CHECKLIST ENVIRONMENTAL ASSESSMENT

Project Name:	Elk Springs - West Water Pipeline Re-Development
Proposed Implementation Date:	Summer/Fall, 2020
Proponent:	Red Rock Lakes / US Fish & Wildlife Service
Location:	Section 3 & 4, Township 14 South – Range 1 East
County:	Beaverhead County

I. TYPE AND PURPOSE OF ACTION

The Red Rock Lakes National Wildlife Refuge (RRLNWR) has submitted an Improvement Request Form for a proposed re-development of a stock water pipeline on state land located in the Alaska Basin area of the Centennial Valley. The proposal entails the re-development of the Elk Spring pipeline that currently runs West from the spring site. At present much of the existing pipeline is above ground and is a poorly functioning, high maintenance line. The lessee has applied to replace the existing above ground pipeline with a buried pipeline with the goal of improving reliability and reducing annual maintenance issues and costs. The current site consists of very shallow soils overlaying bedrock or bedrock outcrops where the line cannot be buried in the existing location. The proponent wishes to change the location of the line by following an existing 2-track used to maintain the spring head box South to private land where the line would cross approximately a half mile of Huntsman Ranch private land and re-enter state land in Section 4. Total length of new buried pipeline on trust land is approximately 6,300 feet. The new line would be gravity fed to 2 existing stock tanks located on trust land in section 4. The lower tank is located in the NESWNE and the upper tank where the new line terminates is located in the SWNWNW.

The water rights for Elk Spring are shared between the MT DNRC, USDA Forest Service, and Huntsman Ranch.

II. PROJECT DEVELOPMENT

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

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

Scoping for the proposed project included:

MT FWP Wildlife Biologist, Dean Waltee
MT DNRC Archeologist, Patrick Rennie
Red Rocks Lake National Wildlife Refuge Biologist Kyle Cutting
Montana Natural Resource Information Service
MT FWP Fisheries Biologist, Matt Jaeger

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

No other government permits are needed for this proposal.

3. ALTERNATIVES CONSIDERED:

A. Action Alternative: Allow RRLNWR to replace the West pipeline from Elk Spring with a buried line.

B. No Action Alternative: Deny RRLNWR's proposal for re-development of the West Elk Spring pipeline.

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 proposed project area is located on alpine glacial deposits and alluvium derived from primarily ancient metamorphic bedrock (quartzites and amphiboles) and volcanic bedrock. Bedrock is common at shallow depth, mainly along ridges and convex slopes. Predominant soils on northerly slopes of 10 to 45%, and ridges are shallow to moderate depth, cobbly sandy loams and cobbly loams. Topsoils are 3-7 inches cobbly loams and sandy loams. These soils are well drained and tend to be droughty. Overall productivity is estimated as low to moderate and cold climate and moisture availability limit plant growth. On concave terrain and swales of 15-35% slope, there are soils with higher clay contents and better site quality. Erosion potential for disturbed soils is moderate, except for steeper side slopes. Soils have a relatively long dry or frozen season. Primary concern for soil productivity is maintaining the shallow topsoils, by minimizing displacement. Southerly aspects with moderate to steep slopes typically have higher rock content soils. These soils are droughtier and include open forest and range sites. The depth of organic rich surface soils is similar to adjacent range sites, and these sites were historically more open stands of trees and native rangelands. Erosion potential for disturbed soils is moderate. Low soil bearing strength and compaction/rutting hazard is a concern in spring/early summer, when soils are wet.

The proposed project route would follow existing 2 track trails. The proposal includes use of a dozer to rip the pipe into the ground and immediately cover the line. Little ground disturbance would occur if done during dry conditions. No long term or cumulative effects to soil productivity, compaction or soil erosion would occur if the stock pipeline was installed.

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.

This proposal is located in the watershed of Red Rock Creek in an area commonly referred to as "Alaska Basin." Red Rock Creek drains a watershed area of approximately 22,134 acres. The proposal is located in areas that are drained by several small ephemeral draws and swales that do not contain defined stream channels. These ephemeral drainage features are tributary to several unnamed headwater intermittent and perennial tributaries to Red Rock Creek. Red Rock Creek is a tributary to Upper Red Rock Lake, which feeds the remaining lower Red Rock River system. The Red Rock River drainage is located within the Upper Missouri River Basin.

