Environmental Assessment Checklist

Project Name: Hansen Ranch Conifer Encroachment Treatment Project
Proposed Implementation Date: April 2017
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) is proposing to conduct sage grouse habitat restoration work in conjunction with the Hansen Ranch Conifer Encroachment Project in cooperation with the Montana Sage Grouse Oversight Team (MSGOT), the Nature Conservancy (TNC), and the Bureau of Land Management (BLM). Conifer encroachment has been identified as a considerable threat to sage grouse conservation (80 FR 59858, October 2, 2015). Reducing the prevalence of rangeland-invading trees has been identified as an important objective for this region of Montana.

In this project approximately 1,300 total acres of rangeland and conifer forest would be treated using a combination of tree slashing and prescribed burning treatments. Of the 1,223 acres proposed for treatment, approximately 121 acres would be treated on DNRC-managed state trust lands. Approximately half of the treatment area would receive both tree slashing and prescribed burn treatments (See Attachments A-1 and A-2). Proposed treatments would be planned and implemented in a coordinated fashion with conifer removal efforts on nearby private land and federal public lands. The positive effect of treating the Hansen's private land would be greater, given the treatments will be conducted concurrently with work conducted on other cooperating ownerships across the larger landscape. Thus, the impact of the Stewardship Fund investment in this circumstance would also be greater.

The project is located approximately 7.5 miles south of Grant, Montana (see Attachments A-1 and A-2), and includes DNRC-managed portions of the following sections: 4, 8, and 9, T11S, R12W.

Overall, of the 1,300 total acres proposed for treatment across all ownerships, 545 acres within 3 distinct management units would be burned, and 1,296 acres would receive conifer slashing treatment. On DNRC lands within the project area approximately 121 acres would be treated, of which approximately 80 acres would be burned (i.e., portions of sections 8 & 9).

Credits generated by the proposal would be available for compensatory mitigation in the future through the Montana Sage Grouse Habitat Program. Credits would be estimated retroactively, upon finalization of a habitat quantification tool, and made available for sale in a mitigation marketplace when the market becomes available.

Objectives of the Project:

TNC is proposing removal of low, medium, and high density encroaching conifers on a portion of the Hansen Ranch located in Beaverhead County in the southwest corner of T10S R12W and northwest corner of T11S R12W (see attached map -- Hansen Ranch Conifer Encroachment Treatments 2016 - 2017). The project is based on the expansion of Douglas-fir and Rocky Mountain juniper into historical sagebrush habitats. The encroaching conifers are within a 4-mile-buffer distance of three identified Sage Grouse leks (FWP). Conifer encroachment is considered a significant factor in lek extirpation due to conifers providing subsidy to common terrestrial and avian predators of sage grouse.

TNC mapped conifer encroachment in the project area using a combination of aerial photography and site inspections. Three separate encroachment classes (Phases 1, 2, & 3) were assigned using a system commonly used by the U.S.D.A. Natural Resource Conservation Service Sage Grouse Initiative, and Great Northern Landscape Conservation Cooperative (GNLCC). Phase 1 encroachment class is dominated by sagebrush with scattered conifers typically less than 2 meters tall. Phase 2 encroachment class is still dominated by sagebrush with larger (up to 4 meters) conifers at higher stems per acre. Phase 3 encroachment class consists of cover typically dominated by conifers with remnant sagebrush. TNC identified approximately 1,223 acres of encroachment to treat. Roughly 900 acres fell within Phase 1, 283 acres within Phase 2, and 40 acres within Phase 3 (See Attachment A-2).

