

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:

David E. Hardy, Applicant
3131 160th Ave. NW
Fairview, MT 59221

2. Type of action: Application for Beneficial Use, Application 40S 30063074

3. Water source name: Missouri River

4. Location affected by project:

T26N 58E

Section: 1 - Richland County, Roosevelt County
2 - Richland County, Roosevelt County
3 - Richland County, Roosevelt County
4 - Richland County, Roosevelt County
5 - Richland County, Roosevelt County

T26N R58E

Section: 1 - Richland County, Roosevelt County
2 - Richland County, Roosevelt County
3 - Richland County, Roosevelt County

T27N R58E

Section: 25 - Roosevelt County
26 - Richland County, Roosevelt County
27 - Roosevelt County
35 - Richland County, Roosevelt County
36 - Richland County, Roosevelt County

T27N R59E

Section: 31 - Richland County, Roosevelt County
32 - Richland County, Roosevelt County

5. Narrative summary of the proposed project, purpose, action to be taken, and benefits: The DNRC shall issue a water use permit if an applicant proves the criteria in 85-2-311 MCA are met.

This project is to pump water out of the Missouri River for the purpose of water marketing. The application is for 4.5 CFS up to 1,500 AF of water annually from January 1 thru December 31. The point of diversion is location in the SW¹/₄SE¹/₄SE¹/₄ Sec 4 T26N R58E Richland County and the place of use is SW¹/₄SE¹/₄SE¹/₄ Sec 4 T26N R58E Richland County. The primary purpose of this application is the sale of water to the oil industry. The applicant will use a water depot that will be available to contracted buyers.

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

Montana Natural Heritage Program
Montana Department of Environmental Quality Website (TMDL 303(d) Listing)
Montana Fish, Wildlife & Parks
United States Fish & Wildlife Service National Wetlands Inventory

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: Montana Department of Fish, Wildlife & Parks does not identify the Missouri River as chronically or periodically dewatered.

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: The 2012 Montana Department of Environmental Quality Clean Water Act Information Center (MT CWAIC) lists HUC-8 No.10060005 as fully supporting agricultural and drinking water uses, and partially supporting aquatic life. Probable causes of impairment to aquatic life as a beneficial use for this reach of the Missouri River include alterations to the flow regime and changes in water temperature. Probable sources for the impact stem from flow regulation or modification through impoundments including the Fort Peck Hydropower Dam. At this time the Montana Department of Environmental Quality has not assessed primary contact recreation as a beneficial use of the Missouri River as found in HUC 10060005.

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: This application pertains to a surface water appropriation on the Missouri River, there are no significant impacts to groundwater supply or quality anticipated to occur.

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: The diversion works for this project consist of a floating pump operational in months without freeze danger, and a submersed pump during the remainder of the year. Both pumps will not be used simultaneously. The construction of the intake structures necessitates construction & modification of the banks. This project is located near the apex of a meander in the Lower Missouri, making sedimentation and continued maintenance of the pump site likely. Additionally, much of this site is clearly covered in wetland habitat, primarily in the form of riparian emergent and woody vegetation. Dredging is likely necessary to establish a functional pump site, as well as the bank modification necessary to construct the pump pit for the submersible winter intake.

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: Three endangered species utilize the characteristic habitat as found at the proposed project. The Pallid Sturgeon, Whooping Crane, and Least Tern represent these species.

The Pallid Sturgeon utilizes turbid rivers with fine sandy-silty substrates, such as the stretch of the Missouri River where the proposed project is found. The screened intake structure for the project is designed to lower the intake velocity, a design which the applicant has successfully used in other applications that have presumably passed USFWS & Montana FW&P standards. Impact to the Pallid Sturgeon population in this reach of the Missouri River is not expected to be significant.

