

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: BMP Investments, Inc.
127 PM Coal Road
Roundup, MT 59072
2. Type of action: Application for Beneficial Water Use Permit 40A-30022892
3. Water source name: Groundwater (Madison Group)
4. Location affected by project: The point of diversion is a well located in the SW SW NW, Section 13, T6N, R26E, Musselshell County.
5. Narrative summary of the proposed project, purpose, action to be taken, and benefits:

This permit application is for an 8619 foot deep well completed into the Madison Formation. The water will be utilized for an industrial coal mine operation and associated facilities. The applicant is requesting to divert 350 gallons per minute (gpm) up to 565.0 acre-feet (AF) annually. The period of diversion and period of use are all year long. Water will be pumped from the well to a 14.6 AF lined pit/dam used as storage for coal washing, dust abatement, facility support, and fire suppression if the need arises.

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)

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
MT State Historic Preservation Office - Archeological/Historical Sites
USDA Natural Resources Conservation Service – Web Soil Survey
USDI Fish & Wildlife Service – Wetlands Online Mapper

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.

Ground water quantity will be diminished by up to 565 AF in some years; however the withdrawal of water from the Madison aquifer should not have a significant impact on surface water quantity. The Madison group lies several hundred feet below the land surface, and there are no known structural features (faults) in the area of interest to allow vertical communication between formations.

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: Low likelihood of impact.

The applicant has provided water quality analysis which includes physical parameters (ph, specific conductance, etc) from both the field and the lab; along with the chemical constituents tested for in the lab. Fluoride and Total Iron concentrations exceed WQB-7 max. contaminant levels. The applicant states treatment of the water should be possible, especially if they decide to develop the well as a potable water source to be used for facility support. The applicant also plans to address high concentrations (300 ppm) of hydrogen sulfide gas detected at the wellhead through further system design.

Sediment derived from normal construction activities on the land surface (i.e. roads, water distribution system, etc.) could migrate into the nearest surface water drainage (unnamed tributary to Rehder Creek). This tributary is an ephemeral stream, and joins Rehder Creek several miles down gradient from the project site. While it is possible that some sediment may reach the Rehder Creek drainage, it is unlikely that water quality will be significantly impacted.

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: Low likelihood of impact.

The proposed project will consist of a well drilled 8619 feet into the Madison group. The applicant used the software program AQTESOLV to estimate the radius of influence (ROI). Aquifer parameters of 33 square feet/day for transmissivity and a storage coefficient of 0.0005 were utilized in the computations. The ROI was calculated to be 7.6 miles after 5 years.

Applicant states there are no known wells completed into the Madison Formation within 20 miles of the proposed well.

The applicant estimates that the proposed project would lead to an annual projected drawdown of 600 feet in the closest simulated well (2650'). The effects on this well are expected to begin 7 days after pumping begins in the proposed well. The projection was also run with a simulated well #2 located at the outermost boundary of the calculated ROI (40,000'). Drawdown on this well is not expected to be seen for 5 years. Long term projections for this well estimate a drawdown of between 40 and 50 feet after approximately 19 years of pumping the proposed Madison well at 350 gpm.

As stated previously, the Madison group lies several hundred feet below the land surface, and there are no known structural features (faults) in the area of interest to allow communication between formations. As such, it is unlikely that the project will negatively impact adjacent surface water flows.

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: Low likelihood of impact.

According to the certified signature on the Montana Well Log Report; the well has been constructed according to applicable MT Board of Water Well Contractors standards. Currently an electric 200 HP submersible pump is installed in the well. This pump is set at 2900 feet below ground surface. At this depth, the applicant estimates that the sustainable well yield will be about 200 gpm. They state that a larger pump will need to be installed to develop a sustainable flow rate of 350 gpm. Water pumped from the well will be conveyed to an existing lined 14.6 AF pit/dam and distributed throughout the project area from this pond. Full design plans will accompany the project completion notice.

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.

The Montana National Heritage Program lists 4 species as Species of Concern within Township 6 North Range 26 East. Common names for these four species are Townsend's Big-eared Bat, Greater Sage-grouse, Red-headed Woodpecker, and the Common Sagebrush Lizard. The USDI Fish & Wildlife Service Website shows that Musselshell County has one species listed as threatened; the Bald Eagle and one species listed as endangered; the Black-footed Ferret. Yellowstone County has the same two species as Musselshell County listed along with an additional endangered species: the Whooping Crane. This project is not expected to impact any

threatened or endangered species as the majority of the project has been in place and operating. Some short-term surface disturbance and erosion may occur during installation of the distribution system.

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.

There are no known wetlands associated with this project. The USDI Fish & Wildlife Service – Wetlands Online Mapper has no data available for the area of interest.

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

Determination: Low likelihood of impact.

The project involves storing water in an existing 14.6 AF pit/dam. The pond is lined and no impact to wildlife, waterfowl, or fisheries is anticipated.

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.

The USDA-NRCS Web Soil Survey indicates the dominant soil in the area of the wellhead is the Shambo loam with 2 to 8 percent slopes. The rating for this soil unit says it's well-drained and it has a moderately high to high capacity to transmit water.

Likely some short-term surface disturbance and erosion will occur with the installation of the distribution system. Long-term effects will depend upon management, but it is expected that proficient conservation practices will minimize any potential 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.

Determination: Low likelihood of impact.

Normal weed management would be used to control noxious weeds potentially invading disturbed areas; therefore, no spread of noxious weeds would likely be associated with this application. It is the responsibility of the property owner to control noxious weeds on their property.

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 will utilize an electric 200 HP pump. This project would have no emissions other than normal construction activities. Dust abatement practices will be used during construction activities.

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

Determination: Low likelihood of impact.

The State Historic Preservation Office shows that there is a low likelihood cultural properties will be impacted; a cultural resource inventory is unwarranted at this time. Mining activities will typically disturb the sub-surface area. The associated building facilities are already in place and have been previously utilized for mine operation.

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: Low likelihood of impact.

No additional impacts are anticipated.

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 action is consistent with common coal mining practices.

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 action will not impact recreational activities in the area.

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

Determination: Low likelihood of impact.

No impacts to human health have been identified.

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 known impacts.

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 - No secondary impacts are anticipated.

Cumulative Impacts - No cumulative impacts are anticipated.

3. Describe any mitigation/stipulation measures:

No mitigation measures have been identified at this time.

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: Deny the application. This alternative would result in none of the related economic benefits being realized by the applicant.

PART III. Conclusion

1. Preferred Alternative

The preferred alternative is the proposed alternative.

2 Comments and Responses

None Received.

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:

None of the identified impacts for any of the alternatives are significant as defined in ARM 36.2.524. The Roundup Power Project Final Environmental Impact Statement was completed in January 2003 by Montana Department of Environmental Quality.

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

Name: Douglas Mann

Title: Water Resources Specialist - LRO

Date: 10/30/2007