

CHECKLIST ENVIRONMENTAL ASSESSMENT

Project Name:	Tepee Creek Mesic Restoration Improvement Request
Proposed Implementation Date:	August 2019
Proponent:	US Fish and Wildlife Service
Location:	T13S R1W, Sections 20 & 29
County:	Beaverhead County

I. TYPE AND PURPOSE OF ACTION

The Red Rock Lakes National Wildlife refuge (Lessee) has applied for an Improvement Request for restoration work in the Tepee Creek drainage in the Centennial to improve flows and restore the natural channel that has been altered over the years by irrigators. Restoration work will be accomplished using simple rock structures which will be installed to slow and spread seasonal flows within the Tepee Creek drainage. Such water retaining practices are known to reduce erosion and channel incision and helps raise water tables.

Approximately 100 slowing and water spreading rock structures will be placed in the stream channel covering approximately 1.75 miles of linear feet of the stream. This work will be completed with the use of a mini excavator. In addition, select filling of diversion ditches to place the stream in its original channel will also be accomplished. There will be approximately 0.10 acres of surface disturbance to the area with an estimated cost of \$17,000.

II. PROJECT DEVELOPMENT

1. PUBLIC INVOLVEMENT, AGENCIES, GROUPS OR INDIVIDUALS CONTACTED:
Provide a brief chronology of the scoping and ongoing involvement for this project.

MT Fish Wildlife & Parks Wildlife Biologist, Dean Waltee
MT Fish Wildlife & Parks Fisheries Biologist, Matt Jaeger
MT DNRC Archeologist, Patrick Rennie
Beaverhead County Commissioners
NRIS Search

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

Montana Sage Grouse Conservation Program approval.

3. ALTERNATIVES CONSIDERED:

Action Alternative: Allow the Lessee, Red Rock Lakes National Wildlife Refuge, permission to complete mesic restoration work on approximately 1.75 miles of Tepee Creek in the Centennial Valley in Sections 20 & 29, T13S R1W in Beaverhead County.

No Action Alternative: Deny the Lessee, Red Rock Lakes National Wildlife Refuge, permission to complete mesic restoration work on approximately 1.75 miles of Tepee Creek in the Centennial Valley in Sections 20 & 29, T13S R1W in Beaverhead County

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 NRCS Soil survey of the area identifies the soils along Tepee Creek as Zufelt-Crookedrun complex 0-2 percent slopes. The parent materials of these soils are alluvium over lacustrine deposits and are typical of lake bed soils. These soils have a land capability classification of 5W. The soils are poorly drained near the surface but are sandy in the 20- 60-inch range.

Action Alternative: If the action alternative is chosen there could be some short-term ground disturbance where the channels are closed, and the rock dams are installed. Work will need to be completed during dry soil conditions to mitigate compaction, rutting and or erosion potential. The proposal estimates a small amount of ground disturbance approximately, 0.10 acres. Excessive disturbance would need to be seeded with grass seed, otherwise natural revegetation will be allowed to occur.

No Action Alternative: no short term or long-term ground disturbance would occur under this alternative. No soil impacts would occur.

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.

Action Alternative: Tepee Creek, which is in the northeast corner of the Centennial Valley is an intermittent stream that dries up in early summer. Because of this, the stream has seen modifications by ranchers to try and provide water for irrigation and livestock use. Some of these modifications included altering the original stream channel to irrigate portions of the range and to provide water for livestock. These changes have reduced water quality and quantity of the water that is available on the landscape.

The action alternative would help mitigate some of the changes that occurred to the creek in the past. This includes slow down runoff in the spring and spread the snowmelt out over a larger area reducing erosion and increasing underground water storage in the Tepee Creek drainage. The proposal also will close side channels that have been dug over the years to irrigate areas allowing the original channel to flow for longer periods of time. There will be some disturbance of the stream channel that will cause short term erosion until the disturbed sites are revegetated.

No Action Alternative: There will no short or long-term changes to the stream and water quality and quantity under this alternative. The stream Channel will remain in its altered state.

