

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:* Montana H₂O, LLC
1411 22nd Ave NW
Sidney, MT 59270

2. *Type of action:* Application for Beneficial Water Use Permit No. 42M 30066155

3. *Water source name:* Groundwater

4. *Location affected by project:* SESENW, Section 22, T23N, R59E, Richland County

5. *Narrative summary of the proposed project, purpose, action to be taken, and benefits:*
This project is to supplement an existing water right, 42M 30062767, by increasing the flow rate of groundwater for the purpose of water marketing. The application is for an additional 387 GPM and 0 AF of water annually from January 1 thru December 31. The point of diversion and the place of use are located in the SESENW Sec 22 T23N R59E, Richland County. The service area is generally located in all of Richland County. The additional flow will allow for a combined appropriation of 750 GPM which would allow them to meet peak demands and allocate the appropriated 585 AF.

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

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

Montana Department of Environmental Quality – Web site
Montana Department of Fish, Wildlife & Parks
National Wetlands Inventory
Montana Natural Heritage Program

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: The Applicant showed in 42M 30062767 that the zone of influence of the well intersects the Yellowstone River. The reach of the Yellowstone River that is included in the zone of influence 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 Yellowstone River that ranges from 2,670 CFS in August to 25,140 CFS in June to maintain instream flows. Under water right 42M 30062767 the Applicant showed that after 4 years of pumping the depletion to the Yellowstone River will equal 80% of the pumping rate or 0.65 CFS. Eventually, the depletion rate will equal the pumping rate. Since this application is for supplemental flow and does not request any additional volume so there will be no changes in the amount or timing of depletion, no additional depletion to surface water is expected.

This reach of the stream is not identified as being dewatered and a diversion rate of 387 GPM will likely not have an effect on the Yellowstone River.

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 lower Yellowstone River is listed on the 2010 Montana 303(d) list as fully supporting agriculture, drinking water industrial uses and primary contact recreation and partially supporting aquatic life and warm water fishery. Probable causes of impairment are alterations in stream-side or littoral vegetative covers, fish passage barriers and chemical and mineral levels. Probable sources are the impacts from irrigation crop productions, rangeland grazing, streambank modification/destabilization, hydro-structure flow regulation/modification and natural or unknown sources of chemical or mineral properties.

This project will not have a significant or long term impact water quality.

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: The well was drilled in November of 2012 and the drawdown and yield testing was conducted from March 04, 2013 through March 06, 2013. A 72 hour aquifer test was not performed since the proposed POD is a supplemental production well for water use permit 42M 30062767. A complete 72-hour aquifer test was conducted for the POD (MTH20#1) in permit 42M 30062767. The department determined that since there was no additional volume requested that well MTH20#2 only needed to be tested for adequacy of diversion by conducting an eight-hour drawdown and yield test.

The eight-hour pump test data showed water levels reaching steady-state conditions at a production rate of 365 GPM. However, this is based on only eight hours of production data. Long term pumping will increase the zone of influence, and heterogeneities in the aquifer may be

encountered that could restrict conductivity to the well, or intersecting zones of influence from neighboring wells may cause additional drawdown.

The rate of diversion will not have a significant impact on the groundwater or the Yellowstone River quality.

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: Water will be diverted from the ground via a 6 inch well. The well is constructed of a 8 inch welded steel casing from 2 feet above ground to 50 feet below ground surface and a 6 inch schedule 40 PVC casing from 0 feet to 50 feet below ground surface. The well is screened with an 8 inch continuous 20 slot steel screen in a coarse sand and gravel from 50 feet to 70 feet below ground surface. The well is equipped with a 475 GPM, 20 HP 6-inch submersible Grundfos pump and a 20 HP, 460 volt, 3-phase Grundfos motor. The wells are equipped with submersible pumps and pump water to a main water line. The discharge pipe at each wellhead is fit with a valve to control the flow rate from each well and an in-line flow meter to monitor flow rate and volume of water diverted from each well. Water is pumped to four 400-bbl above ground storage tanks, cold water. This cold water holding system is described in permit #42M 30062767. The trucking company installed hot water holding tanks. Water is pumped through the main pipeline to a series of twenty heating tanks from which the water truck load heated water needed for fracking.

