CHECKLIST ENVIRONMENTAL ASSESSMENT

Project Name:	Devils Fence Ranch Conifer Encroachment Reduction Project
Proposed Implementation Date:	Fall/Winter Months 2022-2024
Proponent:	Lessee Justin Carey
Location:	T4N R2W Section 16
County:	Jefferson

I. TYPE AND PURPOSE OF ACTION

The Helena Unit of the DNRC has received a request to conduct a conifer reduction project from the lessee, Devils Fence Ranch (Proponent), on the above referenced state trust land tract. The Proponent proposes to reduce juniper encroachment into grassland in the SE¼ of the section. Proposed treatment area is approximately 37 acres. See attachment A-1 Map. Treatment methods could include hand cutting with chainsaws, pruning shears, or other mechanical tools. The proponent would then collect the junipers with heavy equipment, organize them into piles and burn them.

II. PROJECT DEVELOPMENT

1. PUBLIC INVOLVEMENT, AGENCIES, GROUPS OR INDIVIDUALS CONTACTED:

Provide a brief chronology of the scoping and ongoing involvement for this project.

Adam Grove, MT FWP Wildlife Biologist
Patrick Renee, MT DNRC Archeologist
Devin Healy, DNRC Helena Unit
Chuck Maddox, DNRC Dillon Unit
Devils Fence Ranch, c/o Justin & Bow Carey, Lessee
DNRC submitted the project to MSGOT
Montana Natural Heritage Program

2. OTHER GOVERNMENTAL AGENCIES WITH JURISDICTION, LIST OF PERMITS NEEDED:

Montana Sage Grouse Advisory Committee was solicited for input by the lessee and DNRC Dillon Unit, and approval letter is attached to this document.
No other permits or other governmental agency issues were identified during scoping for the project.

3. ALTERNATIVES CONSIDERED:

A) No Action Alternative, the conifer reduction project would not be approved
B) Action Alternative, the conifer reduction project would be approved as applied for. These actions include removal of juniper and conifer encroachment by mechanical or hand treatments, the possible burning of debris created from cutting of vegetation and the implementation of mitigation measures enumerated in this document under the action alternative.

III. IMPACTS ON THE PHYSICAL ENVIRONMENT

- *RESOURCES potentially impacted are listed on the form, followed by common issues that would be considered.*
- *Explain POTENTIAL IMPACTS AND MITIGATIONS following each resource heading.*
- *Enter "NONE" If no impacts are identified or the resource is not present.*

4. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE:
Consider the presence of fragile, compactable or unstable soils. Identify unusual geologic features. Specify any special reclamation considerations. Identify any cumulative impacts to soils.

The project area is located in gently sloping to rolling terrain, described as silty upland and sub-irrigated bottom land. USDA NRCS Web Soil Service classifies the soils as primarily Bronce-Amesah Complexes, that are well suited to mechanical treatment-shredder (mastication) within the proposed project area. See attached Web Soil Survey.

Mitigations:

- Conifer removal operations would occur in late fall through winter when the ground is frozen and plants are dormant, limiting soil and plant disturbance.
- Disturbed sites shall be grass seeded with a grass seed mix approved by the DNRC.

5. WATER QUALITY, QUANTITY AND DISTRIBUTION:
Identify important surface or groundwater resources. Consider the potential for violation of ambient water quality standards, drinking water maximum contaminant levels, or degradation of water quality. Identify cumulative effects to water resources.

The proposed project area lies entirely within the Boulder River watershed (HUC 8 10020006), a tributary to the Missouri River. Willow Springs is located to the just outside of the project area to the north west. Willow Springs that feed a perennial stream. Within the project area there is a ~2900-foot ephemeral draw. The project area would typically receive less than 16" of precipitation annually. Water use for this watershed is classified in rule by DEQ as B-1. Waters classified B-1 are to be maintained suitable for drinking, culinary, and food processing purposes, after conventional treatment; bathing, swimming, and recreation; growth and propagation of salmonid fishes and associated aquatic life, waterfowl and furbearers; and agricultural and industrial water supply. Waters in in project area are not listed on the 2020 303d impaired waters list.

