

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: **M & W Ranch Inc.
PO Box 2351430 N Lake Shore Drive
Two Dot, MT 59085**
2. Type of action: **Application to Change an Existing Irrigation Water Right No. 40A 30072821**
3. Water source name: **Crooked Creek**
4. Location affected by project: **The project is located in Wheatland County about 8-miles south of the town of Two Dot, Montana.**
5. Narrative summary of the proposed project, purpose, action to be taken, and benefits:

Applicant proposes to change the point of diversion and place of use for Statement of Claim No. 40A 205264. Statement of Claim No. 40A 205264 was claimed from Crooked Creek with a flow rate of 3.48 cubic feet per second (CFS) and associated volume of up to 635.68 acre-feet (AF) per year. The claimed period of use is May 10 through September 15 to irrigate 232 acres in Sections 2 & 3 T6N R13E, all in Wheatland County. Specifically, the Applicant proposes to convert the historic flood irrigation associated with the claimed 232.0 acres to 213.4 acres of pivot irrigation. Historic flood irrigation underlies 175.7 of the 213.4 pivot acres, leaving 37.7 acres of new pivot irrigation that was not covered under historic irrigation practices. The Applicant proposes the water use associated with the remaining 56.3 acres of claimed flood irrigation be moved to the pivot acres.

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

**Dept. of Environmental Quality Website – Clean Water Act Information Center
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: **No Significant Impact.**

No data other than total stream miles (10.2 miles) is listed for Crooked Creek, a tributary to Big Elk Creek in Wheatland County. No adverse impacts to Crooked Creek are expected because of this project, the conversion to pivot irrigation will leave more than 210 AF of historic flood diversions in the source supply.

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 DEQ website does not list any information regarding Crooked Creek in Wheatland County. No significant effects to water quality are anticipated from this project, the Applicant is proposing to simply convert flood irrigation to center pivot irrigation.

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.**

The proposed change should not have a significant impact on ground water quality or supply. The proposed place of use for pivot irrigation may realize an increase in seasonal water table elevations; in turn, the potentiometric water surface under acres being retired from flood irrigation should see a decrease in elevation.

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.**

The change in point of diversion for this application is to clarify the headgate and ditch location for the historic diversion point of the McFarland-White/Sedgewick Ditch. The primary point of diversion is a headgate in the SW SE SE Section 5 T6N R13E. No impacts to channel impacts, flow modifications, barriers, riparian areas, dams, and well construction are anticipated. The system is in place, therefore no further impacts due to diversion works are expected because of this project.

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 lists three Species of Concern within Township 6 North, Range 13 East. The common names for the three bird species include the Long-billed Curlew, Sprague's Pipit and the Baird's Sparrow. The USDI Fish & Wildlife Service Report (August 26, 2016) indicates that Wheatland County has one species listed as threatened, the Canada Lynx. The report also lists the Wolverine as a proposed listing, while the Whitebark Pine is a candidate species. No impacts to any of these species are expected as the project simply proposes to convert or retire historic flood acres to accommodate pivot irrigation. The pipeline and pivot are already in place and no new disturbances will occur.

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 National Wetlands Inventory website shows Freshwater Emergent Type Wetlands adjacent to the source and to the southeast of the pivot location. Wetlands should not be significantly impacted as a result of this project.

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.**

Potential impacts associated with the construction activities could have created a minor impact, but there will be no further impacts than what has already occurred. It is not anticipated that any significant impacts to geology, soil quality, stability and moisture would result from the proposed action because this project has already in place for multiple seasons.

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.**

Construction associated to this project was completed prior to this application. Any impacts to existing cover will have already occurred and have caused no significant impact. It is the responsibility of the land owner to control the spread of noxious weeds.

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 or adverse effects to vegetation are expected as a result of this proposal, the pivot is gravity fed from a headgate and screen box.

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

Determination: **No Significant Impact.**

The acres under the proposed pivot have been previously disturbed by farming, irrigation, and grazing operations. There is a low likelihood cultural properties will be affected; 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: **No Significant 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: **No Significant Impact.**

No locally adopted 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: **No Significant Impact.**

The proposed action should not negatively impact recreational activities in the area. The project is in place and located on private lands.

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 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? **No impact from discontinuing some flood irrigation.**
- (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 – Less return flows are expected in the riparian zone along Crooked Creek due to the conversion from flood to pivot irrigation because the Applicant proposes to divert less volume with the pivot system. The timing of the flow regime will also be modified. Secondary impacts are expected to be minor,

more water will be available in the stream during periods of pivot diversion and consumptive use for the new center pivot system as it relates to historic flood irrigation will not change.

Cumulative Impacts – More and more historic flood acres are being converted to center pivot sprinkler irrigation to facilitate better water management, increased production and reduced labor. Water is more easily managed with a pivot and application rates can be matched to the landowners' specific soil characteristics. Generally, acres under a center pivot system will experience increased production compared to flood acres, which in turn increases crop water consumption. In this instance, the Applicant will be limited to using the same consumptive use after conversion from flood to pivot irrigation. Water measuring devices will aid in controlling the amount of water diverted and in turn, consumed.

3. *Describe any mitigation/stipulation measures:*

No mitigation or stipulation measures have been identified by the Applicant. The Department may impose a measurement condition to ensure required criteria are met.

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 no change to the existing water rights for 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: Michael Everett
Title: Water Resources Specialist – LRO

Date: 10/21/2016