

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

1. Applicant/Contact name and address: Chase A. Brady
341 4th Lane NE
Fairfield, MT 59436
2. Type of action: The applicant has proposed to divert water from Muddy Creek by means of a pump for the purpose of irrigation. Sprinkler irrigation is scheduled to occur from May 15 to September 15 with a maximum pumping rate of 450.0 gallons per minute (gpm) producing an annual volume of up to 58.0 acre-feet (AF). A Cornell 3 WH 25 HP pump operates at 160.0 feet of total dynamic head and it will be used to achieve the pumping rate aforementioned. 780.0 feet of six-inch diameter plastic irrigation pipe will convey water from the pump to a Reinke brand center pivot.
3. Water source name: Muddy Creek.
4. Location affected by project: The place of use is 29.0 acres of irrigation located in the Southeast quarter of the Southeast quarter of Section 26, Township 23 North, Range 2 West, Teton County. The proposed point of diversion would be located in the Northwest quarter of the Southeast quarter of the Southeast quarter of Section 26, Township 23 North, Range 2 West, Teton County. The place of use and the point of diversion are both located within basin 41K of Teton County. This basin is subject to the Upper Missouri Basin Closure which allows for the Department to not grant an application for a permit to appropriate waters until the final decrees for all basins with the Upper Missouri Basin have been issued, subject to certain exceptions. The Muddy Creek basin includes the certain exception, stating, “[The closure does not apply to] an application for a permit to use water from the Muddy Creek drainage, which drains to the Sun River, if the proposed use of water will help control erosion in the Muddy Creek drainage.” (§ 85-2-343, MCA). See Figure 1 on the following page for a project location map.
5. Narrative summary of the proposed project, purpose, action to be taken, and benefits: The DNRC shall issue a water use permit if an applicant proves the criteria in 85-2-311 MCA and 85-2-343 MCA are met.
6. Agencies consulted during preparation of the Environmental Assessment: United States Geological Survey, Montana Natural Heritage Program, Natural Resources Conservation Service (NRCS) Soils Data Website, Department of Environmental Quality, National Wetlands Inventory Website, and the Natural Resources Information System.