Primary sediment delivery within the tract is from wildlife and livestock trails and trampling. These sources have contributed to a moderate level of cumulative water quality impacts in the form of sedimentation.

Due to the proposed removal systems used, location of encroachment relative to ephemeral draws, implementation of mitigations and the level of precipitation within the project area there is a low risk of direct and secondary water quality impacts from the proposed action. Considering the existing cumulative effects, the mitigations to the action, the proposed action will result in no cumulative effects over those moderate levels currently presenting in the watershed. The removal of juniper and conifer encroachment may slightly increase water quantity.

Water Quality & Quantity Mitigations:

- Disturbed sites would have woody debris placed on them to intercept overland waterflow.
- Disturbed sites would be grass seeded.
- Ephemeral draw crossings would be kept to a minimum and equipment operation down topographic convergences (draw bottoms) would be prohibited.

6. AIR QUALITY:
What pollutants or particulate would be produced? Identify air quality regulations or zones (e.g. Class I air shed) the project would influence. Identify cumulative effects to air quality.

Debris consisting of tree limbs and tops and other vegetative debris could be piled throughout the project area. Debris could ultimately be burned after operations have been completed. Burning would introduce particulate matter into the local airshed, temporarily affecting local air quality. Over 70% of emissions emitted from prescribed burning is less than 2.5 microns (National Ambient Air Quality PM 2.5). High, short-term levels of PM 2.5 may be hazardous. Within the typical column of biomass burning, the chemical toxics are: Formaldehyde, Acrolein, Acetaldehyde, 1,4 Butadiene, and Polycyclic Organic Matter.

Effects to air quality as a result of dust and smoke generated during activities are expected to be low.

7. VEGETATION COVER, QUANTITY AND QUALITY:
What changes would the action cause to vegetative communities? Consider rare plants or cover types that would be affected. Identify cumulative effects to vegetation.

The vegetation on in the project area is delineated into two general categories, sub irrigated and silty upland. Rocky mountain juniper has spread along the drainages. For a full description of vegetation species present see Field Evaluation Form (attachment C)

The proposed action would significantly reduce juniper, Douglas-fir, and limber pine, in the project area. The project would target the conifers while maintaining the sagebrush – grass vegetative community.

Vegetation Mitigations:

- The use of equipment would occur in the fall and winter when the ground surface is frozen and vegetation is dormant.
- Maintain sagebrush and grass communities to the greatest extent possible.

8. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:
Consider substantial habitat values and use of the area by wildlife, birds or fish. Identify cumulative effects to fish and wildlife.

The area is used by mule deer and antelope, with occasional elk and whitetail deer use. The removal of juniper and conifers would alter the available cover and forage available. Thus, some short-term risk associated with disturbance, and some long-term, albeit minor risk, to elk, antelope and deer could occur given the reduction in cover. Given the location, small size of the affected area, type of the proposed activity, and cover attributes found on the project area and surrounding lands, low adverse direct, indirect and cumulative effects to, deer antelope and elk associated with cover removal on these habitats would be anticipated.

9. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:
Consider any federally listed threatened or endangered species or habitat identified in the project area. Determine effects to wetlands. Consider Sensitive Species or Species of special concern. Identify cumulative effects to these species and their habitat.

A query was made on the Montana Natural Heritage Program site regarding endangered or sensitive species located in the vicinity of the project area, sage grouse is not among the 9 (see end of this section - section 9 - addressing sage grouse). The resulting Species of Concern Data Report included 9 species found:

Long-billed Curlew - (Numenius americanus) – Long-billed curlews are listed as sensitive by the BLM and as a species of concern by the State of Montana. According to NRIS, curlews avoid areas like the project site where there are trees and heavy brush. The site does not match curlew habitat preference, which is open short to mixed grass prairie. Curlews will not be affected by the change in vegetation if the project is approved.

