Montana Department of Natural Resources and Conservation
Water Resources Division
Water Rights Bureau

ENVIRONMENTAL ASSESSMENT

For Routine Actions with Limited Environmental Impact

Part I. Proposed Action Description

Applicant/Contact name and address:

Randall S. Shinn & Deborah G. Steward
13683 Lodge Grass Creek Rd
Lodge Grass, MT 59050

Type of action: Application to Change a Water Right No. 43O 30163932

Water source name: Lodge Grass Creek

Location affected by the project: the NENENE of Section 29, T7S, R34E, in Big Horn County

Narrative summary of the proposed project, purpose, action to be taken, and benefits:

This project is on Lodge Grass Creek within the boundary of the Crow Reservation, approximately 13 miles southwest of Lodge Grass, Big Horn County, Montana. Lodge Grass Creek originates from the Big Horn Mountains and travels in a northeasterly direction to its confluence with the Little Big Horn River, just south of Lodge Grass, Montana.

This project is changing the point of diversion from the NWNENW of Section 32, T7S, R34E, Big Horn County via a headgate and William Miller Ditch for flood irrigation to a pump directly from Lodge Grass Creek, downstream in the NENENE of Section 29, T7S, R34E, in Big Horn County, to pivot and flood irrigate the place of use. The flow rate and volume of the appropriation will decrease. No construction will transpire; the pump will be on aluminum pontoons, with a screen protector, and capable of pumping water from minimum depth of four inches. The pump will be placed into the creek and removed when necessary.

The DNRC shall issue Change Authorization 43O 30163932 if the applicant proves the criteria in 85-2-402 MCA are met.

Agencies consulted during the preparation of the Environmental Assessment:
(include agencies with overlapping jurisdiction)

Montana Department of Natural Resources and Conservation
Montana Department of Fish, Wildlife and Parks (FWP)
Montana Department of Environmental Quality (DEQ)

Montana Sage Grouse Habitat Conservation Program (SGHCP)
Montana Natural Heritage Program (NHP)
U.S. Fish and Wildlife Service (USFWS)
U.S. Department of Agriculture, National Resource Conservation Service (USDA, NRCS)

Part II. Environmental Review

1. Environmental Impact Checklist:

PHYSICAL ENVIRONMENT

WATER QUANTITY, QUALITY AND DISTRIBUTION

Water quantity

This application is to change the location of the uptake of water from Lodge Grass Creek. Originally diverted via headgate to a ditch, uptake will now be pumped from a location downstream. The new appropriation is less than historically used. Therefore, there will be more water left in the source and no significant impact on water quantity.

Determination: No Significant Impact

Water quality

Classified as a B-1 stream by Montana DEQ, water quality use classes. Lodge Grass Creek was not located in the 2020 Water Quality Integrated Report or 303(d) List, provided by Montana DEQ. Lodge Grass Creek was last included in the 1998 303(d) List, Table 3-A, as segments completely under Tribal Jurisdiction. Since the project falls within the Crow Reservation, the State has no jurisdiction over the water quality of this creek. However, this project will have no significant impact on water quality, regardless of data availability.

Determination: No Significant Impact

Groundwater

This project will have no significant impact on the groundwater quality or supply. The project will be appropriating surface water from Lodge Grass Creek at a flow rate and volume below its historical allotments.

Determination: No Significant Impact

Diversion works

The project will utilize a 12” Riverscreen on aluminum pontoons, capable of withdrawing water from a minimum depth of 4”. As the Riverscreen floats on the surface, it will not affect the creek bed, however, the size of the Riverscreen will impede surface debris flow that will likely require the owner to remove it if caught on the device. The screen protector will keep wildlife away from the pump. The Riverscreen will not alter the shape of the stream or restrict the flow of aquatic life. However, given its size, there will be some bank disturbance when placing in and removing the Riverscreen from the creek. Furthermore, this disturbance can increase the spread of noxious

weeds or invasive species, both of which are the responsibility of the owner to maintain and report. Long-term bank disturbance and riparian health can be affected if the owner places and removes the Riverscreen without precautions or too frequently, increasing erosion and bank instability.