41K 30072520 Brady Application Overview

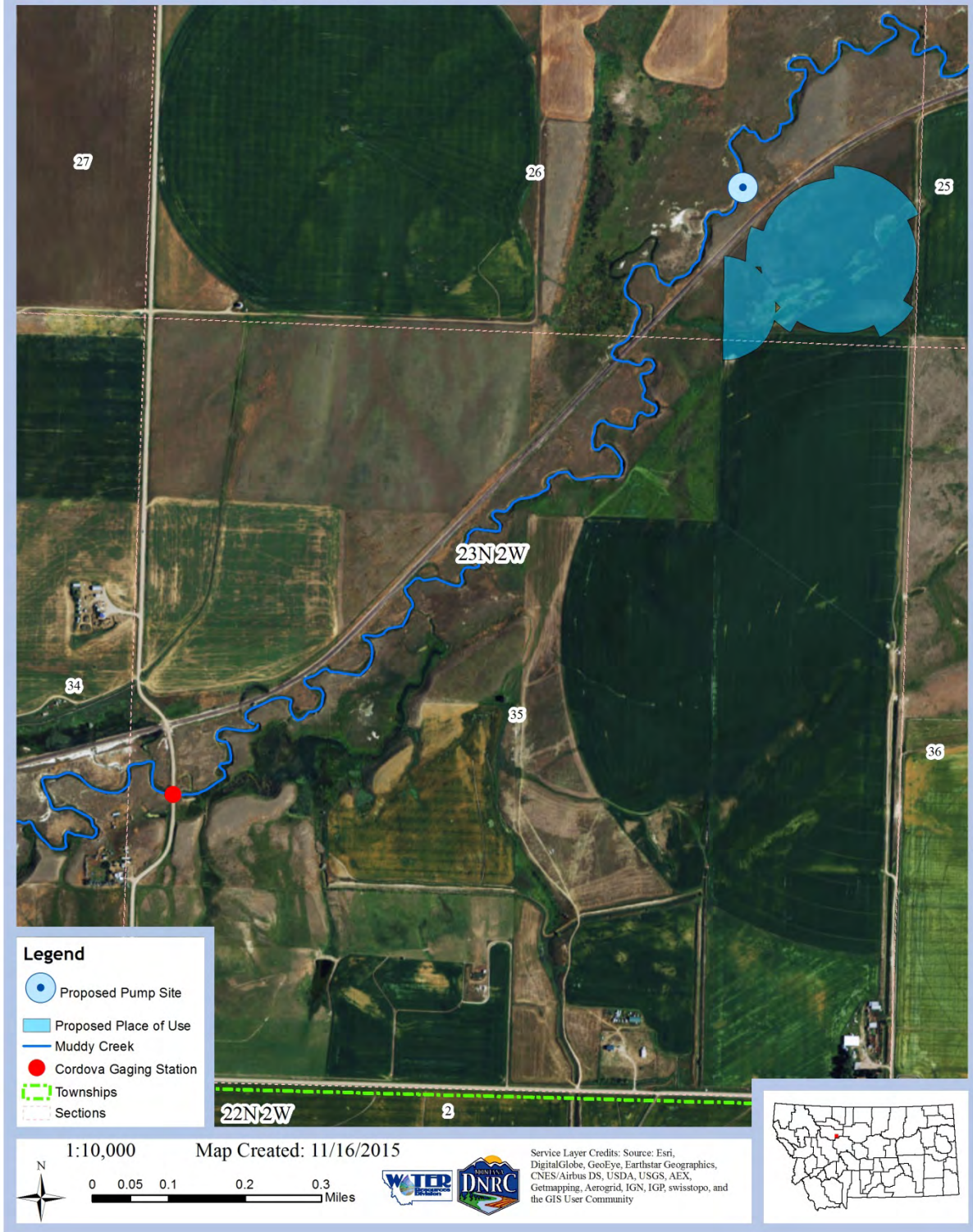


Figure 1-A map of the proposed project.

Part II. Environmental Review

1. Environmental Impact Checklist:

<h2>PHYSICAL ENVIRONMENT</h2>

WATER QUANTITY, QUALITY, AND DISTRIBUTION

Water quantity-The proposed appropriation is from a surface water source with the potential to negatively affect preexisting dewatered streams. Therefore, research was conducted to discover any preexisting dewatered streams that could be affected. The Department of Fish, Wildlife, and Parks reported that only one stream experiences chronic dewatering in basin 41K. The stream that falls under this listing is Sun River, which forms the southern boundary of Teton County and basin 41K. Although Sun River lies within the basin, the point of convergence between Sun River and Muddy Creek is downstream from the 60 mile stretch listed as chronically dewatered.

Determination: It is unlikely that the proposed project will have an effect on any preexisting dewatered streams.

Water quality-According to the Montana Department of Environmental Quality, all total maximum daily load (TMDL) reports have been completed and approved on Muddy Creek from its headwaters to the mouth at Sun River. In good confidence, the 2014 TMDL report lists that water quality is impaired for aquatic life, agriculture, drinking water, and primary contact recreation. The impairment for these subjects is caused by salinity, sedimentation/siltation, sulfates, water temperature, total dissolved solids, nitrogen, and phosphorus. Aquatic life is also impaired by selenium. Impairment is generally caused by habitat modification, streambank modifications/destabilization, channel erosion/incision, and agriculture.

Determination: It is likely that the proposed project will have a small impact in further increasing high concentrations of sulfates, total dissolved solids, nitrogen, and phosphorus due to irrigation and the use of fertilizers/pesticides.

Groundwater-No groundwater information/data was submitted with the application or by a department hydrogeologist.

