

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: Black Rocks Estates Subdivision, 745 South 56<sup>th</sup> Street West, Billings, MT 59106
- 2.
3. Type of action: Application for Beneficial Water Use Permit 43Q 30069789
4. Water source name: Groundwater
5. Location affected by project: Section 4 T1S R25E, Yellowstone County
6. Narrative summary of the proposed project, purpose, action to be taken, and benefits: The applicant proposes to divert water from groundwater, by means of two wells, from January 1 through December 31 at 356 GPM up to 172 AF, from a point in the SESW Section 4 T1S R25E, Yellowstone County, for multiple domestic and lawn and garden use from January 1 through December 31. The Applicant proposes to irrigate lawn and garden on 31.5 AC. The place of use is generally located E2SW Section 4 T1S R25E, Yellowstone County. The proposed wells would provide residential water and lawn watering for 93 new homes as part of a new subdivision in the area west of Billings. The DNRC shall issue a water use permit if an applicant proves the criteria in 85-2-311 MCA are met.
7. Agencies consulted during preparation of the Environmental Assessment:  
(include agencies with overlapping jurisdiction)  
Montana Department of Fish, Wildlife and Parks  
Montana Department of Environmental Quality  
Montana Bureau of Mines and Geology  
Montana Natural Heritage Program  
United States Fish and Wildlife Service  
United States Natural Resource and Conservation Service

**Part II. Environmental Review**

**1. Environmental Impact Checklist:**

**PHYSICAL ENVIRONMENT**

**WATER QUANTITY, QUALITY AND DISTRIBUTION**

**Water quantity** – The project would draw water from groundwater in the West Billings area. Based on aquifer test results the proposed project would create a cone of depression extending 11,000 feet from the wells. The aquifer flux through this region is far greater than the current legal demands on the groundwater in the area. The appropriation of groundwater will deplete the stretch of Hogans Slough between the project area and the Shiloh Drain. Hogans Slough is not listed by the Montana Department of Fish, Wildlife, and Parks as a chronically or periodically dewatered stream.

*Determination:* No Significant Impact.

**Water quality** – The water appropriated would be returned to the aquifer through lawn and garden irrigation and through individual drainfields at each of the 92 residences. The water in the West Billings area, and particularly near Hogans Slough has high dissolved constituents and is undesirable for drinking water (Olson and Reiten, 2002). Moreover, nitrate concentrations with isotopic signatures indicating manure and septic system sources are near or above recommended human health limits. Based on Department of Natural Resources and Conservation standards and analysis roughly 60% of appropriated water will return to the aquifer either by infiltration of irrigation water or through drainfields. The return of water from residential yards and drainfields has the potential to degrade groundwater quality. The Montana Department of Environmental Quality and the Yellowstone County Health Department monitor and regulate public water supply and drainfield installation. If water quality falls below health limits, treatment of the water supply would be required.

*Determination:* Possible Significant Impact.

**Groundwater** – This proposed project will divert 172 AF/YR of water from the alluvial aquifer of the Yellowstone River Valley. The amount of water available in the area exceeds legal demands on the aquifer based on analysis by Department of Natural Resources and Conservation hydrogeologists and drawdown from the well is acceptable. The appropriation will probably deplete surface water in Hogans Slough. The depletion to Hogans Slough is relatively minor and Hogans Slough is not listed as chronically or periodically dewatered by the Montana Department of Fish, Wildlife, and Parks.

*Determination:* No Significant Impact.

**DIVERSION WORKS** – The proposed wells were drilled by a licensed Montana well driller and can be assumed to be properly constructed. The diversion will not create barriers or alter riparian environments or stream channels. The area in question has been in agricultural use and is not adjacent to any naturally occurring watercourse. The soils in the area are not unstable.

*Determination:* No Impact.

#### **UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES**

**Endangered and threatened species** – According to the Montana Natural Heritage Program there are no plant species of concern or potential concern in the region possibly affected by this project. The United States Forest Service and the United States Bureau of Land Management list the Townsend's Big-eared Bat, the Sotted Bat, the Western Hog-nosed Snake, the Milksnake,

and the Greater Short-horned Lizard as sensitive species in the area of the project. The Bureau of Land Management also lists the Spiny Softshell and the Sauger. The Bald Eagle is a species of special status in the area. These species have habitat that include riparian forest, conifer forest, cliffs and caves. The area of this project is currently agricultural land with none of the appropriate habitat for listed species of concern.

