EA Form R 1/2007

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:* Diamond Falls LLC
3472 Stone Mountain Circle
Billings, MT 59106

2. *Type of action:* Application for Beneficial Water Use Permit

3. *Water source name:* Groundwater

4. *Location affected by project:* S2NE Sec. 16 T1S, R25E, Yellowstone County

5. *Narrative summary of the proposed project, purpose, action to be taken, and benefits:* Diamond Falls LLC is requesting a beneficial water use permit in order to divert 1830 GPM up to 41.37 acre-feet per year from groundwater to use for multiple domestic and lawn and garden for 60 homes and 7.12 acres. 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)*

Montana Natural Heritage Program
Montana Department of Fish Wildlife & Parks (MFWP)
Montana Department of Environmental Quality (MDEQ)
Montana Bureau of Mines and Geology
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 **-** *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: No significant impact

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 4,800 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 Hogan's Slough within the cone of depression. Hogan's Slough is not listed by Montana DFWP as chronically or periodically dewatered.

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: Possible significant impact

The water appropriated would be returned to the aquifer through lawn and garden irrigation and through individual septic drainfields at each of 60 residences. The water in the West Billings area, particularly near Hogan's Slough, has high dissolved constituents and is undesirable for drinking water (Olson and Reiten, 2002). Nitrate concentrations, with isotopic signatures indicating manure and septic system sources, are near or above recommended human health limits. Based on DNRC 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 DEQ and the Yellowstone County Health Department monitor and regulate public water supply and drainfield installation. These individual wells would not be considered public water supplies and therefore would not be regulated by DEQ or the County Health Department. If water quality falls below health limits, treatment of the water supply would be required.

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: No Impact

This proposed project would divert 41.37 acre-feet of water from the alluvial aquifer of the Yellowstone River valley. Based on aquifer test results, there are 3,671 acre-feet of water in the surrounding aquifer. After 72 hours of pumping the test well at 112 GPM, the test well experienced a drawdown of 1.65 feet. The 1.65 ft. drawdown left 22.25 feet of available water above the bottom of the well. Groundwater modeling by Department hydrogeologists predicts a depletion of up to 22.9 GPM from Hogan's Slough from the proposed wells. Previous measurements of flow in Hogan's Slough show at least 0.9 CFS throughout the year. Pumping of the proposed wells should not affect water quality or supply in groundwater or Hogan's Slough.

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: No Impact.

The proposed diversions will be drilled by a licensed water well contractor and can be assumed to be properly constructed. These proposed diversions should not impact channels, flow, barriers, riparian areas, dams, or well construction.

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: No Impact

The Natural Heritage Program identified the following species of concern, potential species of concern or special status species within the project area: Townsend's Big-eared Bat, Spotted Bat, Great Blue Heron, Pinyon Jay, Spiny Softshell Turtle, Plains Hog-nosed Snake, Western Milksnake, Greater Short-horned Lizard, Sauger and Bald Eagle. This area is already actively farmed and subdivided; there should be no new impacts to endangered or threatened species due to this proposed use of water.

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 Impact

The project area is not within a wetland, so there should be no significant impacts to wetlands from this proposed use.

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

Determination: No impact

There are no ponds associated with this water right application.

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: No Impact

The soils in the proposed place of use are primarily Keiser silty clay loam and Lohmiller silty clay which are non- to moderately saline. The construction of 60 homes with turf lawns and gardens should not degrade soil quality, alter stability or moisture content. There should be no saline seep from this use of water.

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: No Impact

The project area was previously farm land, there should be no new establishment or spread of noxious weeds due to this project. The land owner is expected to prevent the establishment or spread of 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: No Impact

There should be no deterioration of air quality due to increased air pollutants from 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 Impact

There should be no significant impacts on other environmental resources of land, energy, and water from this proposed use.

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 Impact

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

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: No Impact

The project is located in an area that was previously farmed; this project should have no new impact on recreational or wilderness activities.

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

Determination: No significant Impact

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

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?* Conversion from farming to housing would increase tax revenue for the county and state. No significant impact.

(c) *Existing land uses?* Area would no longer be farmed or flood irrigated. Reduced recharge to groundwater. 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 population density. No significant impact.

(f) *Demands for government services?* The new homes would increase demand for fire and police protection. No significant impact.

(g) *Industrial and commercial activity?* No significant impact.

(h) *Utilities?* The new homes would increase demand for electric, gas and telephone services. No significant impact.

(i) *Transportation?* The subdivision would increase traffic on nearby streets. 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 None identified.

Cumulative Impacts There are no other pending applications on this source of water. There should be no significant cumulative impacts.

3. *Describe any mitigation/stipulation measures:* There are no mitigation or stipulation measures required.

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 application, to advise the Applicant to propose a different application or the no action alternative. An alternate proposal may be to construct a public water supply system which would utilize the same amount of water with fewer wells. It would also subject the Applicant to further expense involved in the design, construction, operation and regulation of the system. 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 ongoing and the no action alternative would prevent the construction of housing which is in demand.

PART III. Conclusion

1. Preferred Alternative To authorize the beneficial water use permit.

2. Comments and Responses

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 environmental impacts were identified. No EIS required.

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

Name: Christine Schweigert
Title: Water Resources Specialist
Date: August 27, 2015