TNC developed treatment proposals in conjunction with BLM wildlife biologists and fire managers working on similar treatments in the Medicine Lodge watershed. TNC proposes to fell and lop (as necessary) conifers by hand using contract sawyer crews. Within encroachment Phases 1 and 2, crews would cut all visible conifers within the treatment boundaries. Within encroachment Phase 3, chain saw crews would leave standing approximately 50% of existing trees. In Phase 3 and some portions of Phase 1 and 2 encroachment areas, trees that fall within logical burn boundaries would be burned by TNC, U.S. Forest Service, and BLM fire crews during April of 2017. The saw crews would also prepare the perimeter of the burns by clearing brush and combustible debris from all burn control lines. The TNC fire manager would develop a burn plan with assistance from BLM and U.S. Forest Service (USFS) for approval by all burn partners prior to ignition. The project would be of short duration and would be completed within one spring/summer operating season. 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 approximately April 2017. Slashing treatments would occur in spring and summer months in 2017 to prepare for the following season’s burning. Prescribed burning treatments proposed for the area would occur during spring of 2018, when an opportunistic burn window is present.

The DNRC would manage lands involved in this project in accordance with:

- The State Forest Land Management Plan (DNRC 1996),
- Administrative Rules for Forest Management (ARM 36.11.401 through 471),
- The Montana DNRC Forested State Trust Lands Habitat Conservation Plan (HCP) (DNRC 2010)
- and all other applicable state and federal laws.

Project Development

SCOPING AND PUBLIC INVOLVEMENT:

The purpose of the Montana Sage Grouse Stewardship Fund Grant Program is to provide competitive grant funding and establish ongoing free-market mechanisms for voluntary, incentive-based conservation measures that emphasize maintaining, enhancing, restoring, expanding, and benefitting sage grouse habitat and populations on private lands, and public lands as needed. A grant-funded project is eligible if it will maintain, enhance, restore, expand, or benefit sage grouse and populations for the heritage of Montana and its people through voluntary, incentive based efforts.

The Montana Sage Grouse Oversight Team decided on February to offer the first grant cycle from the Montana Sage Grouse Stewardship Fund (Fund) on February 19, 2016, contingent on the Fund's administrative rules taking effect.
Thereafter, the timeline leading up to MSGOT's meeting on May 24 was as follows:

- March 5: Administrative rules take effect.
- March 17: MSGOT issues a media release announcing the first grant cycle and the application deadline of April 8, 2016 at 5:00 p.m.
- April 8: MSGOT receives nine complete applications (eight proposals for permanent conservation easements and one proposal to mark high risk fences).
- April 14: All grant applications are published to the Montana Sage Grouse Habitat Conservation Program (Program) website and made available for public review, as required by the Montana Greater Sage Grouse Stewardship Act.
- April 17: The Program issues a media release announcing a public comment opportunity.
- April 24: The Program emails a Request for Supplemental Information to all applicants to solicit more specific, uniform responses to questions that the applicants had only partially addressed in the application.
- April 29: Public comment opportunity closes. The Program receives two comment letters, both in support of the fence marking proposal.
- April 29 – May 10: MSGOT application review and a peer review committee review.
- May 10-May 18: The Program compiles information from peer reviewers; finalizes recommendations.

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 June 30, 2016. The comment deadline was July 11, 2016. For this proposal, four reply letters were received. These included letters from: 1) the Beaverhead Outdoors Association; 2) Montana Backcountry Hunters and Anglers; 3) Dale Tribby, Helena; and 4) Dyrck Van Hyning, Great Falls.

SUMMARY OF COMMENTS RECEIVED:

Three commenters had questions about the efficacy of the proposed conifer removal treatments and objectives for the Phase 3 – high density areas. Given: 1) that 50% of the existing trees would be retained, 2) sites where phase 3 treatments are proposed may be most favorable for conifers over time, and 3) that realized treatment benefits would be relatively short-lived and the cost-to-benefit ratio appears questionable. One of these commenters also suggested the value of Phase 2 treatments would be low. Conversely, one of the other commenters in this group suggested that cutting treatments in Phase 1 and 2 areas would be beneficial.

Two commenters suggested that clearer maps be provided that depicts treatment areas, burn areas, and their relationship to sage grouse leks.

Two commenters noted that the fire component could have a long-lasting effect on sage brush as the plant does not readily repopulate burned sites and it may not be advisable.

One commenter asked how cheat grass and livestock grazing would be controlled following treatments to ensure that habitat elements important for sage grouse conservation would be optimized.