Whooping Crane are identified by the Montana Natural Heritage Program Animal Species of Concern database to utilize habitat as found in the section where the Applicant proposes to place a pump site. This bird utilizes freshwater emergent marshes, as identified in the National Wetlands Inventory map of the section, to forage during spring and fall migrations. Given the mobility of the species, the limited emergent wetland habitat found near the site, and seasonal use, this site is unlikely to negatively affect the wellbeing of this population.

The Least Tern utilizes barren sand-pebble beaches for nesting habitat. This is not characteristic of this site, as the littoral zone is largely fine sand and silt, and obviously vegetated in the aerial photos available (1997, 2005, 2009, and 2011 using the Montana NRIS Topographic map finder

utility). There are numerous miles of more suitable habitat in adjacent townships extending either up or downgradient of the proposed pumpsite. Given the less than ideally suitable character of this site for species specific habitat parameters, it is unlikely that this site location would contribute any significant impacts to the Least Tern population.

The State of Montana lists the following species as high risk due to extremely limited or rapidly declining populations potentially found within area of impacts for this project:

- Whooping Crane – migratory habitat
- Least Tern – Breeding habitat
- Shortnose Gar
- Sicklefin Chub
- Paddlefish
- Pallid Sturgeon

The State of Montana also recognizes the following animal and plant species as having declining or limited populations found within area of impacts for this project:

- Great Blue Heron
- Piping Plover
- Northern Redbelly Dace
- Blue Sucker
- Iowa Darter
- Sturgeon Chub
- Sauger
- Nannyberry Viburnum

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: The site is located along the Missouri River, impacted and adjacent wetlands would be defined as Riverine Wetlands (Smith, et al. 1995, pg.16). Many wetland values relate to their functionality, a relationship that is difficult to transcribe into social values as it is difficult, if not impossible, to assign economic values to these functions. This is not to say that wetlands have no value, nor does this imply that wetlands are not functional.

The hierarchy described by Smith, et al (1995) is not anthropocentric, instead it addresses wetland functionality in terms of integrity, cycling, and sequestration. In this regard, the wetlands found on the site are significant, The Missouri River below Fort Peck Dam & Reservoir is highly influenced by human activity, including farming. Many of the human impacts alter flow regimes, sedimentation, embankments, and introduce additional or contaminated runoff.

Remaining patches of emergent and woody vegetated riverine wetlands play critical roles in buffering runoff, dissipating flow energy along stream edges, provide valuable habitat, and stabilize banks.

The proposed pump site has been cleared of woody vegetation in the past, and no wetlands currently exist on the river right segment where the pump site is to be located. Existing emergent vegetation wetland habitat exists on the transverse side of the river of the proposed pump site, as well as larger patches of emergent and woody wetland habitat upstream as well as downstream of the proposed appropriation pump site. Although wetlands lie adjacent to the proposed projects, significant impacts to the adjacent wetlands are not anticipated as a result of this proposed project.

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

Determination: This application does not pertain to any ponds, however impacts to the aforementioned wetlands will have effects on fish & wildlife utilization of the site.

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: The project site is within the Missouri River Basin. This area is historically highly disturbed due to agricultural operations in the past 100+ years, regular flood cycles prior to the construction of Ft. Peck dam & reservoir, and unstable channel morphology resulting in a meandering river over time. Significant effects would be difficult to assess for geology & pedology stability, or moisture of either. No significant impacts to soil or geological resources are anticipated as the result of the proposed 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: Surface disruption on the site of this project, the water depot as well as the pump site may expose recently disturbed sites to noxious weeds. Cropland of exotic species surrounds much of the site, and natural means of seed distribution render the exposed ground vulnerable. Chemical treatment of the site could, and likely would, influence wetland vegetation. The best management practice for this situation would be reseeding with native grasses & forbs and allow for natural succession to occur while mechanical removal of known and obvious invasive species would be highly advised.

AIR QUALITY - *Assess whether there will be a deterioration of air quality or adverse effects on vegetation due to increased air pollutants.*

Determination: Air quality reduction may occur as a secondary effect of idling trucks waiting to fill at the depot, however significant effects are not anticipated to occur on this site at this time.

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 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: Water is currently legally available in the Missouri River, including all senior appropriations and a substantial instream flow reservation held by the Montana Department of Fish, Wildlife & Parks. This development is relatively minor within this context, and is not anticipated to pose significant impacts to this resource.

HUMAN ENVIRONMENT

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

Determination: Rivers in eastern Montana represent the lifeblood of the region. Environmental interest groups such as the Audubon Society and its subchapters in Montana recognize these areas for the valuable ecosystems for native species. Development such as this fragments and disrupts this riverine habitat with the site development, noise pollution, and increased truck traffic nearby. In the greater context, this site development is not anticipated to substantially affect any particular population, however the net effect of such sites along the Missouri & Yellowstone Rivers is something cautiously developed and observed for negative impacts.

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: The Montana Department of Environmental Quality has not assessed the support for recreational use along this stretch of the Missouri River at this point in time. The proposed site is not within a wilderness area or setting. Impacts to recreation are anticipated to be minimal.

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

Determination: No known impacts are anticipated to affect human health.

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: NA

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 anticipated
- (b) Local and state tax base and tax revenues? Project will provide income tax revenue through bulk water sales.
- (c) Existing land uses? Small loss of farmland for the depot site and truck staging area & access.
- (d) Quantity and distribution of employment? None anticipated
- (e) Distribution and density of population and housing? None anticipated
- (f) Demands for government services? None anticipated
- (g) Industrial and commercial activity? Purpose is to provide available water for oilfield development & servicing.
- (h) Utilities? No significant impact anticipated.
- (i) Transportation? Site will increase truck traffic on local roads, if the appropriation reaches the scale necessary for the full volume requested, there would be 287 trucks per day, every day of the year entering and leaving this site. This equates to 97,755 truckloads per year. Actual appropriation is based on industrial demand, and the full requested volume may never be appropriated annually.
- (j) Safety? None anticipated, although increased truck traffic has the potential to detrimentally affect safety on public roads.
- (k) Other appropriate social and economic circumstances? None anticipated

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

Secondary Impacts: **None anticipated**

Cumulative Impacts: **Impact to human health and safety is anticipated to be relatively minor.**

3. *Describe any mitigation/stipulation measures:*

No mitigation measures have been planned on this project.

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:*

This proposed action came as an alternative to a former proposal under the same application. The former proposal was located on the apex of a bend in the river with significant probable impacts to wetland habitat. This alternative utilizes a pre-existing cleared site, free of wetlands and is generally preferable to the former proposal.

PART III. Conclusion

1. *Preferred Alternative*

Utilizing the proposed action, significant impacts are not expected to occur and the project will likely develop as proposed. A no action alternative exists, although unlikely.

2. *Comments and Responses*

Should the project proceed, it is the recommendation of the department to develop the site in the least disruptive manner. Erosion may be prevented with geotextile fabric to protect disturbed soils around the intake installation from sloughing into the river. Seeding the site disturbance with a native seed mixture appropriate for riverine wetlands is also recommended.

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:

An EIS is not required because the level of impact is not anticipated to be found significant. The term 'significant impact' has some level of subjectivity, in this context the level of significance is assessed from the paradigm of the responsibilities of a Water Resource Specialist. Other agencies and entities may find the proposed developments to be significant.

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

Name: Jonathan Staldine

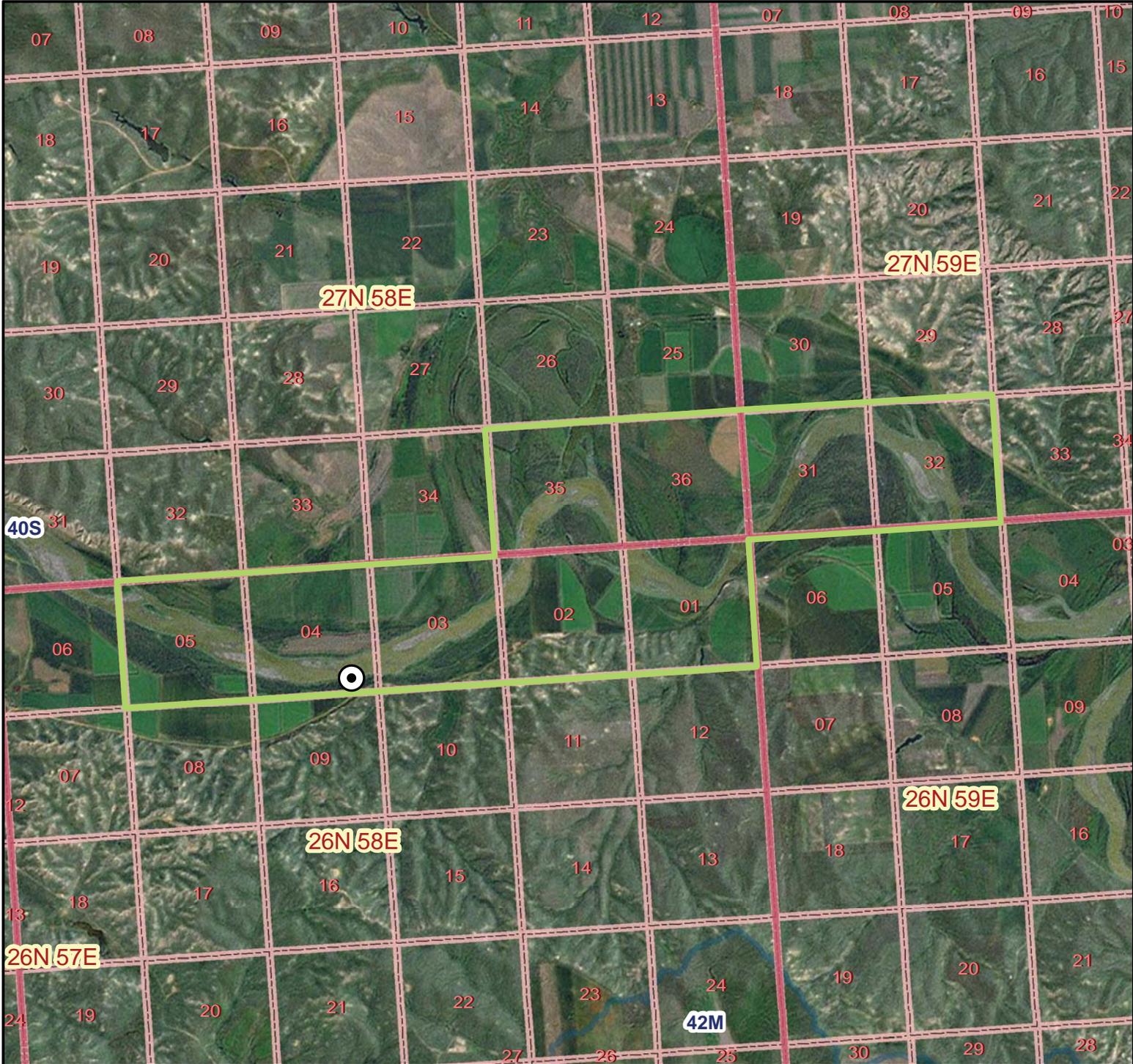
Title: water Resource Specialist

Date: November 7, 2012

References:

Smith, R.D., Ammann, A., Bartoldus, C. & Brinson, M.M. 1995. Wetlands Research Program Technical Report WRP-DE-9. An approach for assessing wetland functions using hydrogeomorphic classification, reference wetlands, and functional indices. <<http://el.erc.usace.army.mil/wetlands/pdfs/wrpde9.pdf>>. Accessed online, 5, November 2012.

Hardy Water Depot - Amended EA Map



Legend

- EA_Amended
- Township & Range
- Section

1 0.5 0 1 Miles

Location Map