Brewer's Sparrow (Spizella breweri) – Brewer's sparrow is a BLM sensitive species. Per Montana Natural Resource Information Service (NRIS), the species prefers nesting in sagebrush averaging 16 inches in height. The proposed project is designed to reduce conifer species and improve conditions for sagebrush – grass species. Sagebrush would benefit from reduction of competition for resources and elimination of overstory shading which would improve brewer's sparrow habitat.

Sage Thrasher (Oreoscoptes montanus) – Sage thrashers are listed as sensitive by the BLM and State of Montana. The proposed project will not increase human use of the area and would not significantly alter the current vegetative community. The proposed project is designed to reduce conifer encroachment and improve conditions for sagebrush – grass species. Sagebrush would benefit from reduction of competition for resources and elimination of overstory shading which would improve sage thrasher habitat. The project would not cause cumulative impacts to the sage thrasher.

Mountain Plover (Charadrius montanus) – Mountain plover are a BLM and State of Montana listed sensitive species. According to the MNHP site, mountain plover utilize Montana grasslands as breeding and nesting ground with their preferred areas being prairie dog towns. There are no known prairie dog towns located near the proposed project area. Current vegetative community on-site includes sagebrush grassland that has juniper along with some limber pine and Douglas fir encroaching into the site. The proposed project would include removal of the conifer trees. Current vegetative community type does not match preferred short to mixed grass habitat of the plover.

Pinyon Jay (Gymnorhinus cyanocephalus) – Pinyon jays are a state listed species of concern. According to NRIS MHP site, pinyon jays in Montana are year-round residents that prefer to nest in ponderosa pine and limber pine trees. The birds do inhabit juniper sites. No ponderosa pine trees are located in the project area and few limber pine are present. Most of the encroaching timber on-site is rocky mountain juniper. While removal of the conifers from the site may degrade habitat for pinyon jays, implementation of the project will improve conditions for species such as sage grouse.

Great Blue Heron (Ardea herodias) – The Great Blue Heron is currently listed as sensitive by the State of Montana. According to the MNHP site, the blue heron primarily inhabits riparian areas and wetland habitats. The nearest naturally occurring surface water is the Boulder River located approximately 2 air miles West of the proposed project. A man-made reservoir is located on the affected site but will not be disturbed by the conifer encroachment project. Timing of the encroachment removal is planned for the late fall and winter months when the reservoir is frozen and unavailable to heron use. Outside of the reservoir area, the site is dry rangeland and would not impact blue heron habitat.

Black-tailed Prairie Dog (Cynomys ludovicianus) – There are no reported Black-tailed prairie dog towns in the vicinity of the proposed project. Conifer encroachment and sagebrush are not preferred habitat of prairie dogs. Removal of conifers would not degrade habitat for black-tailed prairie dogs.

Clark's Nutcracker (Nucifraga columbiana) – Clarks nutcracker is a state listed sensitive species. The Montana Natural Heritage Program site includes this excerpt regarding the species of concern status:

Threats or Limiting Factors
Loss of whitebark, limber, and ponderosa pines to disease, insect outbreaks, and fire may lead to local and widespread population declines (Tomback 1998).

This site is a relatively flat sagebrush - grassland site where juniper, limber pine, and Douglas fir are encroaching. The majority of encroaching conifers are juniper along with a sparse limber pine and Douglas fir component. The project would occur in the winter and would target juniper. The proposal would not impact Clark's nutcracker use of the area.