One commenter noted that the selected treatment areas seem to lie on the fringe of a much larger landscape containing sage grouse habitat, raising questions about the importance and priority of this geographic area for management and expenditure of limited conservation funds.

One commenter provided overall support for the mitigation project.

One commenter voiced frustration with the short duration of the comment period provided during project scoping by the sage grouse program.

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 grant the funding.

Accommodations were also made for the public to submit comments electronically through the public comment web application tool located on the MSGOT webpage at https://sagegrouse.mt.gov/msgot.html.

OTHER GOVERNMENTAL AGENCIES WITH JURISDICTION, LIST OF PERMITS NEEDED:

- **United States Fish & Wildlife Service-** DNRC is managing the habitats of threatened and endangered species on this project by implementing the Montana DNRC Forested Trust Lands HCP and the associated Incidental Take Permit that was issued by the United States Fish & Wildlife Service (USFWS) in February of 2012 under Section 10 of the Endangered Species Act. The HCP identifies specific conservation strategies for managing the habitats of grizzly bear, Canada lynx, and three fish species: bull trout, westslope cutthroat trout, and Columbia redband trout. This project complies with the HCP. The HCP can be found at http://dnrc.mt.gov/divisions/trust/forest-management/hcp

- **Montana Department of Environmental Quality (DEQ)-** DNRC is classified as a major open burner by DEQ and is issued a permit from DEQ to conduct burning activities on state lands managed by DNRC. As a major open-burning permit holder, DNRC agrees to comply with the limitations and conditions of the permit.

- **Montana/Idaho Airshed Group-** The DNRC is a member of the Montana/Idaho Airshed Group which was formed to minimize or prevent smoke impacts while using fire to accomplish land management objectives and/or fuel hazard reduction (Montana/Idaho Airshed Group 2006). The Group determines the delineation of airsheds and impact zones throughout Idaho and Montana. Airsheds describe those geographical areas that have similar atmospheric conditions, while impact zones describe any area in Montana or Idaho that the Group deems smoke sensitive and/or having an existing air quality problem (Montana/Idaho Airshed Group 2006). As a member of the Airshed Group, DNRC agrees to burn only on days approved for good smoke dispersion as determined by the Smoke Management Unit.

ALTERNATIVES CONSIDERED:

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

No Action Alternative – Under the No Action Alternative, the MSGOT would not at this time authorize disbursal of funds in the Stewardship Fund Account to facilitate implementation of the Hansen Ranch Conifer Encroachment Treatment Project for the purpose of sage grouse conservation in Montana. As such, DNRC would not be able to implement the portion of the project on state trust lands at this time. Project mitigation credits generated under the easement would not be realized and would not be available at a later time to be used as compensatory mitigation for other projects around the state involving energy or agricultural development etc. Treatments designed to improve sage grouse habitat under this proposal providing measureable contributions for sage grouse conservation and other wildlife would not be required or implemented at this time.

Proposed Action Alternative – Under the Action Alternative, DNRC would implement conifer removal activities on state trust lands following funding authorization by MSGOT for the disbursal of funds in the Stewardship Fund Account to facilitate implementation of the Hansen Ranch Conifer Encroachment Treatment Project. Cost-share grant funding provided by TNC would be used to pay for the habitat improvement work that would occur on the DNRC-owned portion of the project area. Credits generated by the proposal would be available as compensatory mitigation in the future for other projects conducted elsewhere in the state of

Montana. Credits would be estimated retroactively, upon finalization of a habitat quantification tool for the program, and would be made available for sale in a mitigation marketplace when the market becomes available. The Hansen Ranch Conifer Encroachment Treatment Project analyzed in this environmental assessment was one project selected from nine total applications for conservation-related projects seeking Stewardship Grant funding through a peer review process. As described in detail in Description of the Proposed Action section above, measures and terms would be required under the conservation easement that would provide habitat-enhancing benefits for sage grouse conservation.

