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: Big Horn Conservation District 724 West 3rd Street, Hardin, MT 59034

2. Type of action: Conservation District Change Application 43P 30066605

3. Water source name: Bighorn River

4. Location affected by project: NW Section 20 T2S R33E, Big Horn County

5. Narrative summary of the proposed project, purpose, action to be taken, and benefits: The applicant proposes to authorize the producer (Layne Nichols) to use 1.3 CFS up to 813 AF/year of the Big Horn Conservation District water reservation. The water would be used to irrigate 73 acres in the NW section 20 T2S R33E using center pivot sprinklers. The benefit would be to allow the Conservation District to fulfill its obligation to provide water for future irrigation projects. 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)

   United States Department of Agriculture Natural Resources Conservation Service
   Montana Natural Heritage Program
   United State Fish and Wildlife Service
   Montana Department of Fish, Wildlife and Parks
   Montana Department of Environmental Quality

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.
This stretch of the Bighorn River between the Afterbay Dam and the confluence with the Little Bighorn River is considered a periodically dewatered stream by the Montana Department of Fish, Wildlife and Parks. The proposed use will have little effect on the dewatering because it appropriates water only during times of relatively high flow.

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.
This stretch of the Bighorn River is listed as fully supporting agriculture but not supporting drinking water due to lead and mercury levels from unknown sources. This application is for agricultural use and would not degrade the water quality in terms of metal concentrations. This project will use high efficiency center pivot sprinklers. High efficiency projects decrease the potential for degradation of water quality, because there is little to no return flow.

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 impact
The project uses surface water for irrigation and will not adversely affect groundwater.

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 diversion works are predominantly buried and will take water from a canal system after diversion from the river eliminating impact to the river itself. The primary diversion is in place and operating. The project includes no dams or wells and riparian areas are removed from the secondary diversion.

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.
According to the Montana Natural Heritage Program website, the Bureau of Land Management (BLM), lists the Greater Sage Grouse, Spiny Softshell, Western Hog-nosed Snake, Milksnake and Sauger as sensitive. The US Forest Service (USFS) lists the Greater Sage Grouse, Western Hog-nosed Snake and Milksnake as sensitive. There are no threatened or endangered species in the area. No plant species of concern are listed.

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.
There are several small areas periodically flooded primarily in the riparian areas around the Bighorn River. There are also some small regions that seem to flood periodically due to return flow from flood irrigation or canal leakage. The proposed project will take no water from recognized wetlands and is located across a major irrigation canal and road from the riparian areas.

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

Determination: Not applicable.
There are no ponds involved in this proposal.

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 impact.
The dominant soil types in the area are Hysham Loam and Halverson Loam. Both these soils are well drained, unlikely to pond or flood, and non-saline to slightly saline. The slopes in the area are very low, uniformly less than 10%, and most of the project area is flat.

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.
The area of this project has been used for agriculture in the past and has little native vegetative cover. The area is currently served by several roads and surrounds an active dwelling. Installation of the sprinkler systems, pipes and pumps may provide an opportunity for spread of weeds. It will be the responsibility of the property owner to monitor and control 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 impact.
The project is for sprinkler irrigation of agricultural land and will not impact air quality.

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: Not applicable

The project is not located on State of 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: None recognized.

HUMAN ENVIRONMENT

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

Determination: There are no known locally adopted environmental plans or goals.

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 impact.
The area is surrounded by roads and has been historically used for agriculture. There are no nearby recreational or wilderness areas.

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

Determination: No impact
The project is for sprinkler irrigation of agricultural land.

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 of this project were recognized

Cumulative Impacts: There are no pending applications or non-perfected permits issued in this area. This project does not appear to pose any cumulative adverse impacts.

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 project as proposed is a no action alternative. The no action alternative would have no impacts. However the no action alternative denies the conservation district and the producer the benefit of irrigation.

PART III. Conclusion

1. ***Preferred Alternative:*** Issue a change authorization if applicant proves the criteria in 85.2.402 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: No significant adverse impacts associated with the project were identified. Therefore an EA is the appropriate level of investigation and an EIS is not required.

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

Name: Mark Elison
Title: Hydrologist/Specialist
Date: 11/29/2013