Downstream beneficial uses in the affected watersheds include: domestic, irrigation, livestock watering, wildlife, and cold-water fisheries. There are several existing water rights for livestock and irrigation uses of surface water located immediately downstream of the proposal.

Elk Spring is also being used to fill stock water tanks found to the North on trust lands and to Forest Service allotments to the north west of the state ground. When the existing system was working properly no adverse effects to water quality were observed. By re-developing the West line to the uplands, cattle will be dispersed out of the spring bottom reducing erosion and sediment. No long term or cumulative effects are anticipated to water quality if this proposal was to move forward and be implemented.

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.

This proposal would not create any significant air particulate problem and is not located in an area identified as a non-attainment zone. No long term or cumulative effects to air quality are anticipated from this proposal.

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 proposed project area is located at the northeast end of the Centennial Valley along the southeastern tip of the Gravelly Range. State ownership within the project area is 9,008 acres of which 1,518 acres are forested. Adjacent ownership to the north and east is the Beaverhead-Deerlodge National Forest, to the south the Red Rock Lakes National Wildlife Refuge and to the west is private. Lands within the proposed project area occur in open, rolling country with generally broad and gentle ridge tops. Slopes range from 10-50% with an elevation range of 6600 feet to 8200 feet. The area is primarily grassland to the south turning into timbered blocks to the north. A mixture of conifer and aspen forest comprises the State timbered parcels.

The contiguous block of trust lands containing the proposed spring development site is comprised of all or parts of 12 sections. Collectively this area is known as the “Alaska Basin grazing leases”. The vegetation in the area of the proposal is made up of high elevation sagebrush and native grasses and forbs that will not be affected by this proposal.

No long term or cumulative effects are anticipated from the implementation of this proposal.

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.

A variety of big game, small mammals, raptors and songbirds potentially use this area. There are no known fish-bearing streams within the immediate vicinity of the proposed project area; however, the spring does supply water to Red Rock Creek via ground water.

Because Arctic graying use Red Rock Creek for spawning, Matt Jaeger, Fisheries Biologist for the FWP has requested that if the spring development is allowed to be re-developed the system be shut off when not in use. Cursory hydraulic analysis suggests that Red Rock Creek gains about 3 cfs from groundwater in the reach adjacent to Elk Spring. Matt Jaeger wants to be sure that expression of this water isn’t disrupted by pumping or piping water away from this reach.

The purpose of the project is to improve reliability and reduce maintenance on an upland water source that would reduce livestock dependence on Red Rock Creek. Reducing livestock use along the creek will allow the riparian to maintain or improve current condition.

No long term or cumulative negative effects are anticipated to occur to wildlife, birds or fish if the proposal is implemented.

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.

The Montana Natural Resource Information Service (NRIS) Natural Heritage Program (MNHP) website was queried for information regarding sensitive or endangered species located in the vicinity of the project area. The query results are listed below:

Bald Eagle (Haliaeetus leucocephalus) – Bald eagles are listed as Recovered, delisted, and being monitored by the US Fish and Wildlife Service. Montana State, the US Forest Service, and the US Dept. of the Interior Bureau of Land Management all list the bald eagle as sensitive. The proposed project would place a buried stock water pipeline on an upland site in sagebrush - grass dry rangeland conditions outside of known bald eagle nesting areas. The project would not increase disturbance to bald eagle use of the area.

Bruneau Mariposa Lily (Calochortus bruneaunis) – Bruneau mariposa lilies are listed by the State of Montana as a Species of Concern. The Montana Natural Resource Information System (NRIS) defines Species of Concern as: "Species of Concern are native taxa that are at-risk due to declining population trends, threats to their habitats, restricted distribution, and/or other factors. Designation as a Montana Species of Concern or Potential Species of Concern is based on the Montana Status Rank, and is not a statutory or regulatory classification. Rather, these designations provide information that helps resource managers make proactive decisions regarding species conservation and data collection priorities." The global and state ranking are contradictory."
It is given a G5 Global Rank on the NRIS site, which is defined as "*G5 - Common, widespread, and abundant (although it may be rare in parts of its range). Not vulnerable in most of its range."*

