

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:* Dept. of Veterans Affairs VA Montana HCS
210 S. Winchester Ave.
Miles City, MT 59301
2. *Type of action:* Application for Beneficial Water Use Permit No. 42K 30063152
3. *Water source name:* Groundwater
4. *Location affected by project:* SW $\frac{1}{4}$ NE $\frac{1}{4}$ Section 34, Township 8 North, Range 47 East, in Custer County.
5. *Narrative summary of the proposed project, purpose, action to be taken, and benefits:*
The applicant proposes to divert up to 50 gallons per minute (GPM) up to 14.1 acre-feet (AF) per year from two wells for 9 acres of lawn and garden at the VA hospital in Miles City, MT. The proposed period of diversion and period of use is from May 1 to Sept. 30 each year. 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:*
(include agencies with overlapping jurisdiction)
 - U.S. Fish and Wildlife Service and Montana Natural Heritage Program; Endangered, Threatened Species and Species of Special Concern, wetland mapper
 - Montana Department of Fish Wildlife & Parks (MFWP); Dewatered Stream Information
 - Montana Department of Environmental Quality (MDEQ); TMDL Information
 - U.S. Natural Resource Conservation Service (NRCS); 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.

The source of supply is two groundwater wells completed in the Tullock Member of the Fort Union Formation. The source aquifer has been determined to be hydraulically connected to the Tongue and Yellowstone Rivers. The alternate pumping of the two wells is estimated to deplete the Tongue and Yellowstone Rivers by an average 8.7 GPM year round. The Tongue River is listed as chronically dewatered from the T&Y Diversion to the mouth and periodically dewatered from the state line to the T&Y Diversion. The Yellowstone River at Mile City is not on the FWP dewatered streams list. A year round depletion of 8.7 GPM could worsen the already dewatered condition.

Determination: minor 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.

MT DEQ's 303 (d) list states the Tongue River from 12 Mile Dam to the mouth (Yellowstone River) is impaired due to sulfates, zinc, copper, nickel, salinity, lead, iron, solids (suspended/bedload) and cadmium. The list states the Yellowstone River from the Cartersville Diversion Dam to the Powder River is impaired due to lead, solids (suspended/bedload), pH, Nitrate/Nitrite (Nitrite + Nitrates as N), Total Dissolved Solids (TDS), zinc and copper. The propose use is from groundwater for watering the lawn of the VA hospital in Miles City. This use of water should not further impair the quality of water in the Tongue or Yellowstone Rivers.

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.

Montana Bureau of Mines and Geology (MBMG) geologic map of the Miles City 30'x60' quadrangle, eastern Montana from Geology Open File Report 426, 2001 was used along with a regional groundwater flow potentiometric surface map to determine that the Tongue and Yellowstone river alluviums contact the Tullock Formation. The regional flow patterns indicate that groundwater flow is dominated by river flow. The pumping of the proposed wells is expected to deplete the Tongue and Yellowstone rivers by an average of 8.7 GPM year round. The water from the wells will be mixed with treated water from the city of Miles City. The total annual appropriation is expected to consume a maximum of 14.1 acre-feet (AF) per year from the aquifer and rivers. Wells within the zone of influence will see a drop in water levels but it should not be enough to keep the operators from exercising their rights.

Determination: No significant impact

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 wells are located within the city of Miles City and were constructed by a licensed water well driller. There were no impacts to channels, flow modifications, barriers, riparian areas, or dams. There was some ground disturbance at the well sites during construction.

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."

According to the US Fish and Wildlife Service and the Montana Natural Heritage Program in Township 8 North, Range 47 East there is one animal and one plant species of concern within the project area. Those species are the Pallid Sturgeon and the Schweinitz' Flatsedge. Because the project is from groundwater within the city limits the possible impact to these species is expected to be small, if any.

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.

There are no known wetlands or critical riparian habitats within the project area.

Determination: No significant impact.

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

There are no ponds involved in this project.

Determination: No significant impact.

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.

According to the NRCS Web Soil Survey, the project area consists of Yamacall loam, 0 to 2 percent slopes. The proposed place of use is currently being irrigated with treated water from the city of Miles City. The groundwater used in this project will be mixed with treated water prior to application. There may be some increase in salinity due to the high salinity and sodium absorption ratios of the groundwater. The VA Hospital will mix the well water with treated water at a ratio of approximately 40% to 50% well water to city water and will apply approximately 800 pounds of gypsum per acre-foot of irrigation water to minimize chances of soil degradation or saline seep.

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.*

The project area is an existing lawn, there will be no impacts to vegetative cover and should be no spread of noxious weeds.

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.*

There should be no deterioration of air quality or adverse effects on vegetation due to this use of groundwater.

Determination: No significant impact.

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.*

There will be no degradation of unique archeological or historical sites in the vicinity of the proposed project due to the use of groundwater for lawn irrigation at the VA Hospital.

Determination: No significant impact.

DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AND ENERGY - *Assess any other impacts on environmental resources of land, water and energy not already addressed.*

No additional impacts anticipated.

Determination: No significant impact.

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

This proposed use is not inconsistent with locally adopted environmental plans and goals.

Determination: No significant impact.

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.*

This use of groundwater for lawn watering should have no impact on access to or quality of recreational and wilderness activities.

Determination: No significant impact.

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

There should be no impacts on human health.

Determination: No significant impact.

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: No significant impact.

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 significant impact.

Cumulative Impacts No significant impact.

3. ***Describe any mitigation/stipulation measures:*** No mitigation or stipulation measures exist for this application.

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:*** If this application is not granted, the applicant will continue to irrigate the lawn with treated city water and will not enjoy the benefit of the financial savings anticipated by using untreated groundwater in combination with treated city water.

PART III. Conclusion

1. ***Preferred Alternative*** Grant the permit to appropriate groundwater.

2. ***Comments and Responses*** None to report.

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 impacts were identified.

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

Name: Christine Smith

Title: Water Resources Specialist

Date: November 27, 2012