It is advised that the owner install the Riverscreen crane system for easy installation and retrieval and to maintain bank stability, or to maintain the riparian vegetation.

Determination: Possible Impact

UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES

Endangered and threatened species

The Montana Natural Heritage Program (MT NHP) identifies the following as Species of Concern (SOC) within the general area of the project: Bobolink, Veery, Great Blue Heron, Bald Eagle, Eastern Screech Owl, Dickcissel, Bombus suckleyi, N.A. Porcupine, Danaus Plexippus, Western Spotted Skunk, Dwarf Shrew, A. White Pelican, Plumbeous Vireo, Black-billed Cuckoo, Little Brown Myotis, Long Eared Myotis, Long-legged Myotis, Merriam's Shrew, Prairie Shrew, Preble's Shrew, Silver-haired Bat, Golden Eagle, Sharp-tailed Grouse, Plains Hog-nosed Snake, Northern Hoary Bat, Brewer's Sparrow, Common Poorwill, Long-billed Curlew, Sage Thrasher, Townsend's Big-eared bat, Fringed Myotis, Greater Sage-Grouse, Pinyon Jay, Short-eared Owl, Snapping Turtle, Astragalus barrii, Astragalus ceramicus var. filifolius, Eastern Red Bat, Rufous Hummingbird, Great Plains Toad, Northern Leopard Frog, Carex crawei, Carex gravida, Cirsium pulcherrimum, Stellaria crassifolia, A. Bittern, Black Tern, Broad-Tailed Hummingbird, Ferruginous Hawk, Lewis's Woodpecker, Ovenbird, Red-headed Woodpecker, Black-tailed Prairie Dog, Eupatorium maculatum, Physaria brassicoides, Potentilla plattensis, Streptanthella longirostris, Pallid Bat, Yellow-billed Cuckoo, and the Sprague's Pipit.

While there is an abundance of species present, this project is not expected to produce an adverse effect on the wildlife community.

Determination: No Significant Impact

Wetlands

No wetlands were claimed or proposed in this project or identified in the general area of the project were reported on the Montana Natural Heritage Program (MT NHP) report.

Determination: No Significant Impact

Ponds

No ponds were claimed or proposed in this project or identified in the general area of the project via the Montana Natural Heritage Program (MT NHP) report.

Determination: No Significant Impact

GEOLOGY/SOIL QUALITY, STABILITY, AND MOISTURE

As mentioned above in the Diversion Works section, the most significant impact from this project will come from the Riverscreen being placed and removed from the creek, that may

increase erosion on the bank near the point of diversion located in the NENENE Sec 29, T7S, R34E, in Big Horn County.

USDA Web Soil Survey gives the point of diversion located in NENENE Sec 29, T7S, R34E, in Big Horn County as consisting primarily of Korchea and Frazer soils (KR). Frazer soils consist of well-draining, slow runoff, and slow permeability characteristics, formed by alluvium, and found on stream terraces. This soil is likely to be eroded upon increased disturbance if vegetation is lost.

It is advisable to maintain the vegetation and limit the number of times the Riverscreen is placed in and removed from the creek to maintain bank stability.

Determination: Possible Impact

VEGETATION COVER, QUANTITY, AND QUALITY/NOXIOUS WEEDS

The Montana Natural Heritage Program (MT NHP) identified the following land cover in the general project area: Great Plains Mixed-grass Prairie (37%); Big Sagebrush Steppe (16%); Cultivated Crops (14%); Rocky Mountain Lower Montane, Foothill, and Valley Grassland (12%); Great Plains Riparian (10%); Rocky Mountain Dry-Mesic Montane Mixed Conifer Forest (3%); Pasture/Hay (3%); and Great Plains Wooded Draw and Ravine (2%).