Refer to #42M 30062767 for additional details of the water system conveyance and facilities.

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: According to the Montana Natural Heritage Program website, The Bureau of Land Management, (BLM), lists the Townsend's Big Eared Bat, Black-tailed Prairie Dog, Spiny Softshell, Blue Sucker, Sturgeon Chub, Paddlefish, and Sauger as sensitive. The Whooping Crane and the Pallid Sturgeon are listed by BLM as Special Status. The US Forest Service, (USFS), lists the Townsend's Big-eared Bat and Black-tailed Prairie Dog as sensitive. Both the US Forest Service and the US Fish & Wildlife Service list the Whooping Crane and the Pallid Sturgeon as Endangered. There is only one federally-listed plant species within the Project area, the BLM lists the Pale-spiked Lobelia as sensitive.

Townsend's Big Eared Bat

Caves and abandoned mines are used for maternity roosts and hibernacula (Worthington 1991, Hendricks et al. 1996, Hendricks 2000, Hendricks et al. 2000, Foresman 2001, Hendricks and Kampwerth 2001); use of buildings in late summer has also been reported (Swenson and Shanks

1979). Habitats in the vicinity of roosts include Douglas-fir and lodgepole pine forests, ponderosa pine woodlands, Utah juniper-sagebrush scrub, and cottonwood bottomland.

Black-tailed Prairie Dog

Black-tailed Prairie Dog colonies are found on flat, open grasslands and shrub/grasslands with low, relatively sparse vegetation. The most frequently occupied habitat in Montana is dominated by western wheatgrass, blue grama and big sagebrush (MFWP 2002). Colonies are associated with silty clay loams, sandy clay loams, and loams (Thorp 1949, Bonham and Lerwick 1976, Klatt and Hein 1978, Agnew et al. 1986) and fine to medium textured soils are preferred (Merriam 1902, Thorp 1949, Koford 1958), presumably because burrows and other structures tend to retain their shape and strength better than in coarse, loose soils. Encroachment into sands (e.g., loamy fine sand) occurs if the habitat is needed for colony expansion (Osborn 1942).

By colonizing areas with low vegetative stature, Black-tailed Prairie Dogs often select areas with past human (as well as animal) disturbance. In Montana, colonies tended to be associated with areas heavily used by cattle, such as water tanks and long-term supplemental feeding sites (Licht and Sanchez 1993, FaunaWest 1998).

Spiny Softshell Turtle

They occupy larger rivers and tributaries. Both sexes have been observed basking together on partially submerged logs in backwater sites of slow-moving water, and on sandy or muddy riverbanks (P. Hendricks personal observation).

Generally, the Spiny Softshell is primarily a riverine species, occupying large rivers and river impoundments, but also occurs in lakes, ponds along rivers, pools along intermittent streams, bayous, irrigation canals, and oxbows. It usually is found in areas with open sandy or mud banks, a soft bottom, and submerged brush and other debris. Spiny Softshells bask on shores or on partially submerged logs. They burrow into the bottoms of permanent water bodies, either shallow or relatively deep (0.5 to 7.0 meters), where they spend winter. Eggs are laid in nests dug in open areas in sand, gravel, or soft soil near water. No specific information is available for Montana, but data from other locations indicate that eggs are laid mostly in the second half of May and in June (most areas). Hatchlings emerge in 55 to 125 days in late August to early October (mainly September). Nesting sites need to be identified and protected from disturbance by human activities.

Blue Sucker

The blue sucker is a species of concern in Montana. It inhabits larger rivers and the lower reaches of major tributaries, and is usually found in channels and flowing pools with moderate current, and in some impoundments. Adults probably winter in deep pools. Young are present in shallower and less swift water than adults. The blue sucker spawn in deep riffles (1-2 meters) with cobble and bedrock substrate (NatureServe 2009). They potentially occur within suitable habitat in rivers crossed by or downstream of proposed Project river crossing including the Yellowstone River in Montana

Sturgeon Chub

The sturgeon chub prefers large turbid sandy rivers over substrate of small gravel and coarse sand. It is often found in areas swept by currents especially at the head of islands or exposed sandbars. Sturgeon chubs occur in the Yellowstone River.