The lily is given a somewhat contradictory state rank of S1S3, where S1 is defined as: *"S1 - At high risk because of extremely limited and potentially declining numbers, extent and/or habitat, making it highly vulnerable to global extinction or extirpation in the state."*
S3 on the other hand, is defined as: *"S3 - Potentially at risk because of limited and potentially declining numbers, extent and/or habitat, even though it may be abundant in some areas."*

Bruneau mariposa lily habitat according to NRIS includes dry meadows and grasslands in the foothills or montane zones. The proposed project would include a short construction window in a sagebrush – native grassland site along an existing 2 track road. No long term effects to the species is expected as a result of the proposed project being approved.

Greater Sage-Grouse (*Centrocercus urophasianus)*- Greater Sage-Grouse are listed as sensitive by the US Forest Service, BLM and the State of Montana. The project area is located in Sage-Grouse general habitat as Identified by the Montana Fish, Wildlife and Parks. There are no known leks within 5 miles of the proposed project area. The proposed project would be replacing a partially buried stock water pipeline with a completely buried pipeline. Construction would occur in late summer to fall outside of prime sage-grouse nesting season. No cumulative effects to Sage-Grouse are expected as a result of the proposed improvement. The proponent submitted the project for review to the Montana Sage-grouse Advisory Committee.

Grizzly Bear (Ursus arctos) – Grizzlies have been delisted and relisted on the endangered species list recently. Current status is Threatened by the USFS, BLM, and State of Montana. The project area is situated approximately 5 miles west of the Greater Yellowstone Ecosystem Grizzly Bear Recovery Zone. In recent years, grizzly bears have been documented ranging greater distances outside of the Yellowstone Ecosystem. Grizzly bears have frequently been documented in the vicinity of the project area. The replacement of the partially buried stock water pipeline with a buried stock water pipeline will not cause cumulative negative impacts to grizzly bear use of the area.

Mealy Primrose (Primula incana) – Mealy primrose is currently listed as sensitive by the U.S. Forest Service, BLM, and the State of Montana. According to the Montana Natural Resource Information Service, the plant is found growing in wetland sites which tend to be saturated and calcareous in nature. The proposed project would be placed on a dry sagebrush – grass site outside of mealy primrose habitat. The proposed project would benefit the plant by improving an upland water source for livestock outside of the slough areas where the plants preferred habitat is located. The resulting reduction of livestock use of the plants preferred habitat due to the off-source water development could provide a benefit to the plant during the growing season.

Wolverine (Gulo gulo) - Wolverines 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. Wolverines could and may pass through the state sections when moving between mountain ranges however the state sections do not provide the necessary habitat for sustained use by wolverines at this location. Because of this, this project would not cause direct,

indirect, or cumulative effects on this species and the area of this proposal is not considered prime habitat for wolverines.

No long term or cumulative effects are anticipated to occur to wildlife, birds, fish, or sensitive species should this proposal be implemented.

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

A field inspection of the proposed route was conducted by the Dillon Unit Land Use Specialist. No cultural or paleontological resources were identified within the affected area. Patrick Rennie, DNRC Archaeologist, was solicited for comment, he responded on 2/25/2020. His response follows:

"A Class I (literature review) level review was conducted by the DNRC staff archaeologist for the area of potential effect (APE). This entailed inspection of project maps, DNRC's sites/site leads database, land use records, General Land Office Survey Plats, and control cards. The Class I search results revealed that no cultural or paleontological resources have been identified in the APE, but it should be noted that Class III level inventory work has not been conducted there to date.

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

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 project is located in an isolated area away from any population. The new stock water pipeline will replace an existing stock water pipeline. The proposed new line is buried where the old line was partially on the surface. The old line that is above ground should be removed if this project is approved to reduce so there shouldn't be any changes to the aesthetics of the area. No long term or cumulative effects to aesthetics are anticipated from the implementation of this proposal.

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 demands for additional environmental resources are required if this proposal is implemented. No direct, indirect or cumulative effects to environmental resources should result from this proposal.

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.