*Determination:* No Impact.

**Wetlands** – The National Wetlands Inventory prepared by the United States Fish and Wildlife Service shows no wetlands within a mile of the area potentially impacted by this project. There are emergent palustrine wetlands to the north and south and some open water associated with ponds and golf courses.

*Determination:* No Impact.

**Ponds** – The proposed project does not involve ponds.

*Determination:* No Impact.

**GEOLOGY/SOIL QUALITY, STABILITY AND MOISTURE** – The dominant soils in the area are Keiser, Hesper and Halvorson silty clay loams. These soils are non-saline. The slopes are uniformly low and very stable.

*Determination:* No Impact.

**VEGETATION COVER, QUANTITY AND QUALITY/NOXIOUS WEEDS** –The entire region has historically been used for agriculture so the impact would be to alter the vegetation from agriculture to lawns and residential homes. No existing vegetation is critical to habitat. The construction equipment necessary for development may transport noxious weeds to the site. It will be the responsibility of the developer to monitor and control noxious weeds.

*Determination:* No Significant Impact.

**AIR QUALITY** – The proposed project is for subdivision development of existing agricultural land. The switch from agriculture to residential would decrease dust associated with tilling and harvest and increase emissions associated with transportation, heating and cooling.

*Determination:* No Significant Impact.

**HISTORICAL AND ARCHEOLOGICAL SITES** – This project is not located on State or Federal land and this section is not applicable to the specific project.

*Determination:* Not Applicable.

**DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AND ENERGY** – The proposed project would take roughly 80 acres out of agricultural production and use it for residential purposes. The amount of water required would decrease and energy consumption would change from running equipment related to agriculture to powering homes.

*Determination:* No Significant Impact.

## **HUMAN ENVIRONMENT**

**LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS** – The project lies within Yellowstone County and would be subject to county zoning restrictions, subdivision review and public water and wastewater regulations. The land is currently zoned residential rural and agricultural rural. The proposed use is not inconsistent with county zoning.

*Determination:* No Impact.

**ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES** – The project lies within a rapidly developing suburban area. There are no nearby wilderness areas or recreational sites and no changes to the transportation system are expected.

*Determination:* No Impact.

**HUMAN HEALTH** – The project would have limited impact on public health. Dust may be reduced by abandoning farming and drinking water quality may be affected by residential drainfields.

*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:* Not Applicable.

**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?* The county and state tax base would increase with the change from agricultural use to residential use. 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? The project would increase available housing in the area and generally increase the population density. No Significant Impact.
- (f) Demands for government services? The new residential homes would increase demand for fire and police protection. No Significant Impact.
- (g) Industrial and commercial activity? No Significant Impact.
- (h) Utilities? The new residential homes would increase demand for electric, gas and telephone services. No Significant Impact.
- (i) Transportation? The subdivision would generate additional traffic on Central Avenue west of Shiloh Road. 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 secondary impacts associated with the proposed project are recognized.

Cumulative Impacts: There are no known pending permit applications in the area and no unperfected permits. The west Billings area is developing rapidly and multiple subdivisions have been created in recent years. There are no known actions under concurrent consideration by any state agency in the vicinity of the project.

**3. *Describe any mitigation/stipulation measures:*** None.

**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 reasonable alternatives are to grant the beneficial water use permit or the no action alternative. The no action alternative prevents the Applicant from developing a residential subdivision and denies the economic benefit. The no action alternative has few significant advantages over the proposed project. Development in west Billings is inevitable and the no action alternative prevents needed housing.

***PART III. Conclusion***

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

2. **Comments and Responses:** None.

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:* Although some potential impacts are recognized, an EA is the appropriate level of analysis because the Department of Natural Resources and Conservation is required to meet statutory timelines (MCA 35-2-307) in the processing of water right applications. Those timelines preclude the preparation of an Environmental Impact Statement.

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

*Name:* Mark Elison

*Title:* Hydrologist/Specialist

*Date:* 12/30/2014