Evening Grosbeak (Coccothraustes vespertinus) – Evening grosbeak are listed as a species of concern in the state. According to NRIS information, little is known about this species habitat preferences outside of winter. Winter habitat is listed as various. The exact NRIS habitat statement follows; "In Montana, the Evening Grosbeak breeds in mixed coniferous and spruce-fir forests of western Montana. Winter habitat is much more varied, including coniferous forest as well as urban and suburban areas statewide (Gillihan and Byers 2001, Montana Natural Heritage Program Point Observation Database 2014)." There is no clear statement as to why the species is considered a species of concern, therefor few mitigation measures can be inferred or applied to the project. By inference, it is assumed that evening grosbeak made the list of potential species of concern for the site due to the presence of trees. If that is the case, the presence of trees is due to encroachment of conifers into a sagebrush-grassland site and the scattered nature of trees would not be considered a forest type, so reduction of encroaching conifers would not cause a deterioration of evening grosbeak habitat.

Sage grouse were not found in the list of species of concern from NRIS, but according to the sage grouse habitat map created by the Montana Department of Fish, Wildlife, & Parks for the Montana Sage Grouse Advisory Group, the tract is within the boundaries of general habitat so the project was submitted to the MSGOT site for review. A letter from MSGOT was received clearing the project for winter implementation to reduce conifers on site with the understanding that the lessee will monitor for and treat noxious weeds on site for the

duration of their lease term. In regard to potential impacts to sage grouse from implementation of the proposed project, the following applies:

Greater Sage-grouse (Centrocercus urophasianus) The project area located in general sage grouse habitat. There are no known leks in the vicinity of the project and in talking with the lessee, they have never seen a sage grouse in the area. The nearest known sage grouse lek is approximately 43 miles from the project area. The sagebrush - grass community on-site is in good condition but shows signs of deterioration from encroaching juniper and other conifer species. According to multiple sources including Montana DFWP Biologists, sage grouse tend to avoid areas with conifer trees as they create high perch sites for predatory birds. Removal of conifers will improve habitat for sage grouse.

10. HISTORICAL AND ARCHAEOLOGICAL SITES:
Identify and determine effects to historical, archaeological or paleontological resources.

Patrick Rennie, DNRC archaeologist, was consulted regarding the project. His input to this environmental assessment includes:

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 revealed that no cultural or paleontological resources have been identified in the APE. Considering the low-impact nature of the project, 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.

11. AESTHETICS:
Determine if the project is located on a prominent topographic feature, or may be visible from populated or scenic areas. What level of noise, light or visual change would be produced? Identify cumulative effects to aesthetics.

The proposed conifer removal project would not be visible from open roads or trails. The site has no public access. The project would not be detrimental to aesthetic values of the area. No known or anticipated cumulative effects to ascetics.

12. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY:
Determine the amount of limited resources the project would require. Identify other activities nearby that the project would affect. Identify cumulative effects to environmental resources.

No limited resources would be required. The proposed project would not alter or affect other activities in the area. No known or anticipated cumulative effects to environmental resources are expected as a result of this project.

13. 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.

The Proponent has a grazing lease on the project area. The proposed action is indented as an improvement to that lease.

IV. IMPACTS ON THE HUMAN POPULATION

- *RESOURCES potentially impacted are listed on the form, followed by common issues that would be considered.*
- *Explain POTENTIAL IMPACTS AND MITIGATIONS following each resource heading.*
- *Enter "NONE" If no impacts are identified or the resource is not present.*

14. HUMAN HEALTH AND SAFETY:
Identify any health and safety risks posed by the project.

No human health or safety risks are expected to result from this project.

15. INDUSTRIAL, COMMERCIAL AND AGRICULTURE ACTIVITIES AND PRODUCTION:
Identify how the project would add to or alter these activities.

Minor increases to AUMs may be achieved in the years following the implementation of the action alternative. Those would be assessed as part of the DNRCs field evaluations.

16. QUANTITY AND DISTRIBUTION OF EMPLOYMENT:
Estimate the number of jobs the project would create, move or eliminate. Identify cumulative effects to the employment market.

The proposed project would not affect the employment market. No positive or negative cumulative effects to the employment market would result from this project.

17. LOCAL AND STATE TAX BASE AND TAX REVENUES:
Estimate tax revenue the project would create or eliminate. Identify cumulative effects to taxes and revenue.

