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: PN Ranch, LLC
19095 PN Bridge Road
Winifred, MT 59489

2. Type of action: Application for Beneficial Water Use Permit 41T-30041734

3. Water source name: Groundwater

4. Location affected by project: The point of diversion is a well located in the NE NW SW and the place of use is in the west half; both in Section 25, T23N, R66E, Fergus County.

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

This permit application is for an 88 foot deep well completed into the alluvial aquifer near the confluence of the Judith and Missouri Rivers. The eight inch diameter well will be used to supply a half-circle center pivot with shallow ground water for irrigation of 50 acres. The applicant is requesting to divert 400 gallons per minute (gpm) up to 125.0 acre feet (AF) from April 1 to October 30 annually.

The DNRC shall issue a water use permit if an applicant proves the criteria in 85-2-311 MCA are met.

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

Dept. of Environmental Quality Website - TMDL 303d listing
MT. National Heritage Program Website - Species of Concern
USDI Fish & Wildlife Service Website - Endangered and Threatened Species
MT State Historic Preservation Office - Archeological/Historical Sites
USDA Natural Resources Conservation Service – Web Soil Survey
USDI Fish & Wildlife Service – Wetlands Online Mapper

Part II. Environmental Review

1. Environmental Impact Checklist:

PHYSICAL ENVIRONMENT

WATER QUANTITY, QUALITY AND DISTRIBUTION

Water quantity *- Assess whether the source of supply is identified as a chronically or periodically dewatered stream by DFWP. Assess whether the proposed use will worsen the already dewatered condition.*

Determination: Minor impact.

Water quantity will be diminished by up to 125 AF in some years; however the withdrawal of water from the shallow alluvial aquifer near the confluence of the Judith and Missouri Rivers should not have a significant impact on surface water quantity. Neither the Judith River, nor the Missouri River, are considered to be dewatered concern areas near or below the closest reaches to this system. The Judith has been listed as a chronically dewatered stream starting at about river mile 69 and continuing a distance upstream; which would be more than 68 miles upstream of this project.

Water quality *- Assess whether the stream is listed as water quality impaired or threatened by DEQ, and whether the proposed project will affect water quality.*

Determination: Low likelihood of impact.

The reach of the Missouri River from the Marias River to Bullwacker Creek has been designated as requiring a TMDL plan by DEQ. The 2006 303d listing identifies impairments to aquatic life, primary contact recreation & warm water fishery uses; probably caused by unknown sources of copper and lead, riparian degradation, and other physical habitat alterations. This project will not likely impact water quality in the Missouri, as the river is located approximately 1/2 mile away.

The reach of the Judith River from its' confluence with Big Spring Creek to the mouth of the river at the Missouri has not been designated as requiring a TMDL plan by DEQ. No pollutant-related use impairment has been identified. The 2006 303d listing identifies impairments to aquatic life & warm water fishery uses; probably caused by riparian degradation and other physical habitat alterations. The project should not impact water quality in the Judith, as the river is located approximately 3/4 mile away from the project.

Groundwater *- Assess if the proposed project impacts ground water quality or supply. If this is a groundwater appropriation, assess if it could impact adjacent surface water flows.*

Determination: Minor impact.

The proposed project will consist of a well drilled 88 feet into the shallow ground water near the confluence of the Judith and Missouri Rivers. Because of the wells' proximity to the surface water sources listed above, a minor impact associated with the depletion of up to 125.0 AF annually to these hydraulically connected surface waters is anticipated. The applicant completed a 15-hour pump test that showed no discernable drawdown in two monitoring wells located approximately 550 feet south and 2000 feet south southwest of the proposed well. No significant impacts to ground water quality or supply are expected as a result of this project.

DIVERSION WORKS - *Assess whether the means of diversion, construction and operation of the appropriation works of the proposed project will impact any of the following: channel impacts, flow modifications, barriers, riparian areas, dams, well construction.*

Determination: Low likelihood of impact.

The means of diversion is an 88-foot deep 8-inch diameter well fitted with a 15 horsepower submersible pump. The pump itself is hung on 5-inch galvanized steel pipe that increases to 6 inches at the well head. The 6-inch pipe conveys water ten feet to the 1100 foot long Valley center pivot where the pipe size is increased to 6 5/8 inches. The requested flow rate of 400 gpm will be applied through 123 spray nozzles and a booster pump for the end gun that pumps up to 50 gpm. The applicant says after the pivot completes its' half circle of irrigation, it will return dry to the starting position to prevent over-watering at the end of each cycle. There is a low likelihood that negative impacts would occur as a result of the diversion works.

UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES

Endangered and threatened species - *Assess whether the proposed project will impact any threatened or endangered fish, wildlife, plants or aquatic species or any "species of special concern," or create a barrier to the migration or movement of fish or wildlife. For groundwater, assess whether the proposed project, including impacts on adjacent surface flows, would impact any threatened or endangered species or "species of special concern."*

Determination: Low likelihood of impact.

The Montana National Heritage Program lists 12 species as Species of Concern within Township 23 North Range 16 East. The USDI Fish & Wildlife Service Website shows that Fergus County has one species listed as threatened; the Bald Eagle and two species listed as endangered; the Black-footed Ferret and the Pallid Sturgeon. No impacts to any of these species are expected as the place of use has been previously farmed and is consistent with other agriculture development in the area.

Wetlands - *Consult and assess whether the apparent wetland is a functional wetland (according to COE definitions), and whether the wetland resource would be impacted.*

Determination: Low likelihood of impact.

There are no known wetlands associated with this project. The USDI Fish & Wildlife Service – Wetlands Online Mapper has digital data available for the area of interest, however the wetlands are associated with the riparian zone along the river corridors and should not be impacted by this project.

Ponds - *For ponds, consult and assess whether existing wildlife, waterfowl, or fisheries resources would be impacted.*

Determination: Low likelihood of impact.

This project does not involve a pond. No impact to wildlife, waterfowl, or fisheries is anticipated.

GEOLOGY/SOIL QUALITY, STABILITY AND MOISTURE - *Assess whether there will be degradation of soil quality, alteration of soil stability, or moisture content. Assess whether the soils are heavy in salts that could cause saline seep.*

Determination: Low likelihood of impact.

The USDA-NRCS Web Soil Survey indicates the dominant soil in the area of this project is the Havre silty clay loam with 0 to 2 percent slopes. The rating for this soil unit says it's well-drained and it has a moderately high capacity to transmit water. The soil classification is nonsaline to very slightly saline. There is a low likelihood of impact to soil quality, stability, or moisture content.

VEGETATION COVER, QUANTITY AND QUALITY/NOXIOUS WEEDS - *Assess impacts to existing vegetative cover. Assess whether the proposed project would result in the establishment or spread of noxious weeds.*

Determination: Low likelihood of impact.

Normal weed management could be used to control noxious weeds potentially invading disturbed areas under the pivot; therefore, no spread of noxious weeds should be associated with this application. It is the responsibility of the property owner to control noxious weeds on their property.

AIR QUALITY - *Assess whether there will be a deterioration of air quality or adverse effects on vegetation due to increased air pollutants.*

Determination: Low likelihood of impact.

It is unlikely air quality would be impacted; as this project will utilize an electric 15 HP pump.

HISTORICAL AND ARCHEOLOGICAL SITES - *Assess whether there will be degradation of unique archeological or historical sites in the vicinity of the proposed project.*

Determination: Low likelihood of impact.

The State Historic Preservation Office believes there is a low likelihood cultural properties will be impacted; the project area has been previously farmed. A cultural resource inventory is unwarranted at this time.

DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AND ENERGY - *Assess any other impacts on environmental resources of land, water and energy not already addressed.*

Determination: Low likelihood of impact.

No additional impacts are anticipated.

HUMAN ENVIRONMENT

LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS - *Assess whether the proposed project is inconsistent with any locally adopted environmental plans and goals.*

Determination: Low likelihood of impact.

The proposed action is consistent with common agriculture practices in the area.

ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES - *Assess whether the proposed project will impact access to or the quality of recreational and wilderness activities.*

Determination: Low likelihood of impact.

The proposed action will not impact recreational activities in the area.

HUMAN HEALTH - *Assess whether the proposed project impacts on human health.*

Determination: Low likelihood of impact.

No impacts to human health have been identified.

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 known impacts.

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?* **None**

(b) *Local and state tax base and tax revenues?* **None**

(c) *Existing land uses?* **None**

(d) *Quantity and distribution of employment?* **None**

(e) *Distribution and density of population and housing?* **None**

(f) *Demands for government services?* **None**

(g) *Industrial and commercial activity?* **None**

(h) *Utilities?* **None**

(i) *Transportation?* **None**

(j) *Safety?* **None**

(k) *Other appropriate social and economic circumstances?* **None**

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

Secondary Impacts - No secondary impacts are anticipated.

Cumulative Impacts - No cumulative impacts are anticipated.

3. *Describe any mitigation/stipulation measures:*

No mitigation measures have been identified 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:*

No action alternative: Deny the application. This alternative would result in none of the related economic benefits being realized by the applicant.

PART III. Conclusion

1. Preferred Alternative

The preferred alternative is the proposed alternative.

2 Comments and Responses

None Received.

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:

None of the identified impacts for any of the alternatives are significant as defined in ARM 36.2.524.

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

Name: Douglas Mann
Title: Water Resources Specialist - LRO
Date: 1/21/2009