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:

TNC mapped conifer encroachment in the project area using a combination of aerial photography and site inspections. Three separate encroachment classes (Phases 1, 2, & 3) were assigned using a system commonly used by the U.S.D.A. Natural Resource Conservation Service Sage Grouse Initiative, and Great Northern Landscape Conservation Cooperative (GNLCC). Phase 1 encroachment class is dominated by sagebrush with scattered conifers typically less than 2 meters tall. Phase 2 encroachment class is still dominated by sagebrush with larger (up to 4 meters) conifers at higher stems per acre. Phase 3 encroachment class consists of cover typically dominated by conifers with remnant sagebrush. In in the proposed treatment area, TNC identified approximately 1,400 acres of encroachment. Roughly 850 acres fell within Phase 1, 320 acres within Phase 2, and 230 acres within Phase 3 (See attached map – Hansen Ranch Conifer Encroachment Treatments 2016 - 2017).

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**			**Yes**	**2.**
Rare Plants	**x**				**x**				**x**					**3.**
Vegetative community		**x**				**x**				**x**			**Yes**	**4.**

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. Exposed soil in disturbed burned areas could be more prone after treatment to short-term minor localized erosion and colonization by noxious weeds and invasive species, such as cheat grass. Burned sites would be monitored by TNC for a five year period and treated as necessary to limit the establishment or spread of invasive species.

3. A data query was conducted by the Montana Natural Heritage Program (MNHP) for the project (July 19, 2016) 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.

4. Under the Action Alternative, beneficial effects to native plant communities in the area would be expected from conifer removal treatments and prescribed burns. Some sagebrush plants would also likely be lost in burn areas. However, a burn plan would be developed that would attempt to maximize the longevity and effectiveness of the burn for conifer removal while minimizing the temporary loss of sagebrush habitat (J. Berkey, TNC, pers. comm. July 7, 2016). Given the proposed spring burning window for planned burn treatments, minor adverse direct, indirect, and cumulative effects to native plant communities would be anticipated.

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**			**Yes**	**1.**
Erosion	**x**				**x**				**x**					
Nutrient Cycling	**x**				**x**				**x**					
Slope Stability	**x**				**x**				**x**					
Soil Productivity	**x**				**x**				**x**					

Comments:

1. Under the Action Alternative, burn treatment proposed on approximately 20 acres of rangeland and Douglas-fir dominated plant community types on DNRC ownership could result in greater exposure of bare, mineral soil than that which currently exists. Exposed soil in such instances could be more prone to short-term minor localized erosion and colonization by noxious weeds and invasive plants. Given the proposed spring burning window for planned burn treatments and planned follow-up monitoring by the TNC for five years, minor adverse direct, indirect, and cumulative effects to soil resources would be anticipated.

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. A portion of Hansen Creek and an ephemeral tributary to Noble Creek occur in the DNRC-portion of the project area. All perennial stream segments would be buffered from timber slashing and burning treatments and all applicable Montana Best Management Practices would be followed. Given these 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**					

Fisheries	Impact												Can Impact Be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
Stream Temperature	x				x				x					
Connectivity	x				x				x					
Populations	x				x				x					1.

Comments:

1. The MNHP database search conducted for this project indicated that westslope cutthroat trout are potentially present in the unnamed tributary to Barrett Creek running through portions of sections 29, 30, and 31 (T10S, R12W), which are owned by the cooperating private landowner. Under the Proposed Action no direct, indirect or cumulative effects to westslope cutthroat trout would occur in association with authorizing the grant funds for implementation of the Hansen Ranch Conifer Encroachment Treatment Project. All perennial stream segments would be buffered from timber slashing and burning treatments and all applicable Montana Best Management Practices would be followed. Given these project requirements, measurable direct, indirect, and cumulative impacts to westslope cutthroat trout and their habitat 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		
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 fir habitat types, dense sapling, old forest, deep snow zone	x				x				x					2.
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					

