

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:* Richard Moe
PO Box 238
Two Dot, MT 59085
2. *Type of action:* Application to Change a Water Right 30024658-40A
3. *Water source name:* Unnamed Tributary of Musselshell River
4. *Location of project:* N2 Section 9 T8N, R12E, Wheatland County
5. *Narrative summary of the proposed project, purpose, action to be taken, and benefits:*

The applicant proposes to change the purpose of water right 40A-43112-00 from Irrigation to Compensatory Wetland Mitigation. The source of water is waste & seepage, while the source name is listed as an Unnamed Tributary of Musselshell River. The owner states that 38 acres of the claimed 50 acres have been historically flood irrigated using waste and seepage water derived from the GL Ditch and up-gradient irrigation.

Authorization of this change would provide the Montana Department of Transportation (hereafter, MDT) with compensatory wetland mitigation credits. The purpose of the project is to establish a compensatory wetland mitigation site prior to wetland related impacts associated with MDT road construction on Highway 12 in Wheatland County. Section 404 of the Clean Water Act requires that the hydrology for a compensatory wetland mitigation site be protected in perpetuity to ensure the hydrology for the site will never be developed for other uses that do not benefit the wetlands.

Water will be utilized to flood a 30 acre area within the existing place of use. The water will benefit wet meadow habitats and support approximately 10 acres of irrigation by means of a water spreading system. A 3 acre-foot storage pond is proposed to be added near the outlet, within the 30 acre place of use.

The DNRC will issue an Authorization to Change a Water Right if the applicant proves the criteria in MCA 85-2-402.

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 Wheatland County, MT
MT State Historic Preservation Office - Archeological/Historical Sites
USDA Natural Resources Conservation Service – Web Soil Survey

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

The Musselshell River has been identified as chronically dewatered and has been closed to new appropriations from July 1 through September 30 by administrative rule. The **Musselshell River Basin Water Management Study** indicates that in some years no water is legally available for new appropriations in any month of the year from the Musselshell River at the USGS Gauge at Harlowton. The Musselshell River Basin presently has not met the existing water demand in many years. The shortage is so severe that the water users have petitioned the District Court to enforce the Temporary Preliminary Decree. This enforcement action commenced in May 2002 and continues through present day. Deadmans Basin Reservoir typically stores water throughout the winter months and has not filled for several years. A reduction in flow at any time of the year potentially negatively impacts the existing water users.

The applicant estimates historic consumption at 93.9 acre-feet while the estimate for post construction consumption is 60.4 acre-feet. Based on the proposed plan, consumptive use will be reduced post-construction, as the project will remove approximately 8 acres from hay production that had historically been flood irrigated.

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: Minor Impact

The reach of the Musselshell River from the confluence of the North & South Forks to Deadmans Basin Supply Canal has been designated as needing a TMDL plan. The 2006 303d listing identifies impairments to aquatic life, primary contact recreation, & cold water fishery

uses probably caused by low flow alterations, riparian degradation, excess total nitrogen and phosphorus from agriculture, sedimentation/siltation, and other physical habitat alterations.

Normal construction practices used during development of the wetland mitigation site would likely produce a temporary influx of sediment at the outflow of the project and possibly the Musselshell River; however the impacts should be insignificant.

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 elevation of the localized groundwater table may decrease slightly in the area due to the addition of 3 shallow groundwater pits (surface area of ~2.5 acres) and their associated evaporative losses; however, the fact that the applicant will reduce the historic consumptive place of use from 38 acres to 30 acres would make this decrease insignificant. The applicant has also submitted water balance computations that show the outflow to be greater than the surface water inflow; indicating an emergent groundwater component. The Soil Conservation Service values for mean annual evaporation for shallow lakes and reservoirs located along the western edge of Wheatland County is between 40-41 inches. The total evaporative loss associated with the groundwater pits is roughly 8.3 acre feet annually.

The applicant states that presently the predominant grass on the property is 2-3 foot tall Garrison Creeping Foxtail. The Foxtail will be converted to a combination of sedges and rushes that would typically grow to a height of 1.5-2 feet, therefore the evapotranspiration component of the shorter plants would be the same or less than the taller species. This is a reasonable assumption considering the plant species in question. The applicant also contends that the shorter plant species will have an evapotranspiration rate similar to the evaporative loss of an open water surface. While it is difficult to fully separate the evaporation and transpiration components, this is also a reasonable assumption, so long as the root zone remains saturated for the phreatophytes – plants with a tap root system that extend to the water table.

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 diversion works consist of waste and seepage water being collected in a drain ditch that begins in the NENENW Section 9 T8N R12E. Conveyance of the water is controlled by a wooden headgate.

