

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: Gerald and Mary Dell Ellis, 10933 Valley Dr. E., Miles City, MT 59301
2. Type of action: Application for Beneficial Water Use Permit 42J 30072589
3. Water source name: Powder River
4. Location affected by project: Sections 3, 10 and 11 T2N R54E, Custer County
5. Narrative summary of the proposed project, purpose, action to be taken, and benefits: The Applicant proposes to use two 170 AC pivot sprinkler systems to irrigate 340 AC. The water would be pumped from the Powder River in NWNWSW Section 10 T2N R54E, Custer County using a trailer mounted pump at 2780 GPM up to 914 AF/Yr. The water is pumped through 12 inch PVP piping buried four feet beneath the surface to the pivots. The DNRC shall issue a water use permit if an applicant proves the criteria in 85-2-311 MCA are met. The area to be irrigated is approximately 13 miles NE of Powderville, Montana.
6. Agencies consulted during preparation of the Environmental Assessment:  
(include agencies with overlapping jurisdiction)  
Montana Department of Fish, Wildlife and Parks  
Montana Department of Environmental Quality  
Montana Natural Heritage Program  
United States Fish and Wildlife Service  
United States Department of Agriculture, Natural Resource Conservation Service

**Part II. Environmental Review**

**1. Environmental Impact Checklist:**

**PHYSICAL ENVIRONMENT**

**WATER QUANTITY, QUALITY AND DISTRIBUTION**

***Water quantity*** – The Powder River is listed by the Montana Department of Fish, Wildlife and Parks as a chronically dewatered stream. The DFWP has an instream flow reservation on the

Powder River amounting to a maximum of 424 CFS in May and a total of 95,201 AF/YR. The proposed irrigation project has the potential to worsen the chronically dewatered condition of the river, however, the water quality is so bad during times of low flows that farmers often do not divert when flows are low.

*Determination:* Possible Impact.

**Water quality** – Water quality in the Powder River is assessed as impaired with respect to agriculture due to high salt content. Soil salination and low crop yields have been reported. The proposed project would be unlikely to reduce water quality because the irrigation is by pivot sprinkler and highly efficient. The diversion means is a trailer mounted pump so no water quality degradation will result from the diversion.

*Determination:* No Significant Impact.

**Groundwater** – The use of highly efficient pivot sprinklers indicates that the proposed project will be unlikely to affect groundwater quality.

*Determination:* No Impact.

**DIVERSION WORKS** – The proposed diversion and conveyance means are a portable pump installed into the river down a natural bank and buried 12 inch pipelines. The entire system is in place and operational so no disturbance is required for construction. No barriers to migration, disruption of riparian environments, flow modifications or channel impacts would occur due to the project.

*Determination:* No Impact.

#### **UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES**

**Endangered and threatened species** – The Montana Natural Heritage Program lists seven animal species of concern in the project area. These are the Black-tailed Prairie Dog, Great Blue Heron, Greater Sage Grouse, Snapping Turtle, Blue Sucker, Sturgeon Chub and Sauger. Because the proposed project does not remove or alter any habitat for these species there will be no impact. There are no listed plant species of concern.

*Determination:* No Impact.

**Wetlands** – The United States Fish and Wildlife Service maps no wetlands in the area with the exception of rivers and streams. This project does not affect any existing wetlands and would not create any new wetlands.

*Determination:* No Impact.

**Ponds** – The proposed project includes no ponds and removes no ponds.

*Determination:* No Impact.

**GEOLOGY/SOIL QUALITY, STABILITY AND MOISTURE** – Dominant soils in the project area are Cabbart-Havre loam and Eapa loam. These soils are well drained, non-saline to slightly saline and of low to moderate slope in the project area. The poor quality of Powder River water, particularly the high salt content has the potential to degrade the soils by absorption of sodium and reduced permeability.

*Determination:* Possible Impact.

**VEGETATION COVER, QUANTITY AND QUALITY/NOXIOUS WEEDS** – Existing vegetative cover is agricultural crops. The diversion and conveyance facilities are in place so there is no likelihood of noxious weed introduction. It will be the land owner’s responsibility to monitor and control any noxious weeds.

*Determination:* No Impact.

**AIR QUALITY** – The project is for sprinkler irrigation and has no effect on air quality. Dust during harvest and exhaust from the diesel pump are minor possible effects.

*Determination:* No Significant Impact.

**HISTORICAL AND ARCHEOLOGICAL SITES** – The project is not located on State or Federal Lands.

*Determination:* Not Applicable.

**DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AND ENERGY** – No other demands are recognized.

*Determination:* No Impact.

<b>HUMAN ENVIRONMENT</b>
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**LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS** – There are no locally adopted environmental plans and goals.

*Determination:* No Impact.

**ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES** – There are no recreational or wilderness areas in the area of the project.

*Determination:* No Impact.

**HUMAN HEALTH** - The project is for sprinkler irrigation and has no effect on human health.

*Determination:* No 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: Not Applicable.

**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:***

Secondary Impacts: No secondary impacts are recognized.

Cumulative Impacts: There are no pending water right applications in the area of the proposed project and therefore no cumulative impact.

**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:*** The only alternative to the proposed action is a no-action alternative. The no-

action alternative prevents the Applicant from irrigating agricultural ground to increase production and does not prevent any significant environmental impacts.

*PART III. Conclusion*

1. ***Preferred Alternative:*** Issue a water use permit if an applicant proves the criteria in 85-2-311 MCA are met.
2. ***Comments and Responses:*** None.
3. ***Finding:***  
Yes \_\_\_ No **X** *Based on the significance criteria evaluated in this EA, is an EIS required?*

*If an EIS is not required, explain why the EA is the appropriate level of analysis for this proposed action:* An environmental assessment is the appropriate level of analysis because no significant environmental impacts are recognized.

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

*Name:* Mark Elison

*Title:* Hydrologist/Water Specialist

*Date:* 3/16/2015