Wildlife	Impact												Can Impact be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
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**					
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	**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		
(Falco peregrinus) Habitat: Cliff features near open foraging areas and/or wetlands														
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 75 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. Most access in the project area is controlled by the private landowner, which limits motorized activity and generally lowers risk for bears. 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 and conducting burn operations in the spring period during a 1 to 2 month operating window in 2017. Slashing and burning operations, primarily in Phase 3 density areas, could also remove hiding cover for bears on approximately 20 acres which could make bears slightly more detectable, should they be in the area. 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 federal public lands. The positive effect of treating the Hansen'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 encroaching conifers are within a 4-mile buffer distance of three identified sage grouse leks (FWP). 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 primary objectives of the treatments are to: 1) remove encroaching conifers from Phase 1 and Phase 2 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; and 3) on more heavily stocked Phase 3 sites, appreciably reduce the density of conifers and seed source to partially set back and slow future conifer advancement and encroachment – recognizing the trade-off of some perch sites remaining.

In the overall proposed treatment area, TNC identified approximately 1,300 acres of conifer encroachment. Roughly 900 acres was identified as Phase 1 density, 283 acres at Phase 2 density, and 40 acres at Phase 3 density (See attached map – Hansen Ranch Conifer Encroachment Treatments 2016 - 2017). Of these acreages, on DNRC land there would be approximately 90 acres of Phase 1 density, 21 acres of Phase 2 density, and 9 acres of Phase 3 density. Approximately 121 acres of potentially suitable sage grouse habitat is included in proposed burn units overall, of which a negligible portion occurs on DNRC ownership. On this acreage, sagebrush could be killed by the proposed burn and/or be reduced in density and abundance for 20 years or longer (Knick et al. 2005). This is a tradeoff that was deemed feasible to provide more effective removal of conifers trees across a large area.

A burn plan would be developed that would attempt to maximize the longevity and effectiveness of the burn for conifer removal while minimizing the temporary loss of sagebrush habitat (J. Berkey, TNC, pers. comm. July 7, 2016). TNC will monitor noxious weeds and other invasive non-native plants at the site for 5 years following the controlled burn. Given the proposed spring burning window for planned burn treatments, minor adverse short-term direct, indirect, and cumulative effects to sage grouse habitat would be anticipated. Removal of young conifers using chainsaws across approximately 121 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 and fire treatment associated with conifer removal could disturb and displace wildlife in the area for up to two months. Burned acreages would likely not be habitable by nesting or denning animals for at least one breeding season following treatment. 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 3 months in spring/summer 2017), 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. Hard edge habitat associated with existing forest stands would be minimally influenced by proposed treatments. 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**			**Yes**	**1.**
Dust	**x**				**x**				**x**					

Comments:

1. Under the Action Alternative, burn treatments proposed on approximately 6-700 acres of rangeland and Douglas-fir dominated plant community types in the project area would produce noticeable smoke for individuals in the local air shed for up to several days. Burned areas planned for DNRC ownership would only make up approximately 20 acres of this 6-700 acre total. The TNC fire manager would develop a burn plan with assistance from BLM and U.S. Forest Service (USFS) for approval by all burn partners prior to ignition. Burning would be conducted in cooperation with requirements of the local air shed to minimize effects associated with lingering, dense smoke. Short duration burning would be completed within several days in spring 2018 and 2019 depending on burning conditions.

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		
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**				**x**				**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 two forms of treatment. The first form is lopping of young (approximately 2-4 inch diameter) Douglas fir in localities where immature trees are typically spaced several feet or 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. The second form of treatment calls for controlled burning (low to moderate intensity) of densely growing stands of immature Douglas-fir trees. Many studies concerning the effects of fire on cultural resources have been conducted (e.g., Connor and Cannon 1991, Picha et al. 1991). The results suggest that stone artifacts and features have little potential to be physical impacted or modified with wildland fires of low to

moderate intensity. In contrast, above ground wooden structures would not tolerate any level of burning. Because no cultural or paleontologic sites have been identified on private land within the Area of Potential Effects, proposed conifer encroachment treatments will not impact these resources.

2. Conifer removal and burned sites 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. At the statewide level, cumulative increases in conservation credits that would be generated from projects like this habitat enhancement project, as directed under Executive Order 12-2015, would facilitate resource development elsewhere in Montana over time in a regulated, responsible manner.