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.

Neither of the proposed alternatives will have any long term or cumulative impacts to air quality standards. The proposal is in an isolated location of Beaverhead County away from any population center. No effects to air quality would be expected from either alternative.

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 at this location is a mixture of native grasses, forbs and scattered sage brush. An NRIS search of the area didn't identify any rare or sensitive plants or cover types.

Action Alternative: Some disturbance of native vegetation will occur under this alternative. There will be approximately 0.10 acres of surface disturbance to the area during the installation of the rock structures and closing of the side channels that have been made. Because of the light disturbance that will occur natural revegetation will be allowed to occur.

No Action Alternative: no changes to the vegetation cover will occur under this alternative.

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.

Action Alternative: A variety of big game, small mammals, raptors, songbirds, and sage grouse may use this area. Installation of the rock dams and closing of the side channels will not have any long term or cumulative effects on terrestrial, avian and aquatic life or habitats. The mesic stream work could have some short-term disturbance effects during the construction phase of the project. Re-connecting the stream to the broader floodplain riparian area may be beneficial to many species of birds and wildlife, especially if the effort facilitates an increase of a willow canopy cover.

No Action Alternative: Under this alternative there would be no changes to the habitat, or impacts to terrestrial, avian and aquatic life.

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.

An NRIS search of the area identified three species of concern near this proposals location, those species include;

Grizzly Bear, (*Urus arctos*) is considered a threatened and endangered species. The project site is located outside of the bear recovery zone. The bears are considered to have a large home range and can travel great distances and avoid humans whenever possible. The grizzly bear could travel through the project area at any time.

Action Alternative: The project installation would be of short duration with little disturbance of vegetation and ground cover. The installation of the rock dams and closing of side channels could disturb any bears that are in the vicinity of the project for a few days, however the grizzly is a highly mobile animal and this project should cause no long term or cumulative impacts to bears that live in the project area.

No Action Alternative: If the no action alternative is chosen there would be no bear disturbance during the installation phase of the project, and no changes to habitat would occur.

Greater Sage-grouse (*Centrocercus Urophasianus*) Greater sage grouse use has been recorded in the project area and the proposal is located within identified Core Habitat in the Centennial Valley. There is a confirmed active lek located in section 29, T13S R1W within ½ mile of the project location. The proponent has applied to the Montana Sage Grouse Conservation Program for approval of the project and is waiting to hear back from the Program on mitigation measures that need to be followed for the proposal to move forward.

Action Alternative: The project will need to be approved by the MT Sage Grouse Conservation Program, and the proponent must follow all mitigation measures that are prescribed by the sage grouse program. This would include timing of the project and revegetation measures and weed control after the completion of the construction work.

No Action Alternative: If the no action alternative is chosen there will be no change in the use and no short, long term or cumulative effects to the greater sage grouse population.

Wolverine (Gulo gulo) Wolverine have relatively continuous habitat within the Gravelly, Greenhorn and Snowcrest mountain ranges. This project falls outside the Wolverine range by several miles. The BLM and US Forest Service list the wolverine as a sensitive species. Wolverine could travel through the Tepee Creek restoration project area; however, the area is not considered prime habitat for wolverines.

Action Alternative: If the action alternative was chosen there will some disturbance where the work is done, however the project would not cause any direct, indirect, or cumulative effects to wolverine in the long term.

No Action Alternative: No effects to wolverine would occur if the no action alternative is chosen.

10. HISTORICAL AND ARCHAEOLOGICAL SITES:

Identify and determine effects to historical, archaeological or paleontological resources.

Action Alternative: 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. Because the low potential for encountering cultural resources no 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.

No Action Alternative: No affects to historical or archeological sites would occur under this alternative.

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.

Action Alternative: There will be some short-term disturbance in the Tepee Creek drainage associated with this project, however the disturbance will be of short duration and is small, 0.10 acres over 1.75 miles of stream length. The area will revegetate rapidly and no long-term effects to aesthetics are anticipated.

No Action Alternative: No changes to aesthetics will occur under this alternative.

