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: Custer County Conservation District
for Kevin & JoAnn Brewer
HC 84 Box 3006
Forsyth, MT 59327

2. Type of action: Application To Change A Water Right No. 42KJ 30031072

3. Water source name: Yellowstone River

4. Location affected by project: Sections 12,13,24 in T7N, R45E & Sections 7,8,17,18,19 in T7N, R46E; Custer County

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

The applicant proposes to add a point of diversion and a place of use to the Custer County Conservation District Water Reservation for sprinkler/flood irrigation. The proposed point of diversion will be located in the SW SW NW Sec. 13 T7N R45E. Two vertical turbine pumps will be used to convey water at a maximum flow rate of 31.2 cubic feet per second (CFS) from March 15 to November 1 annually. The maximum volume to be used for this change will be up to 1950 acre-feet (AF) per year. The place of use, as applied for, will be 975.0 acres located in the sections described above.

The applicant believes that authorization of this change will allow the Custer County Conservation District to fulfill the obligation of their reservation, which is to provide economic development to the area. They state that the operator will benefit through increased production of agricultural product for his sale or use.

The DNRC shall issue a change authorization if an applicant proves the criteria in 85-2-402 MCA are met.

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

MT Fish, Wildlife & Parks - Montana Fisheries Information System
MT 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 Custer County, MT

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: Low Likelihood of Impact

This application proposes to take 1950.0 AF of water annually from the Yellowstone River in the reach between the Tongue River and the Bighorn River tributaries. The MT Department of Fish, Wildlife and Parks (DFWP) has not identified this reach of the Yellowstone River as chronically or periodically dewatered. The DFWP has been granted a water reservation for instream flows on the Yellowstone River of between 3,829 CFS and 26,188 CFS depending on the month of the year. The period of record for the mean monthly discharge of the river gages located at both Forsyth and Miles City indicate flows in excess of the DFWP water reservations.

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 Yellowstone River, in the stream reach from the Cartersville Diversion Dam to the Powder River, shows only a partially supporting designation for aquatic life and warm water fishery beneficial uses. A TMDL is required. The probable causes of this partial support are listed as alteration in stream-side or littoral vegetative covers, heavy metals, pH, Nitrates, and both suspended and dissolved solids. No adverse impacts to water quality are expected as a result of this project; much of the proposed place of use has been previously farmed and is consistent with other agricultural developments in the area. Since this proposed project predominantly consists of controlled pivot irrigation, impacts from eutrophication associated with excessive fertilizer application are anticipated to be minor.

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: Low Likelihood of Impact

Groundwater elevations may slightly increase during the irrigation season in those areas where the additional water is applied.

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: Minor Impact

The applicant plans to use two Flowserve 18ENL vertical turbine pumps to convey water through various pipe sizes to all or portions of nine Valley pivot sprinklers. The applicant has requested 7000 gallons per minute (gpm) from each pump; the pump specification sheet sent in response to the deficiency letter suggests that the maximum flow with a head of 110 feet and the rated 13.65-inch diameter impeller is 7000 gpm. There could be some localized short-term minor impacts to the vegetation in the riparian areas associated with the establishment of the pump sites.

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: Minor Impact

The USDI Fish & Wildlife Service shows that Custer County has 1 species listed as threatened; Bald Eagle. 4 species are listed as endangered in Custer County: Black-footed Ferret, Pallid Sturgeon, Interior Least Tern, and the Whooping Crane.

The Montana National Heritage Program Website lists 13 species as "Species of Concern" within Township 7 North Range 45 East and Township 7 North Range 46 East. The common names for these species include Fringed Myotis (mammal), Greater Sage-Grouse & Bald Eagle (birds), Spiny Softshell & Greater Short-horned Lizard (reptiles), Blue Sucker, Sturgeon Chub, Paddlefish, & Sauger (fish) and White-bract Stickleaf, Bractless Mentzelia, Large Flowered Beardtongue, & Persistent-sepal Yellow-cress (vascular plants).

The project is consistent with other agricultural developments in the area. Since this project covers 975 acres and involves the installation of 2 pumps, varying sizes and lengths of buried pipeline, and the installation of 9 Valley center pivots; there could be a minor impact to the species listed above. If minor impacts to these species do occur, they are anticipated during the assembly phase of the project with a return to historic patterns expected upon completion of the construction.

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

The USDI Fish & Wildlife Service – Wetlands Online Mapper has no data available for the project location. Much of the subject property has been previously farmed and impacts from installation of the pump sites are expected to be minor; there is a low likelihood that wetland resources would be impacted.

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

Determination: No Impact

A pond is not involved in this project.

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 soils in this area are generally suited for irrigation. Much of the project area has been farmed in the past and is consistent with other agricultural developments in the area; it's unlikely that any unnatural degradation of soil characteristics would occur.

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: Minor Impact

Other than some possible minor disturbance when installing the pump sites; little displacement of vegetative cover is expected. Normal weed management practices can be employed to control noxious weeds in the area - it is the responsibility of the land 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

There is a low likelihood of impacts to air quality; the project will use electric motors to power the pumps and will have no emissions other than the equipment used during installation.

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 has no record of previously recorded cultural sites near this project locale and says that as long as there will be no disturbance or alteration of structures over 50 years of age; there is a low likelihood cultural properties will be impacted.

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 other impacts have been identified.

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

No environmental plans or goals have been identified.

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 project is consistent with agricultural development in the area, and should not place additional impacts on access or quality of recreational activities.

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: Low Likelihood of Impact

No governmental regulatory impacts on private property rights have been identified.

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

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

(c) Existing land uses? No

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

(e) Distribution and density of population and housing? No

(f) Demands for government services? No

(g) Industrial and commercial activity? No

(h) Utilities? No

(i) Transportation? No

(j) Safety? No

(k) Other appropriate social and economic circumstances? No

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

Secondary Impacts:

No secondary impacts are anticipated.

Cumulative Impacts:

This water reservation change will divert water from the Yellowstone River. This reach of the Yellowstone has not been designated as chronically or periodically dewatered by the MT DFWP. Though this water right is minimal in terms of the Yellowstone Rivers' historic discharge rates; any new diversions from the Yellowstone River could contribute to dewatering of the river should current drought conditions persist.

3. *Describe any mitigation/stipulation measures:*

No mitigation or stipulation measures have been identified. A measurement condition will be placed on the water right as required by the reservation final order.

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 acreage in question would be managed as in the past and the applicant would not experience the increased productivity associated with the addition of the proposed pivots.

PART III. Conclusion

1. ***Preferred Alternative:*** Project as proposed.

2 ***Comments and Responses:*** No comments have been 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 <u>why</u> 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 D. Mann
Title: Water Resources Specialist
Date: September 25, 2007