**x**				**x**					
Big Game Species														
Elk		**x**				**x**				**x**			**Yes**	**8.**
Whitetail		**x**				**x**				**x**			**Yes**	**8.**
Mule Deer		**x**				**x**				**x**			**Yes**	**8.**
Other		**x**				**x**				**x**			**Yes**	**8.**

Comments:

1. 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 wolverines would be anticipated.

2. Westslope Cutthroat Trout – The project areas may contain Westslope Cutthroat Trout habitat. The proposed activities would have no negative effects on the species but may allow for more water flow in the streams due to the removal of conifers in the stream corridor.

4. Brewer's Sparrow – The project area is confirmed Brewer's Sparrows habitat. The sparrow typically inhabits shrub steppe habitats dominated by sagebrush with nest averaging 16 inches high in sage brush. By removing encroaching conifers from the sagebrush-rangeland communities the positive impact on the sparrow is greater than the negative impact. There is no negative impact expected.

5. Pygmy Rabbit – The project area is confirmed area of occupancy for the species. The pygmy rabbit typically inhabits shrub, sagebrush steppe grasslands on alluvial fans and high mountain

valleys. Big sagebrush is the primary food source, but grass and forbs are eaten in mid- to late summer. Habitat can be severely impacted by conifer encroachment. The positive impact of removing conifers from the sagebrush-rangeland communities outweigh any short-term disturbance during the project's workflow. There are no long term or cumulative negative impacts expected from the action alternative.

6. Hoary Bat – The project area is within a confirmed area of occupancy for the species. The Hoary Bat only occupies Montana in the summer months, and the preferred habitat is in forested areas, while foraging is done over bodies of water. This project is not expected to have any negative effect on this species.

7. Greater Sage Grouse – All conifer encroachment work in core sage grouse habitat will adhere to the following mitigation measures: The Southwest Montana Sagebrush Partnership has voluntarily agreed to adhere to the seasonal use stipulation set forth in Executive Order 12-2015. No Project activities will occur between March 15 and July 15 on units within four miles of an active sage grouse lek in a Core Area. This meets the requirements of the Montana Sage Grouse Habitat Conservation Program. The Montana Sage Grouse Habitat Conservation Program was consulted on this project and the project was approved if mitigation measures as listed above are followed.

8. 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 covers that are usable by some species, and during treatments, (motorized disturbance on existing roads and chainsaw noise) 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 duration of activities could occur (approximately five years starting summer of 2025), 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**					**1.**
Dust	**x**				**x**				**x**					**1.**
Action														
Smoke		**x**			**x**				**x**					**2.**
Dust		**x**			**x**				**x**					**2.**

Comments:
1. No Action Alternative, there would be no impact to the air quality.

2. Action Alternative, there would be limited dust impact due to vehicle travel to and from the project areas and the equipment working. The impact would be low to the air quality and pose no risks.

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 state actions are being examined within the project area.

ARCHAEOLOGICAL SITES / AESTHETICS / DEMANDS ON ENVIRONMENTAL RESOURCES:

Cultural resources include archaeological sites, historic sites, architectural properties, traditional cultural properties (TCPs), districts, landscapes, structures, features, or objects resulting from human activity. Cultural resources are nonrenewable and, for the region, reflect either pre-European contact and date from hundreds to thousands of years old, or historic and date from A.D. 1805 (for Montana) to approximately A.D. 1966. They are typically recognized as tangible manifestations of human behavior that are at least 50 years old.

Paleontological resources are fossilized plants and animal remains that are rare and have scientific research value. Nonrenewable paleontological and cultural resources provide invaluable information about the behavior of past plants, animals, and human populations and their environments.

A Class I level review was conducted by the DNRC staff archaeologist, Patrick Rennie, for the areas of potential effect (APE) on state land. A Class I (literature review) level review was conducted by the DNRC staff archaeologist for the area of potential effect (APE). This entailed

inspection of project maps, DNRC's sites/site leads database, land use records, General Land Office Survey Plats, and control cards. The Class I search results revealed that no heritage properties have been identified in the APE, but it should be noted that Class III level inventory work has not been conducted there to date.

Because the topographic setting and geology suggest a low to moderate likelihood of the presence of cultural or palaeontologic resources, proposed conifer thinning activities are expected to have *No Effect* to *Antiquities*. No additional archaeological investigative work will be conducted in response to this proposed development. However, if previously unknown cultural or paleontological materials are identified during project related activities, all work will cease until a professional assessment of such resources can be made.

COMMENTS:

1. No Action Alternative, the project area is semi-arid, sagebrush covered steppe/foothills, and the topography is varied. Cultural and palaeontologic resources within the project APEs will persist indefinitely in the rather dry and stable environment.

2. Action Alternative, the proposed action consists of cutting Douglas fir and juniper in localities where immature trees are typically spaced several feet or yards apart. This will entail one or more individual's using chainsaws or loppers and walking from tree to tree to cut them down and lop and scatter the branches. Trees will be cut near ground level and left to deteriorate in-place. This form of treatment has no potential to impact any cultural or palaeontologic resource physically or visually.