Determination: Minimal impacts to groundwater quality or supply are anticipated by the proposed new use of surface flows found in this reach of Muddy Creek.

Diversion Works-The proposed diversion will result in pumping water from Muddy Creek at a rate no greater than 450.0 gpm for a volume up to 58.0 AF. The proposed pump is to be a Cornell 3 WH 25 HP pump operating at 160.0 feet of total dynamic head. 780.0 feet of six-inch diameter plastic irrigation pipe will convey water from the pump to a Reinke brand center pivot.

UNIQUE, ENDANGERED, FRAGILE, OR LIMITED ENVIRONMENTAL RESOURCES

Endangered and threatened species –The Montana Natural Heritage Program does not list any plants or animals as species of special concern in the proposed project area. It is not anticipated that a major impact will be observed due to the O’Brien well. According to the U.S. Geological Survey, South Pondera Coulee is intermittent, which would not support fish.

Determination: No species of special concern exist in the proposed project area. Therefore, the proposed project is not expected to impact endangered or threatened species.

Wetlands –According to the U.S. Fish and Wildlife Service National Wetlands Inventory, both the place of use and the proposed point of diversion are outside of a wetland boundary.

Determination: Because no wetlands are contained within the boundary of the proposed project, no impacts are anticipated.

Ponds –No ponds or reservoirs are associated with the project.

Determination: Because no ponds or reservoirs are associated with the project, assessment is not applicable.

GEOLOGY/SOIL QUALITY, STABILITY, AND MOISTURE–At the place of use, soils are composed of Absher clay loam (strongly saline), Mego-not-Tanna clay loam (nonsaline to very slightly saline), and Marvan silty clay (moderately saline to strongly saline) as identified by the Natural Resources Conservation Service.

Determination: Introduction of a pivot irrigation system is not expected to negatively impact preexisting saline conditions. In fact, soil salinity is expected to decrease due to increased plant consumption associated with the pivot irrigation system.

VEGETATION COVER, QUANTITY, AND QUALITY/NOXIOUS WEEDS–Because fields already exist and there is no change in land-use characteristics associated with the permit, there will be no significant impact.

Determination: It is the responsibility of the landowner to ensure noxious weeds do not become out of control.

AIR QUALITY– The applicant included plans in their application to incorporate electric motor driven centrifugal pumps.

Determination: No deterioration of air quality or adverse effects on vegetation due to an increase in air pollutants is expected.

HISTORICAL AND ARHEOLOGICAL SITES –N/A: The proposed project does lie within State or Federal land boundaries.

Determination: No assessment of unique archeological or historic sites has been performed.

DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AND ENERGY
–No additional impacts on other environmental resources were identified.

HUMAN ENVIRONMENT

LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS –Currently, no environmental plans or goals have been identified in the area.

ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES
–No wildlife areas or recreational land are situated adjacent to the proposed project area. Recreational and wilderness activities will not be affected by the project.

HUMAN HEALTH –Human health will not be affected by the project.

PRIVATE PROPERTY –No adverse effect on private property rights is anticipated from this development.
Yes ___ *No* *x*

OTHER HUMAN ENVIRONMENTAL ISSUES –

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. Proposed project is consistent with other land uses in the region.
- (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:*

Secondary impacts: No secondary impacts have been identified.

Cumulative impacts: No cumulative impacts have been identified.

3. *Describe any mitigation/stipulation measures*: None.
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*:

No action alternative: The applicant would not be able to develop the project as proposed.

Alternative one: Approve the application if the applicant proves the statutory criterion has been met.

Part III. Conclusion

1. *Preferred alternative*: Alternative one.
2. *Comments and Responses*: None to date.
3. *Finding*:
Yes___ No x Based on the significance criteria evaluated in this Environmental Assessment, is an EIS required?

An Environmental Assessment is the appropriate level of assessment for the proposed action because no significant impacts have been identified.

Name: Mike Mahowald
Title: Water Resource Specialist
Date: November 16, 2015