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: **Matthew and Jeralee McCleary**
1651 Oklahoma Star Trl.
Billings, MT 59105

2. Type of action: **Application for Beneficial Water Use Permit No. 40C 30104097**

3. Water source name: **Musselshell River**

4. Location affected by project: **Section 2 T9N R30E (Musselshell County)**

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

The Applicant proposes to divert water from the Musselshell River, by means of an existing 6RB-CC pump, from March 1 through June 30, at 1.56 cubic feet per second (CFS) up to 76 acre-feet (AF). The proposed point of diversion is located in the SW 1/4 of Section 2, T9N R30E. The purpose of use is center pivot irrigation, and the requested period of use is the same as the period of diversion. The Applicant proposes to irrigate alfalfa on 76.0 acres, generally located in the SW 1/4 of Section 2, T9N R30E and has previously been irrigated with state project contract water purchased from Deadman's Basin Water Users' Association.

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
Montana Fish, Wildlife & Parks – MFISH Website

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: **No Significant Impact**

The reach of interest in the Musselshell River for this permit application has been identified as chronically dewatered and has been closed to most new appropriations from July 1 through September 30 by administrative rule. Appropriators can apply for water in the month of September, but only if used for supplemental irrigation. All USGS gages analyzed by the Department reflect that median and mean monthly stream flows exceed the proposed appropriation of 1.56 CFS. Three of the four gauges are located upstream of the proposed diversion, and the other gauge is located downstream near Mosby. The sequence of gauges show water is physically available in the amount sought both upstream and downstream of the diversion point. This determination is contingent on certain stream conditions that must exist before appropriation can occur. The Applicant will likely be required to measure all diversions and check stream flows at either the USGS Gage at Musselshell (when operating) or the USGS Gage near Mosby before appropriating water under this permit. If Applicant adheres to all Department conditions of appropriation, this project will not have a significant impact on surface water quantity in the Musselshell River.

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: **No Significant Impact**

The reach of the Musselshell River near this project has been designated as needing a TMDL plan. The 2014 303d listing identifies impairments to aquatic life support probably caused by low flow alterations, streamside vegetation alteration, Nitrogen & Phosphorous levels and other habitat alterations. No significant impacts to water quality are anticipated because of this project. The stipulations/conditions noted under the water quantity section above and detailed later in this document could limit further impact to the impaired conditions to aquatic life by ensuring minimum stream flows are left in the source. In addition, the place of use for irrigation has been previously disturbed by past agriculture practices.

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: **No Significant Impact**

There should be no significant impact to groundwater quality or supply. The localized groundwater table may increase in the spring due to earlier irrigation on the proposed

place of use, however the proposed pivot system can generally be managed to match water application with crop consumption.

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: **No Significant Impact**

It is unlikely that the project will have any significant impacts related to the diversion works, the system is in place and has been used for irrigation previously.

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: **No Significant Impact**

The Montana National Heritage Program website lists seven animal species as Species of Concern within Township 9 North Range 30 East. Common names for these species are the the Great Blue Heron, the Greater Sage-Grouse, the Spiny Softshell (Turtle), Plains Spadefoot, Plains Hog-nosed Snake, the Great Plains Toad, and the Black-tailed Prairie Dog. Sauger are listed as a species of concern, too. The website also lists the Porcupine, the Silver-haired Bat and the Brassy Minnow as Potential Animal Species of Concern. The USDI Fish & Wildlife Service Website shows that Musselshell County has three species listed as either a candidate, threatened, or endangered for the Endangered Species Act; the Red Knot, (Threatened), the Sprague's Pit (Candidate) and the Black-footed Ferret (endangered). This project is not expected to impact any species listed above as the project will be located on acreage that has been previously disturbed by past agriculture practices.

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: **No Significant Impact**

The acreage involved in this permit application has been previously farmed and therefore, wetlands should not be impacted by this project. The USDI Fish & Wildlife Service – Wetlands Online Mapper shows Freshwater Emergent and Freshwater Forested/Shrub Wetland types in the area; they should not be effected by the proposed irrigation.

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

Determination: **No Significant 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: **No Significant Impact**

No significant impacts to the soil profile are anticipated. The Sodium Adsorption Ratio is very low for all the soil components in the area of interest and the acreage involved in this permit application has been previously farmed and therefore, should not be impacted by this project.

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: **No Significant Impact**

No new disturbance of vegetative cover is expected. The acres under the center pivot have been previously used for pivot irrigation with contract water supplied by Deadmans Basin, this project will likely result in increased forage production. 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: **No Significant Impact**

No impacts to air quality have been identified. The pivot pump will be powered by an electric motor.

HISTORICAL AND ARCHEOLOGICAL SITES - *Assess whether there will be degradation of unique archeological or historical sites in the vicinity of the proposed project if it is on State or Federal Lands. If it is not on State or Federal Lands simply state NA-project not located on State or Federal Lands.*

Determination: **No Significant Impact**

Not Applicable – Project not located on State or Federal Lands

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: **No Significant Impact**

No significant impacts are anticipated, the place of use has been previously used for agriculture practices.

HUMAN ENVIRONMENT

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

Determination: **No Significant Impact**

No local environmental plans or goals have been identified. The proposed action is consistent with historic agricultural 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: **No Significant Impact**

The proposed action should not negatively affect recreational activities in the area.