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.

Neither of the proposed alternatives will have any effects on the demands on environmental resources of land, water, or energy.

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 Dillon Unit is unaware of any other environmental documents currently being completed that are pertinent to this area. We do have a proposed timber sale planned in the Tepee Creek area in Sections 1,2, 11 & 12 T13S R 1W in the next couple of years.

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.

Action Alternative: No health or safety issues were identified during the scoping of this project under the action alternative.

No Action: There would be no health or safety issues associated with the no action alternative.

15. INDUSTRIAL, COMMERCIAL AND AGRICULTURE ACTIVITIES AND PRODUCTION:

Identify how the project would add to or alter these activities.

Action Alternative: This alternative will allow runoff to percolate over a larger surface area in the riparian zone which should allow more forage production for a longer period in the growing season and allow warm weather grasses to flourish.

No Action Alternative: There will be no changes to agricultural activities and production under this alternative.

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.

Action Alternative: This alternative will provide an employment opportunity for a contractor for a few days of employment in late summer.

No Action Alternative: The no action alternative will not provide or eliminate any short term or long-term employment opportunities within the Centennial Valley.

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.

Action Alternative: Will not change local or state tax base revenues.

No Action Alternative: Will not change local or state tax base revenues.

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.

Neither of the proposed alternatives will change 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.

Neither alternative will affect locally adopted environmental plans or goals. Beaverhead County has no zoning requirements in this area. Tepee Creek drains into Red Rock Lake in the Red Rock Lake National Wildlife Refuge.

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.

Neither alternative will change or alter recreational use in the Centennial Valley.

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.

Neither of the proposed alternatives will alter population density or distribution or change housing requirements in the Centennial Valley or Beaverhead County.

22. SOCIAL STRUCTURES AND MORES:

Identify potential disruption of native or traditional lifestyles or communities.

Neither alternative will alter the social structures and mores of the area. The land has been used as agricultural grazing ground for over 100 years and will continue that use for years to come. Neither of the proposed alternatives will change that use. The **Action Alternative** will allow better use of the water resources that are currently available on the site and may help wildlife species too.

23. CULTURAL UNIQUENESS AND DIVERSITY:

How would the action affect any unique quality of the area?

The current and past use of the area is for grazing cattle. Neither of the proposed alternatives will alter that use of the land.

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.

Action Alternative: If chosen the action will restore the lower portion of Tepee Creek to a better functioning mesic habitat which will increase soil moisture. This will enhance native mesic plant communities and their associated insect and wildlife communities. Such structures show promise as a relatively simple, low cost landscape-scale water conservation and habitat improvement technique. There will be no changes in the return to the trust from either of the proposed alternatives.

No Action Alternative: If chosen the use of the area will remain the same. There will be no changes or improvements to Tepee Creek or stream habitat. No changes to trust revenue will occur under either of the alternatives.

EA Checklist Prepared By:	Name: Timothy Egan	Date: 7/2/2019
	Title: Dillon Unit Manager	

V. FINDING

25. ALTERNATIVE SELECTED:

Action Alternative: Allow the Lessee, Red Rock Lakes National Wildlife Refuge, permission to complete mesic restoration work on approximately 1.75 miles of Tepee Creek in the Centennial Valley in Sections 20 & 29, T13S R1W in Beaverhead County.

26. SIGNIFICANCE OF POTENTIAL IMPACTS:

This proposal will have positive impacts on water storage in the lower Tepee Creek drainage and may allow willows to re- establish and grow along the banks of the stream. Overall this is a positive development for wildlife and will be a credit to sage grouse program. It will also increase forage for grazing livestock.

27. NEED FOR FURTHER ENVIRONMENTAL ANALYSIS:

EIS
 More Detailed EA
 No Further Analysis

EA Checklist Approved By:	Name: Andy Burgoyne	
	Title: CLO Trust Land Program Manager	
Signature:		Date: 7/3/19

Fig.1: Location of project area within the state of Montana.



Fig. 2 One Rock Dam. Example Photos