Tax revenue would not be effected by this project.

18. DEMAND FOR GOVERNMENT SERVICES:
Estimate increases in traffic and changes to traffic patterns. What changes would be needed to fire protection, police, schools, etc.? Identify cumulative effects of this and other projects on government services.

Under the action alternative no direct, secondary or cumulative impact are anticipated on the demand for government services

19. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS:
List State, County, City, USFS, BLM, Tribal, and other zoning or management plans, and identify how they would affect this project.

The Project Area is located on the proponents grazing lease, the proposed action's goal is to improve the grazing lease.

20. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES:
Identify any wilderness or recreational areas nearby or access routes through this tract. Determine the effects of the project on recreational potential within the tract. Identify cumulative effects to recreational and wilderness activities.

The proposed project would not affect recreational use of the area. The tract has no public access. No known or anticipated direct, indirect or cumulative impacts are anticipated to access to quality of recreational and wilderness activities.

21. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING:
Estimate population changes and additional housing the project would require. Identify cumulative effects to population and housing.

Under the action alternative no direct, secondary or cumulative impacts are anticipated on the density and distribution of population and housing.

22. SOCIAL STRUCTURES AND MORES:
Identify potential disruption of native or traditional lifestyles or communities.

Under the action alternative no direct, secondary or cumulative impacts are anticipated on social structures and mores.

23. CULTURAL UNIQUENESS AND DIVERSITY:
How would the action affect any unique quality of the area?

No direct, secondary or cumulative impacts are anticipated under the proposed project.

24. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:
Estimate the return to the trust. Include appropriate economic analysis. Identify potential future uses for the analysis area other than existing management. Identify cumulative economic and social effects likely to occur as a result of the proposed action.

The purpose of this environmental document is to assess a proposed conifer encroachment reduction project. Monetary return to the Common Schools Trust beneficiary as a direct result of this proposed conifer reduction project is zero. Indirect benefits to trust revenue from approval of the proposed project may include an increase in AUM's if available forage increases with the elimination of overstory canopy cover and reduced competition from conifers. The lessee will benefit from improved forage availability and reduced competition between juniper and sagebrush – grass.

EA Checklist Prepared By:	**Names:**	Devin Healy & Chuck Maddox	**Date:**	4/12/2022
	Titles:	Helena Unit Forester, Dillon Unit Land Use Specialist		

V. FINDING

25. ALTERNATIVE SELECTED:

Allow proponent to implement the proposed conifer encroachment project.

26. SIGNIFICANCE OF POTENTIAL IMPACTS:

This conifer encroachment project on this state tract would remove a portion of the juniper species in the southeast quarter of this state tract. The removal of conifers at this site would improve water quantity and forage production. Mitigations outlined in this analysis are appropriate and sufficient. No substantial or unacceptable detrimental impacts to water, soil, fisheries, T&E or sensitive species are anticipated as a result of the proposed action. The proposed action is in compliance with the Administrative Rules for Trust Land Management, and all other applicable state and federal laws.

This compliance combined with the implementation of mitigations described in this document provide adequate assurance against potential negative impact.