   Because no cultural or palaeontologic site has been identified on state land within the APEs, proposed conifer encroachment treatments will not impact these resources.

Impacts on the Human Population

Evaluation of the impacts on the proposed action including <u>direct, secondary, and cumulative</u> 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														

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		
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**					
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 grant 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 grant 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: Timothy Egan
Title: Dillon Unit Manager
Date: 09/05/2025

Finding

Alternative Selected

Proposed Action Alternative – Under the Action Alternative, DNRC would allow the Southwest Montana Sagebrush Partnership (SMSP), to implement conifer removal activities on State Trust Lands Significance of Potential Impacts

The potential positive impacts of this project are very high, with very little negative impacts expected. 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 state agencies shall give priority to the maintenance and enhancement of sage grouse habitats in core and general habitat. The order also states that the success of the Conservation Strategy depends on 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 and Fish and Wildlife Service and will occur across property boundaries and will be administered through the DNRC and the SMSP.

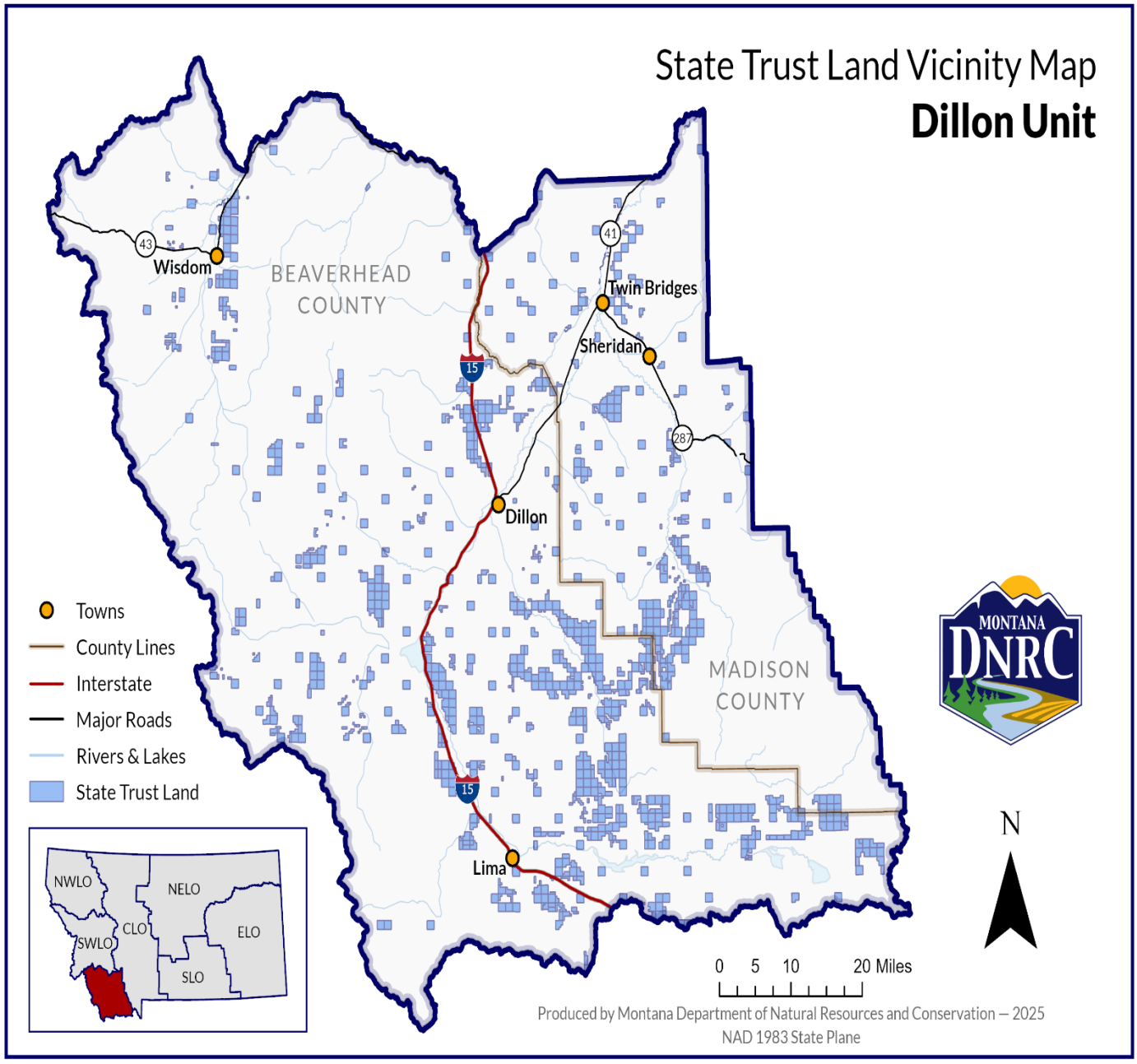
Need for Further Environmental Analysis

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

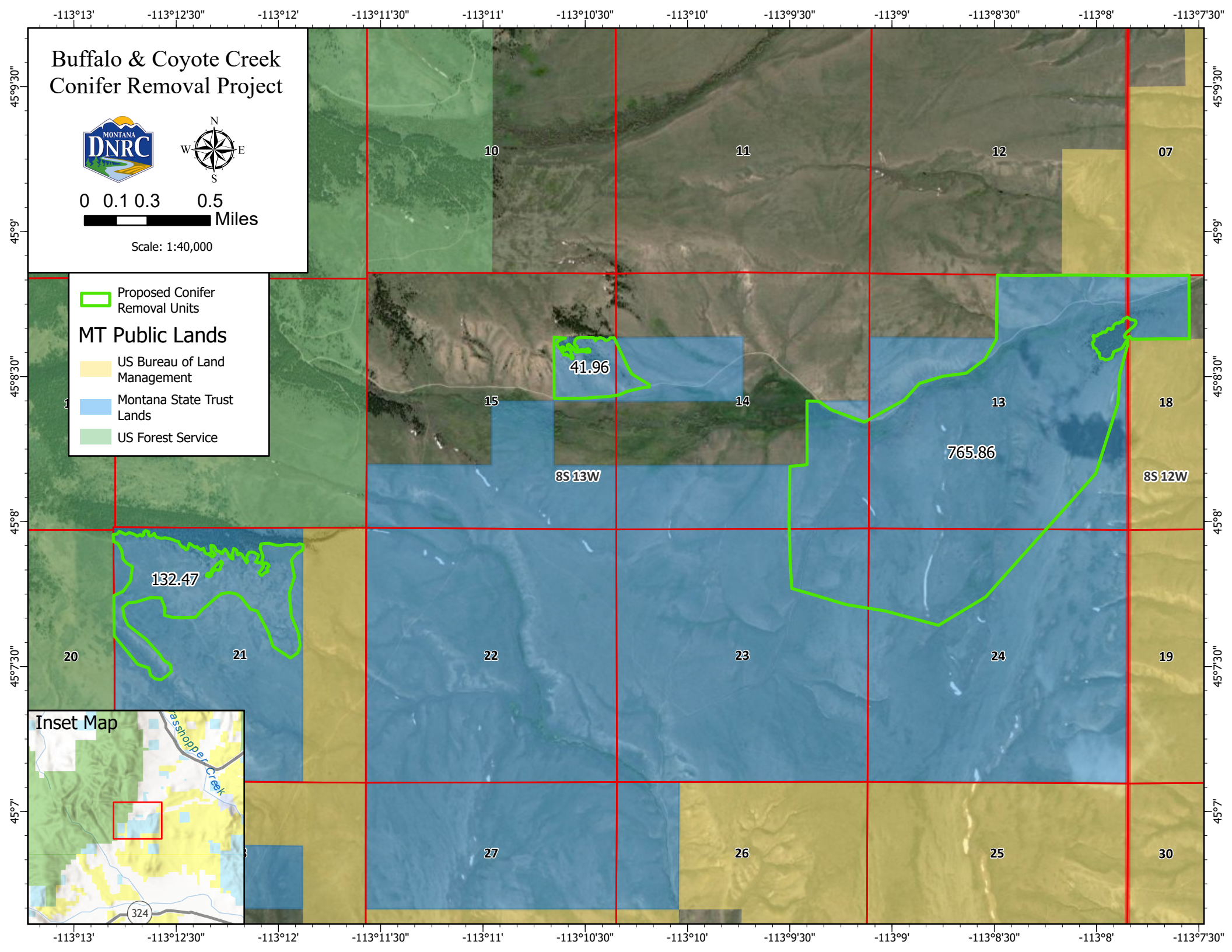
Environmental Assessment Checklist Approved By:

Name: Andy Burgoyne
Title: Central Land Office Trust Land Program Manager
Date: 09/05/2025
Signature: /s/ J. Andrew Burgoyne

Attachment A - Maps



Project Maps


Buffalo & Coyote Creek
Conifer Removal Project
MONTANA DNRC
N
W
E
S
0 0.1 0.3 0.5
Miles
Scale: 1:40,000
Proposed Conifer Removal Units
MT Public Lands
US Bureau of Land Management
Montana State Trust Lands
US Forest Service
41.96
765.86
132.47
8S 13W
8S 12W
10
11
12
07
15
14
13
18
20
21
22
23
24
19
27
26
25
30
Inset Map
Grasshopper Creek
324
-113°13'
-113°12'30"
-113°12'
-113°11'30"
-113°11'
-113°10'30"
-113°10'
-113°9'30"
-113°9'
-113°8'30"
-113°8'
-113°7'30"
45°9'30"
45°9'
45°8'30"
45°8'
45°7'30"
45°7'