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

Determination: **No Significant 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 Significant 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?* **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 significant secondary impacts are anticipated.

Cumulative Impacts:

Since the administrative closure of the Musselshell River to new appropriations in 1992, a limited number of new water rights have been authorized. Given that the period of appropriation is limited, few applications are received and even fewer water rights granted. Therefore, the economic implications of having less than a full-service irrigation season render the cumulative impacts of limited development minor. This specific project should not add to potential cumulative impacts because if authorized, the Applicant will be required to adhere to USGS stream gage trigger flows, measure all water use and the Musselshell River is admeasured through a district court distribution project.

3. *Describe any mitigation/stipulation measures:*

The Department has deemed specific conditions necessary to meet the statutory criteria. These conditions are required by the Departments' Preliminary Determination:

Conditions

WATER MEASUREMENT RECORDS REQUIRED:
THE APPROPRIATOR SHALL INSTALL DEPARTMENT APPROVED WATER USE MEASURING DEVICES AT THE FOLLOWING POINTS:

IN THE MEANS OF CONVEYANCE (PIPELINE) BETWEEN THE PUMP AND THE CENTER PIVOT, IN ORDER TO MEASURE APPROPRIATIONS FROM THE MUSSELSHELL RIVER. WATER MUST NOT BE DIVERTED UNTIL THE REQUIRED MEASURING DEVICE IS IN PLACE AND OPERATING. THE DEVICE TYPE AND LOCATION MUST BE APPROVED BY THE DEPARMENT BEFORE WATER IS DIVERTED UNDER THIS PERMIT. ON A FORM PROVIDED BY THE DEPARTMENT, THE APPROPRIATOR SHALL KEEP A WRITTEN MONTHLY RECORD OF THE FLOW RATE AND VOLUME OF WATER DIVERTED, INCLUDING THE PERIOD OF TIME. RECORDS MUST ACCOUNT SEPARATELY FOR ANY APPROPRIATIONS UNDER THIS PERMIT FROM APPROPRIATIONS UNDER ANY OTHER WATER RIGHT (INCLUDING WATER ACQUIRED FROM DEADMANS BASIN).

RECORDS SHALL BE SUBMITTED BY NOVEMBER 30 OF EACH YEAR AND UPON REQUEST AT OTHER TIMES DURING THE YEAR. FAILURE TO SUBMIT REPORTS MAY BE CAUSE FOR REVOCATION OF A PERMIT OR CHANGE. THE RECORDS MUST BE SENT TO THE WATER RESOURCES REGIONAL OFFICE LISTED BELOW. THE APPROPRIATOR SHALL MAINTAIN THE MEASURING DEVICE SO IT ALWAYS OPERATES PROPERLY AND MEASURES FLOW RATE AND VOLUME ACCURATELY.

SUBMIT RECORDS TO:
LEWISTOWN WATER RESOURCES OFFICE
613 NE MAIN ST, SUITE E
LEWISTOWN, MT
PHONE: 406-538-7459
FAX: 406-538-7012

IMPORTANT INFORMATION:
THE APPROPRIATOR IS SUBJECT TO ENFORCEMENT OF WATER RIGHTS ADMINISTERED BY THE FOURTEENTH JUDICIAL DISTRICT COURT. AT TIMES WHEN THE ENFORCEMENT PROJECT IS NOT OCCURING, THE APPROPRIATOR MUST MEET CERTAIN MINIMUM STREAM FLOW CONDITIONS PRIOR TO DIVERTING WATER. ALTHOUGH THE FOLLOWING CONDITION SPECIFIES CERTAIN STREAM FLOW LEVELS, IT IS THE APPROPRIATORS RESPONSIBILITY TO ENSURE THAT ALL SENIOR WATER RIGHTS ARE BEING MET AT ALL TIMES. IT IS THE RESPONSIBILITY OF THE APPROPRIATOR TO CEASE DIVERSIONS WHEN ITS WATER RIGHT IS "CALLED" BY SENIOR WATER USERS.

THE APPROPRIATOR SHALL NOT DIVERT WATER UNLESS THE REFERENCE USGS STREAM GAGES ARE OPERATING AND REGISTERING STREAM FLOWS. THE APPROPRIATOR SHALL DIVERT WATER ONLY DURING THE PERIOD OF APPROPRIATION WHEN THE FLOW RATE AT USGS GAGE SITE 06127500 MUSSELSHELL RIVER NEAR MUSSELSHELL MT, INDICATES A FLOW OF AT LEAST 80 CUBIC FEET PER SECOND AND USGS GAGE SITE 06130500 MUSSELSHELL RIVER AT MOSBY MT, INDICATES A FLOW OF AT LEAST 70 CUBIC FEET PER SECOND. STREAM FLOWS AT THE REFERENCE USGS GAGES MUST BE CHECKED DAILY TO ENSURE CONDITIONS ARE APPROPRIATE FOR DIVERSIONS. THE CURRENT USGS STREAM GAGING WEBSITE IS: http://waterdata.usgs.gov/mt/nwis/current?type=flow.

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 permit application. This alternative would result in no change to Applicants irrigation.

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: **Mike Everett**
Title: **Water Resources Specialist**
Date: **6/1/2016**