OTHER ENVIRONMENTAL DOCUMENTS PERTINENT TO THE AREA:

-Another Environmental Assessment was conducted for this project by the Montana Sage Grouse Habitat Conservation Program (MSGHCP), which addressed the full scope and acreages included in this project for proposed treatment. This Environmental Assessment specific to activity that would occur on DNRC lands provides supplemental information and tiers to the EA developed by the MSGHCP.

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														
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**					

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**					
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 and prescribed burn activities would require adequate safety measures to be in place to ensure the safety of workers and protect the lives and property of private landowners. Safety requirements complying with OSHA standards and federal and state safety regulations would be required for all sawing and burning operations. Safety measures required for prescribed burning would be addressed in the burn management plan agreed to by

all cooperators. Adequate and safe burning windows would be planned and followed, however, when conducting any prescribed burn, there is some inherent risk of fire escape. To address this inherent risk, ample back up firefighting resources would be promptly available to address any unforeseen conditions or circumstances.

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. At the statewide level cumulative increases in conservation credits that would be generated from projects like this habitat enhancement project, as directed under Executive Order 12-2015, would facilitate resource development elsewhere in Montana over time in a regulated, responsible manner.

3. Conifer removal and burned sites 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 project funding would not be expected to disturb or alter any native or traditional lifestyles or communities.

References

Connor, M. A. and K. P. Cannon. 1991. Forest fires as a site formation process in the Rocky Mountains of northwestern Wyoming. Archaeology in Montana Vol 32(2): Pp. 1-14.

DNRC 1996. State forest land management plan: final environmental impact statement (and appendixes). Montana Department of Natural Resources and Conservation, Forest Management Bureau, Missoula, Montana.

DNRC. 2010. Montana Department of Natural Resources and Conservation Forested State Trust Lands Habitat Conservation Plan: Final EIS, Volume II, Forest Management Bureau, Missoula, Montana.

Knick, S.T., A.L. Holmes, and R.F. Miller. 2005. The role of fire in structuring sagebrush habitats and bird communities. Studies in Avian Biology. No 30:63-75.

Picha, P., S.A. Ahler, R. D. Sayler, and R.W. Seabloom . 1991. Effects of prairie fire on selected artifact classes. Archaeology in Montana Vol 32(2): Pp. 15-28.

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

No.

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

No.

Environmental Assessment Checklist Prepared By:

Name: Ross Baty
Title: Lead Wildlife Biologist
Date: November 1, 2016

Finding

Alternative Selected

The Montana Department of Natural Resources and Conservation has completed the environmental assessment (EA) for the proposed Hansen Ranch Conifer Encroachment Treatment Project. After a thorough review of the EA, public comments, the project file, Department policies, standards, and guidelines, I have made the following decisions concerning this project:

The alternatives proposed for consideration in this EA were the No Action and Action Alternative. Under the Action Alternative, DNRC would implement conifer removal activities on state trust lands following funding authorization by MSGOT for the disbursal of funds in the Stewardship Fund Account to facilitate implementation of the Hansen Ranch Conifer Encroachment Treatment Project.

The Action Alternative has been selected for the following reasons:

- The Action Alternative meets the project Purpose and Need listed under Section I. of the EA.
- The Action Alternative is consistent with State and local policies, laws, and regulations.

Significance of Potential Impacts

Upon review of the project and analysis herein, I find that none of the impacts are severe, enduring, geographically widespread, or frequent. Further, I find that the quantity and quality of the natural resources, including any that may be considered unique or fragile, will not be adversely affected to a significant degree. I find no precedent for the future actions that would cause significant impacts, and I find no conflict with local, State, or federal laws, requirements, or formal plans.