If necessary, the applicant would be required to obtain the appropriate environmental permitting. Compliance with these permits would limit the impact due to construction of the 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: Low Likelihood of Impact

No endangered aquatic species are known to exist in this reach of the Musselshell River. The Montana National Heritage Program lists 2 bird species as Species of Concern within Township 8 North Range 12 East. Common names for these two species are Ferruginous Hawk and the Long-billed Curlew. The USDI Fish & Wildlife Service Website shows that Wheatland County has 2 species listed as threatened; the Bald Eagle and the Canada Lynx. The Fish and Wildlife Service also lists the Black-footed Ferret as endangered in Wheatland County. The wetland mitigation site created and protected by this project would benefit many species of plants and animals by providing an improved and comprehensive wetland environment.

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 existing wetland will be impacted by MDT due to the anticipated road construction that will shift the centerline of Highway 12 about 145 feet to the north. The nature of the requested change to Compensatory Wetland Mitigation would offset the impacts to the existing wetlands by creating a new wetland resource that would be beneficial and more comprehensive.

There may be some question as to the requirements in Section 404 of the Clean Water Act. The underlying water right proposed to be changed lists the source as waste and seepage, which could mean that this water may not be available in perpetuity. Water users along the GL Ditch have the right to line the ditch to prevent seepage, choose not to divert water from the North Fork of the Musselshell, or install a sprinkler system which may result in reduced waste and seepage. Any of these circumstances could in turn reduce the quantity of available water for this project.

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

Determination: Minor Impact

The project involves the addition of 3 small groundwater pits, roughly 2.5 acres total surface area. The evaporative loss associated with these pits is in the region of 8.3 acre feet annually. The applicant has filed a Notice of Completion of Groundwater Development (Form 602) for the groundwater pits. A Form 602 will be required for each individual pit.

Project construction will backfill .78 acres of open surface water within the existing wetland habitat, to be replaced with a "shallow open water wetland" with a volume of about 3 acre-feet.

This proposed 3 acre-foot “shallow open water wetland” will have a surface area of 2 acres and be added to the water right as the underlying water right did not contain a storage component.

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

Soil moisture content for the project area would likely remain unchanged. The predominant soil classification associated with this area may have limitations that would reduce the choice of plants and/or require special conservation practices. Likely the plants chosen for compatibility over approximately 80% of the location would involve water tolerable flora such as phreatophytes and hydrophytes. Applicant estimates an average water table depth of 2.5 feet.

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

The project would result in improved wetland habitat. No spread of noxious weeds would likely be associated with this application, as weed control treatments for the site were carried out in the fall of 2006 and are planned again for May of 2007.

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 would have no emissions other than normal construction activities.

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

Determination: Low Likelihood of Impact

The State Historic Preservation Office conducted a cultural resource file search and found there is a low likelihood cultural properties will be impacted; 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 other demands 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

The proposed project is consistent with federally adopted environmental goals outlined in Section 404 of the Clean Water Act. The project would also likely be consistent with the TMDL plans to be developed for the main stem Musselshell River by the local Conservation Districts in conjunction with the Department of Environmental Quality.

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 project site is visible from Highway 12. It is consistent with other natural and agricultural developments in the area and presents no unreasonable impacts.

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

Determination: Low Likelihood of Impact

Since its introduction in 1999, West Nile virus has become a potential threat in many areas of the United States. In 2006, Montana State University research found that 4 in every 1000 mosquitoes captured on the Milk River near Malta, MT were infected with West Nile. Mosquito habitat development has been associated with standing water containing debris and vegetation; similar to a wetland environment. Proper weed management and pond maintenance will help to control the conditions required for larva growth, thus making the impacts associated with vegetative debris and sluggish movement of water insignificant.

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.*

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 – Beneficial impacts would occur to the physical environment due to improved wetland habitat.

Cumulative Impacts – No cumulative impacts are anticipated.

3. Describe any mitigation/stipulation measures:

No conditions for mitigation/stipulation have been identified.

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

This alternative would result in none of the benefits to the MDT for federal compensatory wetland mitigation credits as required in Section 404 of the Clean Water Act. The land owner would also receive none of the economic benefits associated with the project, if offered by MDT. The No Action Alternative would supply none of the benefits related to positive environmental enhancements proposed by the project and would result in continued agriculture production.

PART III. Conclusion

1. Preferred Alternative

The preferred alternative is the proposed alternative.

2. Comments and Responses

None Received.

3. Finding

Based on the significance criteria evaluated in this EA, is an EIS required?

NO

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: 2/21/2007