No other studies or projects were identified during scoping for the proposed project. Past projects conducted in the last 10 years on DNRC lands include:
Elk Springs – North stock-water pipeline was assessed to be re-constructed in 2013. An EA was completed, and the project was finished in 2013-2014.
The DNRC had a request from the TNC to do a 75 acre burn in section 4, T13S – R2W in approximately 2013. An EA was completed on the proposal. The burn project was not completed.

The DNRC, Dillon Unit assessed and completed a timber permit to remove dead and dying timber from a bark beetle infestation in the Patchtop/Teepee Creek area. There was also a harvest of Post and Rails in the Teepee Creek drainage that was completed during the fall of 2013.
The current project being assessed in the area is a timber sale in Teepee Creek to be sold in fiscal year 2021.

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 known health or safety risks are anticipated from the completion of this proposed project.

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

This project has the potential to improve available forage for livestock. This would be accomplished through more even distribution of cattle use over the entire area including the uplands. The even distribution decreases the likelihood of overutilization of the range resource and has the potential to improve wildlife habitat. The action alternative may increase AUM's in the long term.

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 project will not create or eliminate permanent jobs in the area.

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.

No significant increase in tax revenues at the state or local level are anticipated as a result of this proposal.

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.

No increased demand for government services are expected as a result of this proposal.

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.

In November 2003, the U.S. Forest Service implemented the Antelope Basin/Elk Lake Allotment Management Plan, directing the management of domestic livestock in the southern Gravelly Mountains. No effects are expected.

No locally adopted environmental plans will be affected by this proposal.

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.

Persons having legal access to the tracts and possessing a valid state lands recreational use license or FWP conservation license may conduct recreational activities on the tracts. The proposed project would not affect access for the general public. This area receives considerable hunting pressure during the big game hunting season. Currently there aren't any designated open roads on the state section, but this doesn't stop recreationist from using the area via motorized vehicles. This includes the use of existing roads as well as some off-road travel. There is a concern that installing the pipeline will cause additional off-road travel to occur. The pipeline is proposed to run adjacent to an existing 2 track with access from state land to the North and private land to the South. If the pipeline is installed there will be no new trails formed as a result of construction. Because the area is accessible and being open range land the DNRC is concerned that the existing, currently closed trails will be used for recreation after the project is completed. This recreational use could lead to erosion and noxious weeds being introduced to the area reducing productivity and AUM's.

The area is not close to any populated areas so enforcement of the DNRC's recreational use rules is not easily accomplished. Mitigation measures would include putting up signs, barriers and gates to restrict and discourage off road use.

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.

No change in population will result by implementing this proposal.

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

No change in social structures and mores are expected as a result of this project.

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

No change in social structures and mores are expected as a result of this 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 proposed project will not create a monetary return to the Common Schools Trust. The project will improve water availability and reliability for the lessee's agents that will graze the lease. The current water line has been undependable and has resulted in the pasture not being used for the last 3 years. The proposed project would allow the lessee to return to their previous rotational grazing system.

EA Checklist Prepared By:	**Name:** Charles Maddox	**Date:** July 15, 2020
	Title: Land Use Specialist	

V. FINDING

25. ALTERNATIVE SELECTED:

A. Action Alternative: Allow RRLNWR to replace the West pipeline from Elk Spring with a buried line.

26. SIGNIFICANCE OF POTENTIAL IMPACTS:

This proposal will fix an above ground and poorly functioning, high maintenance stock-water pipeline with a buried line that will function as intended when the system was first designed. The new pipeline will improve the reliability of the system for stock-water use and reduce annual maintenance issues and costs. The new system will be installed along an existing two track road and no long term or cumulative impacts would be anticipated from the proposal. There may be some short-term impacts during the installation process to vegetation and disturbance to fauna in the surrounding area.

The old stock water line that runs above ground is to be removed to improve aesthetics and reduce “litter” on the tract. No other mitigation measures will be required for this project.

27. NEED FOR FURTHER ENVIRONMENTAL ANALYSIS:

	EIS		More Detailed EA	X	No Further Analysis

EA Checklist Approved By:	**Name:**	Timothy Egan
	Title:	Dillon Unit Manager
Signature: /S/ Timothy Egan		**Date**: July 16, 2020