27. NEED FOR FURTHER ENVIRONMENTAL ANALYSIS:

	EIS		More Detailed EA	x	No Further Analysis

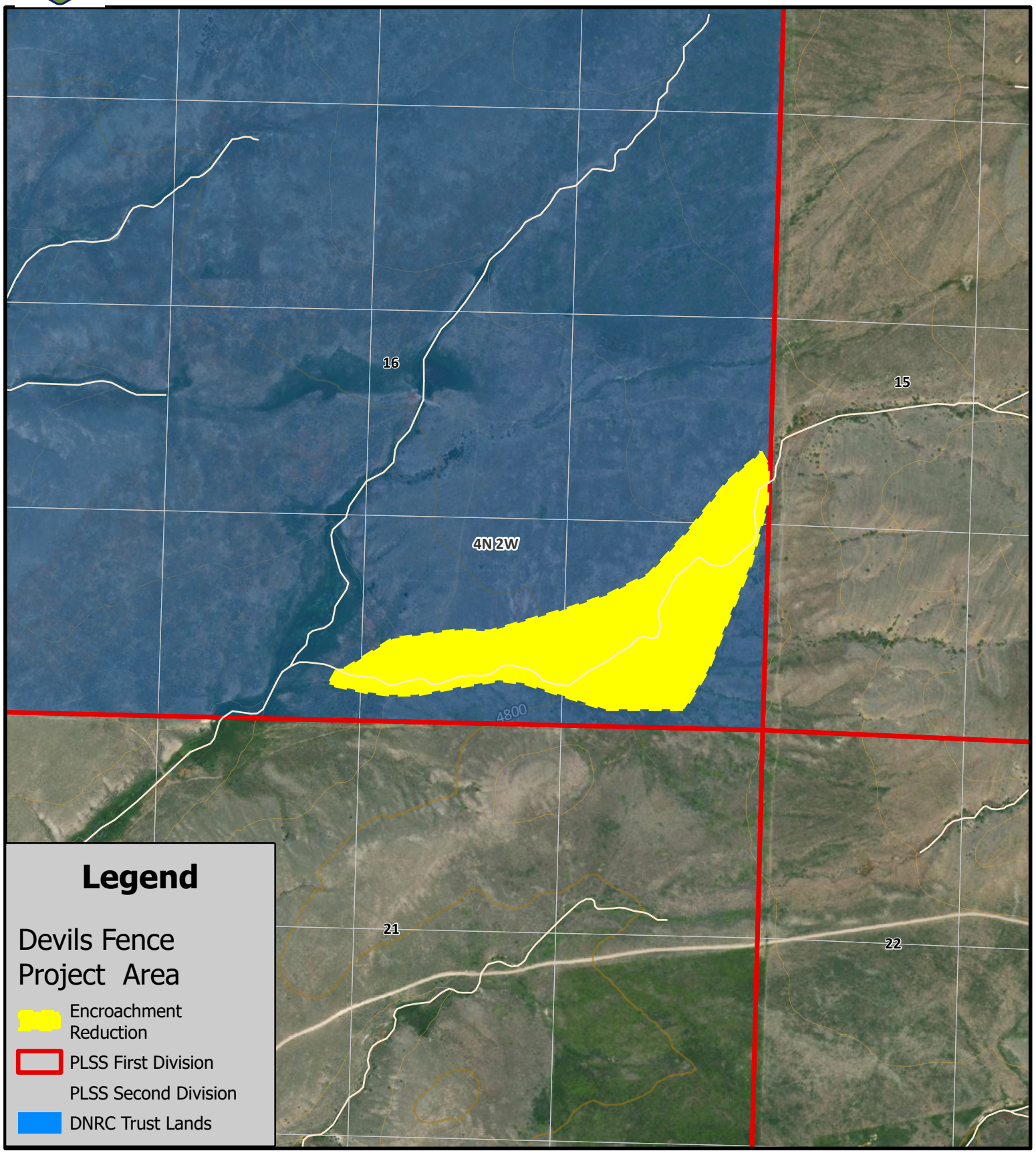
EA Checklist Approved By:	**Name:**	Heidi Crum
	Title:	Helena Unit Manager
Signature: *Heidi Crum*	**Date**:	5/23/2022

Attachment A-1

Devils Fence Encroachment

Section 16 4N R2W

N



Author Name:D. Healy
4/12/2022

0 0.13 0.25 0.5 Miles

Scale: 1:10,000
1 inch equals 0.16 mile

MONTANA SAGE GROUSE
HABITAT CONSERVATION PROGRAM

GREG GIANFORTE, GOVERNOR
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1539 ELEVENTH AVENUE
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HELENA, MONTANA 59620-1601

Project Number 4683
Governor's Executive Orders 12-2015 and 21-2015
Devils Fence Ranch Conifer Reduction

Charles Maddox
840 North Montana Street
Dillon, Montana 59725

March 7, 2022

Dear Mr. Maddox,

The Montana Sage Grouse Habitat Conservation Program received a request for consultation and review of your project or proposed activity on February 25, 2022. Based on the information provided, this project is located within General Habitat for sage grouse.