Paddlefish

Paddlefish occur in Yellowstone River in Montana. This fish inhabits slow moving water of large rivers or reservoirs, usually in water deeper than four feet (130 cm). Paddlefish require large volumes of slow flowing water in order to reproduce. Considerations and BMPs for maintaining water quality and flow would minimize potential impacts.

Sauger

Sauger inhabit the larger turbid rivers and the muddy shallows of lakes and reservoirs. They spawn in gravelly or rocky areas in shallow water and seem to prefer turbid water.

Whooping Crane

The Whooping Crane has been observed in the marsh habitat present at Medicine Lake National Wildlife Refuge and Red Rock Lakes National Wildlife Refuge. Observations of individual birds in other areas of the state include grain and stubble fields as well as wet meadows, wet prairie habitat, and freshwater marshes that are usually shallow and broad with safe roosting sites and nearby foraging opportunities (Lenard et al. 2003).

Pallid Sturgeon

Pallid sturgeon use large, turbid rivers over sand and gravel bottoms, usually in strong current; also impoundments of these rivers (FWP). In Montana, pallid sturgeon use large turbid streams including the Missouri and Yellowstone rivers (Brown 1971, Flath 1981). They use all channel types, primarily straight reaches with islands (Bramblett 1996). They primarily use areas with substrates containing sand (especially bottom sand dune formations) and fines (93% of observations) (Bramblett 1996).

Pale-spiked Lobelia

The pale-spiked Lobelia occurs in moist meadows on the plains. It is rare and peripheral in Montana and unclear if any of the documented occurrences are subject to negative impacts or disturbances.

The well and storage and distribution facilities are already in operation and located adjacent to a regularly traveled county road and a historically irrigated field. It is a supplemental well to increase flow therefore there is no additional volume or consumption. It is unlikely that any of the above listed wildlife and plant would be impacted. Therefore, the Project will likely have no effect on endangered and threatened species.

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 known wetlands exist in the project area.

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.*

Determination: Water diverted for this project will not impact soils. This water is for formation fracturing.

The Project will have no significant impacts on soils in the project area.

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: The water depot is already established and with no additional volume or consumption the number of trucks and spread of noxious weeds will not increase. There should be no deterioration of air quality as a result of this appropriation.

The Applicant will be responsible for monitoring and controlling the establishment or 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: There will be no deterioration of air quality as a result of this appropriation.

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

Determination: The Project will likely have no impact on historical, cultural or archeological sites.

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 additional impacts on 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: There are no known local environmental plans or goals in this area.

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 project is located in a rural area that has historically been used for agricultural purposes and will not have an impact on recreation or wilderness activities

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

Determination: This project will have no impact on human health.

PRIVATE PROPERTY - Assess whether there is 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: There are no additional government regulatory impacts on private property rights associated with this application.

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: This assessment does not indicate possible secondary impacts on the physical environment and/or the local human population.

Cumulative Impacts: This assessment does not indicate possible cumulative impacts on the physical environment and/or the local human population.

3. ***Describe any mitigation/stipulation measures:*** N/A
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:*** An alternative analysis of the project identified a no action alternative to the construction of the additional well to increase the flow rate to the existing water depot. This alternative would not have any direct impacts that are typically associated with construction and operation of the Depot. The no-action alternative would not allow the Applicant to meet the purpose of and need for the project.

PART III. Conclusion

1. ***Preferred Alternative:*** Issue a water use permit if the applicant proves the criteria in 85-2-311, MCA are met.

2 Comments and Responses

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:

No significant impacts have been identified; therefore an EIS is not necessary.

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

Name: Heather Harris
Title: Water Resource Specialist
Date: August 2, 2013