Need for Further Environmental Analysis

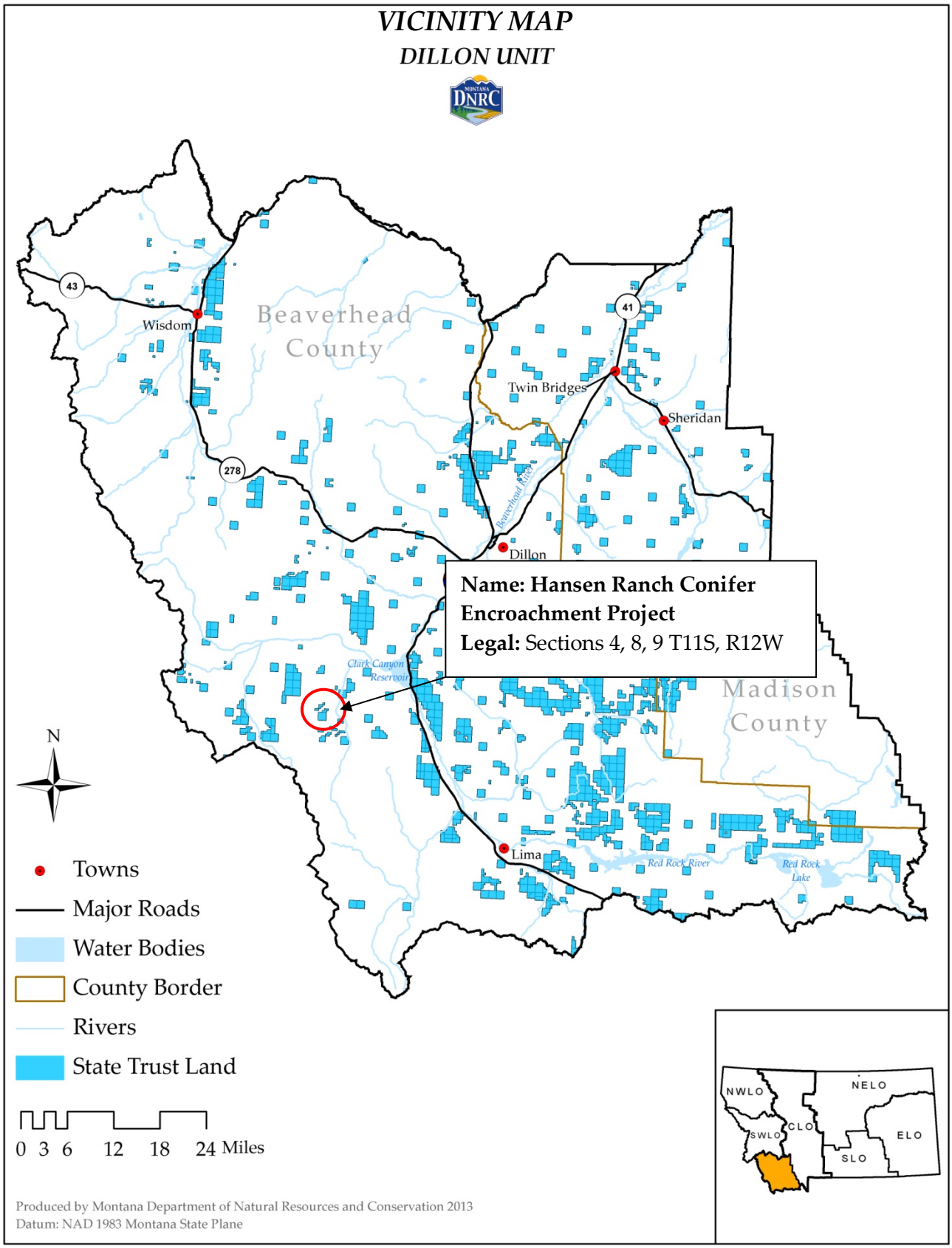
☐	EIS	☐	More Detailed EA	☒	No Further Analysis

Environmental Assessment Checklist Approved By:

Name: Tim Egan
Title: Dillon Unit Manager
Date: November 7, 2016
Signature: Timothy Egan

Attachment A - Maps

Attachment A-1: Hansen Ranch Conifer Encroachment Treatment Project Vicinity Map – Montana DNRC



Attachment A-2: