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: Wild Cat Water Solutions Inc
   6013 Rd 1011
   Bainville, MT 59212

2. Type of action: Application for Beneficial Water Use Permit No. 40S-30073093

3. Water source name: Missouri River

4. Location affected by project: SESENE Section 28, T27N, R57E, Roosevelt County

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

   The Applicant proposes to divert water from the Missouri River, by means of a pump, from January 1-December 31 at 5.5 CFS up to 500 AF, from the SESENE Section 28, T27N, R57E, Roosevelt County, to use for Water Marketing from January 1-December 31. The places of use (water depots) are located in the NWNESE Section 7, T27N, R58E; the SESENW Section 15, T27N, R57E; and the SESENE Section 25, T28N, R57E, all in Roosevelt County. The service area of the project is an area approximately 36 miles by 23 miles surrounding the proposed project, limited to the state of Montana.

   The DNRC shall issue a water use permit if an applicant proves the criteria in 85-2-311 MCA are met.

6. Agencies consulted during preparation of the Environmental Assessment:

   Montana Department of Environmental Quality
   Montana Natural Heritage Program
   US Fish & Wildlife Service
   USDA Web Soil Survey
   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.*

The Missouri River is not identified as a chronically or periodically dewatered stream by the Montana Department of Fish, Wildlife & Parks. The DFWP has a water reservation on this portion of the Missouri River for 5178 cfs to maintain instream flows. Issuance of the requested appropriation would have no significant impact on the surface water flows.

Determination: No significant impact

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.*

This reach of the Missouri River (Poplar River to the North Dakota Border) is listed on the TMDL 2014 303(d) list as not supporting aquatic life and fully supporting drinking water, and agricultural uses. Primary contact recreation was not assessed. No uses for this reach are classified as threatened. The impairment on aquatic life is likely due to flow regime alterations and water temperature due to flows being regulated at Fort Peck Dam. Issuance of the requested appropriation would have no significant impact on the surface water quality.

Determination: No significant impact

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: As this is a surface water diversion, it should not have any impact on the groundwater quality or supply.

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.*

The water intake is designed as a concrete structure with two 21 inch diameter stainless steel screens with openings of 0.093 inch. The screen design allows the entire diversion rate to be obtained from one screen at a velocity of 0.3 feet per second or less. The two screens provide for redundancy in case one is damaged from river debris or ice. Both screens are housed within a concrete structure that will include provisions for air backwashing of the concrete channel, protection of the screens on three sides and a trash rack covering the concrete channel. The screens will be attached to a wet well via 16 inch supply lines.

The pump station includes two wet wells, vertical turbine pumps, sand separators, a diesel generator with diesel storage, an air backwash system, controls and flow meter. The first wet well will be used as a settling basin. Water will then be delivered to the second wet well through sediment filtering media via a low head vertical turbine pump. One of two 200 HP vertical turbine will pump the water from the second wet well through 12 inch pipes into the distribution

system. Each pump is capable of providing the requested 5.5 CFS but only one pump will run at a time. Two pumps allow for backup capability. The flow meters will be installed immediately after the diversion pumps.
The sediment filtration equipment requires backwashing at least once a day for 90 seconds. The backwash water will be piped to an unlined basin where the water will infiltrate back into the ground, leaving the sediment behind. Sediment will be cleaned out of the basin in the spring and fall of each year.

Distribution lines will be a combination of 24, 28 and 12 inch HDPE lines that will serve the three water depots. Four storage tanks will be located within the system, one at each depot site and central storage. The central storage will contain water level equipment linked to a SCADA (supervisory control and data acquisition) system that will be used to call the pumps at the pump station. Water from the depots will be provided without the use of pumps. The depot located on highway 2 will be capable of filling 10 trucks simultaneously. The other two depot sites will be capable of filling 2 trucks simultaneously. All three depots will also provide provisions to hook a temporary water line to the facility, which would allow temporary piping across the ground that would transport water directly to oil well sites.

The Applicant is required to submit a combined application for the following permits prior to construction of the diversion works: 310 (Roosevelt County Conservation District), 124 (Montana Department of Fish, Wildlife & Parks) and 404 (US Army Corps of Engineers).

Determination: No significant impact

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."*

A report received from the Montana Natural Heritage Program indicates there are thirteen species of special concern within the general area of the project. They are the great blue heron, piping plover, whooping crane, least tern, northern redbelly dace, blue sucker, Iowa darter, shortnose gar, sturgeon chub, sicklefin chub, paddlefish, sauger, pallid sturgeon, and the nannyberry. The pallid sturgeon, least tern, and whooping crane are listed as endangered and the piping plover is listed as threatened by the US Fish & Wildlife Service.

Whooping Cranes migrate through the northeast corner of Montana, and are not known to breed in the state. It is unlikely that the proposed diversion would have any impact on the Whooping Crane.

The Least Tern is a species that prefer unvegetated sand-pebble beaches and islands of large reservoirs and rivers in northeastern and southeastern Montana; specifically the Yellowstone and Missouri River systems.

Pallid Sturgeon are found in the Missouri River and use large, turbid rivers over sand and gravel bottoms, usually in strong current. They use all channel types, but primarily use straight reaches with islands.

Piping Plovers primarily select unvegetated sand or pebble beaches on shorelines or islands. Vegetation, if present at all, is sparse. The pump location selected for this diversion would not be likely to provide suitable nesting habitat for the plover. The location of the pump site for this project is an existing pump site currently use for and irrigation system.

No plant species were identified as species of special concern within the identified project area.

The US Fish & Wildlife Service was given the opportunity to review the proposed project and comment on the proposed project. The recommendations received were incorporated into the design plans of the project and will also be incorporated into the project construction.

Determination: No significant impact

Wetlands **-** *Consult and assess whether the apparent wetland is a functional wetland (according to COE definitions), and whether the wetland resource would be impacted.*

Based on the National Wetland Inventory, there are a few wetlands within the portion of the project area located near Highway 2. These wetlands are classified as emergent palustrine wetlands where surface water is only present for brief periods during the growing season, but the water table usually lies well below the soil surface for most of the growing season. Plants that grow both in uplands and wetlands may be characteristic of this flow regime.

Determination: No significant impact

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

Determination: Not Applicable.

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.*

The USDA Web Soil Survey indicates that the major soil type at the proposed water depot #1 (Section 7, T27N, R58E) is Tally Sandy Loam with 2-8% slopes. This soil type is identified as well drained and a non-saline to very slightly saline soil. The major soil type at the proposed water depot #2 (Section 15, T27N, R57E) is Farland-Cherry Silt Loams with 2-8% slopes. This soil type is identified as well drained and a non-saline to very slightly saline soil. The major soil type at the proposed water depot #3 (Section 25, T28N, R57E) is Lallie Silty Clay with 0-2% slopes. This soil type is identified as very poorly drained and slightly saline to strongly saline soil. This last soil type 1.00 (very limited) for commercial buildings due to ponding, depth to saturated zone and the shrink-swell of the soil. A rating of 1.00 has the greatest negative impact on the use. On-site testing of the soils may need to be conducted for water depot #3 prior to

construction to determine the suitability of the soils for this project and/or determine any mitigation measures that may be needed for this site.

Determination: No significant impact

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.*

Ground disturbance will occur at each of the three water depot sites and along the approximately 16 miles of buried pipeline that will be installed. Disturbed areas should be revegetated with appropriate native species. Enact best management practices to avoid and minimize the spread of noxious weeds within the proposed project area.

Determination: No significant impact

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

Determination: No deterioration in air quality or adverse effects on vegetation due to increased air pollutants are anticipated with this proposed project.

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: NA- 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 impacts to other environmental resources were 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: No known environmental plans or goals will be impacted by this project.

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: This project will not have any significant impact on the quality of recreational or wilderness activities.

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

Determination: The proposed project will have no significant impact on 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*.

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 impacts identified

(*b)* *Local and state tax base and tax revenues?* No significant impacts identified

(c) *Existing land uses?* No significant impacts identified

(*d)* *Quantity and distribution of employment?* No significant impacts identified

(e) *Distribution and density of population and housing?* No significant impacts identified

(f) *Demands for government services?* No significant impacts identified

(g) *Industrial and commercial activity?* No significant impacts identified

(h) *Utilities?* No significant impacts identified

(i) *Transportation?* If this permit is granted and the water right fully developed and perfected, truck traffic within the surrounding area would increase. The three depots are positioned to allow for water to be transferred directly to oil well sites via temporary surface pipelines. The practice of transferring water this way significantly reduces the amount of truck traffic. It also reduces costs for the purchaser of water so is the preferred method whenever possible.

(j) *Safety?* No significant impacts identified

(k) *Other appropriate social and economic circumstances?* No significant impacts identified

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

Secondary Impacts No secondary impacts were identified

Cumulative Impacts Cumulative impacts of pending or unperfected rights on the Missouri River have been examined. The area of examination includes the Lower

Missouri River from Culbertson to the North Dakota Border. The following table shows pending or unperfected rights and the expected reduction of flow rate to the Missouri River.

WR Number	Name	GW or SW	Depletion (cfs)
30048277	Ames	SW	4.5
30048631	Culbertson Water	SW	3.9
30051664	Iversen	SW	2.25
30062074	Hardy	SW	4.5
30063842	Pease Ranch	GW	0.89
30066181	Atlantis Water Solutions, LLC	SW	5
30072269	Harmon	SW	4
		Total Depletion	**25.04**

The average depletion of all pending or unperfected rights on the Missouri River from Culbertson to the North Dakota border is 25.04 cfs. Since physical and legal availability of surface water can be shown for the Missouri River during all months of the year in excess of the combined depletion of 25.04 for pending and unperfected permits, the Department finds that the cumulative impacts will not have a significant impact on the water of the Missouri River.

3. ***Describe any mitigation/stipulation measures:*** None 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:***
The only other alternative identified would be the no action alternative. This alternative would not allow the Applicant to benefit from marketing the water for oil well development.

PART III. Conclusion

1. Preferred Alternative

Issue a beneficial water use permit if the Applicant proves the criteria in §85-2-311 MCA are met.

2. Finding:

*Yes___ No_**X**__ Based on the significance criteria evaluated in this EA, is an EIS required?*

If an EIS is not required, explain <u>why</u> the EA is the appropriate level of analysis for this proposed action: No significant impacts have been identified.

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

Name: Denise Biggar
Title: Regional Manager
Date: March 1, 2016