MT NHP identified the following as Invasive and Pest Species: Invasive aquatic species include Myriophyllum spicatum and Nymphaea odorata; priority 1A noxious weeds include Centaurea solstitialis, Isatis tinctoria, and Taeniatherum caput-medusae; priority 1B noxious weeds include Lythrum salicaria, Polygonum cuspidatum, Cytisus scoparius, Echium vulgare, Polygonum x bohemicum; priority 2A noxious weeds include Ventenata dubia, Rhamnus cathartica, Lepidium latifolium, and Ranunculus acris; priority 2B include Acroptilon repins, Convolvulus arvensis, Cynoglossum officinale, Lepidium draba, Linaria dalmatica, Potentilla recta, Tamarix ramosissima, Centaurea stoebe, Cirsium arvense, Euphorbia virgata, Berteroa incana, Centaurea diffusa, Leucanthemum vulgare, Tanacetum vulgare, and Linaria vulgaris; priority 3 include Bromus tectorum and Elaeagnus angustifolia; lastly, biocontrol species include Mecinus janthinus, Mecinus janthiniformis, Aphthona lacertosa, Cyphocleonus Achates, Aphthona nigriscutis, and Oberea erythrocephala.

It will be the responsibility of the landowner to prevent the establishment and spread of noxious weeds.

Determination: No Significant Impact

AIR QUALITY

No impact on air quality is expected due to this project proposing a change in point of diversion.

Determination: No Impact

HISTORICAL AND ARCHEOLOGICAL SITES

Not applicable; the project is not located on State or Federal Lands. The Montana State Historic Preservation Office was not consulted regarding this project. As the project is located on private property, any cultural resource inventory conducted would be at the property owner's discretion.

Determination: Not Applicable

DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AND ENERGY
No additional impact on other environmental resources is expected due to this project.

Determination: No Impact

HUMAN ENVIRONMENT

LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS
There are no known locally adopted environmental plans or goals.

Determination: Not Applicable

ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES
This project will have no significant impact on recreational and wilderness activities.

Determination: No Significant Impact

HUMAN HEALTH
This project will have no significant impact on human health.

Determination: No Significant Impact

PRIVATE PROPERTY - *Assess whether there are any government regulatory impacts on private property rights.*

*Yes___ No_**X**_ If yes, analyze any alternatives considered that could reduce, minimize, or eliminate the regulation of private property rights*.

Determination: No Impact

OTHER HUMAN-ENVIRONMENTAL ISSUES - *For routine actions of limited environmental impact, the following may be addressed in a checklist fashion.*

Impacts on:

(a) *Cultural uniqueness and diversity?* No Significant Impact

(b) *Local and state tax base and tax revenues?* No Significant Impact

(c) *Existing land uses?* No Significant Impact

(d) *Quantity and distribution of employment?* No Significant Impact

(e) *Distribution and density of population and housing?* No Significant Impact

(f) *Demands for government services?* No Significant Impact

(g) *Industrial and commercial activity?* No Significant Impact

(h) *Utilities?* No Significant Impact

(i) *Transportation?* No Significant Impact

(j) *Safety?* No Significant Impact

(k) *Other appropriate social and economic circumstances?* No Significant Impact

2. **Secondary and cumulative impacts on the physical environment and human population:**

   (a) *Secondary Impacts*: No secondary impacts are identified

   (b) *Cumulative Impacts:* No cumulative impacts are identified

3. **Describe any mitigation/stipulation measures:** None at this time

4. **Description and analysis of reasonable alternatives to the proposed action, including the no-action alternative, if an alternative is reasonably available and prudent to consider:** The alternative to the proposed project is the no-action alternative. The no-action alternative prevents the property owner from improving the operation of their irrigation system. The no-action alternative does not prevent or mitigate any significant environmental impacts.

PART III. Conclusion

1. **Preferred Alternative:** Issue the change authorization if the applicant proves the criteria in 85-2-402 MCA are met.

2. **Comments and Responses*:*** The land owner should maintain vegetation on the bank where the pump is being placed into the creek to maintain bank stability and decrease erosion potential.

3. **Finding:**

*Yes___ No_**X**_ Based on the significance criteria evaluated in this EA, is an EIS required?*

No significant environmental impacts were identified; therefore, an EIS is not required.

Name of person(s) responsible for preparation of EA:

Name: Cassey Strebeck
Title: Water Resource Specialist
Date: March 26, 2025