Executive Orders 12-2015 and 21-2015 set forth Montana's Sage Grouse Conservation Strategy. Montana's goal is to maintain viable sage grouse populations and conserve habitat so that Montana maintains flexibility to manage our own lands, our wildlife, and our economy and a listing under the federal Endangered Species Act is not warranted in the future.

The Program has completed its review, including:

Project Description:

Activity Type: Conifer Removal
152.68 Acre Conifer Removal
Implementation Timeframes: March 4, 2022, to March 15, 2024, Short Term (1-5 Years)
Monitoring Timeframes: March 16, 2024, to March 15, 2034, Short Term (1-5 Years)

Project Location:

Legal: Township 4 North, Range 2 West, Sections 15, 16, 21
County: Jefferson
Ownership: Montana State Trust Lands, Private

Executive Orders 12-2015 and 21-2015 Consistency:

The project proposes to reduce conifer in General Habitat for sage grouse.

The project proposes to reduce conifers approximately 15 miles southeast of Boulder, Montana in Jefferson County. Primary target species is Rocky Mountain juniper, along with some limber pine and Douglas fir. The Project plans to remove approximately 160 acres of encroaching conifer on State Trust Lands and private lands. The conifer removal is intended to produce more efficient rangeland.

Conifer encroachment activities will be conducted using a mechanical and hand thinning method. Work will be accomplished using small ground crews with hand tools, chainsaws, skid-steer with a timber masticator, tractor and limited use of vehicles or ATVs on existing roads.

Implementation will not take more than two weeks. The site will be monitored for ten years post treatment for invasives and conifer encroachment. The vegetation removal associated with this project refers only to the removal of conifer species. No other surface disturbances will occur. Weed control will be conducted. However, no seeding is anticipated for this project.

Based on the information you provided, your project is not within two miles of an active sage grouse lek.

Discussion:

This project is intended to remove encroaching conifer for better rangeland. This project is located in sage grouse habitat, but its primary purpose is not sage grouse mitigation here. The project is beyond two miles of any sage grouse leks in General Habitat and therefore the project construction activity will be consistent with Executive Order 12-2015.

This conifer encroachment project has habitat benefits but is not proposed to specifically mitigate for, or offset the impacts of, development projects elsewhere.

Implementation activity will be necessary to remove encroaching conifers. Weed control will be implemented for two years. All disturbance activity necessary to remove encroaching conifers, is offset by the uplift created through restoration of the site.

Program Recommendations:

The following stipulation from Executive Order 12-2015 remains applicable. The primary potential for negative impacts to sage grouse and their habitat from this project is from soil disturbance and the potential for noxious weed colonization and spread.

- Weed management is required within General Habitat for sage grouse. Reclamation of disturbed areas must include control of noxious weeds and invasive plant species, including cheatgrass (*Bromus tectorum*) and Japanese brome (*Bromus japonicas*).

Subject to the stipulation described above and voluntarily agreed to, your activities are consistent with the Montana Sage Grouse Conservation Strategy. Should your proposed project or activity need additional permits or authorization from other Montana state agencies or federal agencies, they are likely to request a copy of this consultation letter, so please retain it for your records.

Thanks for your interest in sage grouse and your commitment to taking the steps necessary to ensure Montana's Sage Grouse Conservation Strategy is successful.

Sincerely,

Therese Hartman
Acting Manager
Montana Sage Grouse Habitat Conservation Program

cc: Shawn Thomas
DNRC-Trust Land Management Administrator
P.O. Box 201601
Helena, MT 59620-1601