

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:

RICHARD E. & JULIA A. LLEWELLYN
5955 GALES LN
COLUMBIA, MD 21045-3839

2. Type of action: APPLICATION FOR BENEFICIAL WATER USE PERMIT NO. 41F 30069777. The Applicant has installed a well and proposes to appropriate up to 27 gallons per minute (GPM) and up to 3.33 acre-feet (AF) of water per year. The well is located within the Yellowstone Controlled Groundwater Area (YCGA).

3. Water source name: GROUNDWATER. The well is located on private property near the Grayling Arm of Hebgen Lake. The well is approximately 2,840 feet southeast of Grayling Creek.

4. Location affected by project: NE¹/₄, SECTION 16, T12 S, R04 E, GALLATIN COUNTY. This well is located on private property in Lot 7, Block 2 of the Bear Trap Ranch Subdivision 1, east of the Grayling Arm of Hebgen Lake and west of U.S. Highway 191. The physical property address is 955 Chokecherry Lane, West Yellowstone, MT 59758.



Figure 1: Map of location affected by project.

5. Narrative summary of the proposed project, purpose, action to be taken, and benefits: The Applicant proposes to pump up to 27 GPM and up to 3.33 AF per year of water. The Applicant proposes to divert up to 1.0 AF between January 1 and December 31 at a rate of up to 12 GPM for the domestic use of one house and up to 2.33 AF between April 1 and October 31 for lawn and garden irrigation of 0.93 acres at a rate of up to 15 GPM (27 GPM when combined with the domestic flow rate). The water from this well measured 46° Fahrenheit at the wellhead and had a specific conductance of 161 microhms when later measured by the Department on June 9, 2014.

The National Park Service has received notification of this application. If they do not object, a permit will be issued.

6. Agencies consulted during preparation of the Environmental Assessment:
 - Montana Department of Fish, Wildlife & Parks (DFWP) – Montana Fisheries Information System (MFISH): <http://fwp.mt.gov/fishing/mFish/>
 - Montana Department of Environmental Quality (DEQ) – Clean Water Act Information Center (CWAIC): <http://deq.mt.gov/wqinfo/CWAIC/default.mcpx>
 - Montana National Heritage Program (MTNHP) – Species of Concern: <http://mtnhp.org/SpeciesOfConcern>

- U.S. Fish & Wildlife Service (USFWS) – National Wetlands Inventory Wetlands Mapper: <http://www.fws.gov/wetlands/Data/Mapper.html>
- National Resources Conservation Service (NRCS) – Web Soil Survey (WSS): <http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>

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 source of water is groundwater, which is not listed by DFWP. The nearest surface water is Grayling Creek. A search of MFISH conducted on December 3, 2014, did not produce any results for Grayling Creek. The nearest surface water for which MFISH has data is Hebgen Lake. As determined by a search of MFISH conducted on December 3, 2014, Hebgen Lake is not listed as chronically or periodically dewatered by DFWP. The Madison River is impounded by Hebgen Dam to form Hebgen Lake. The Madison River's flow is controlled by the dam, and the Madison is not listed as chronically or periodically dewatered. The well's proposed maximum flow rate of 27 GPM and annual volumetric usage of 3.33 AF will not have a significant impact on nearby surface water flow or water users.

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: No significant impact. The source of water is groundwater, which is not listed by the Montana Department of Environmental Quality (DEQ). Adjacent surface water quality is not likely to be affected by the proposed well, as Potts Drilling, a licensed driller (license number WWC-512), has constructed the well in accordance with the rules of the Board of Water Well Contractors. According to a search of the CWAIC website conducted on December 3, 2014, no data is available for Grayling Creek, and DEQ has not assessed Hebgen Lake for water quality data. The nearest reach of the Madison River, from Hebgen Dam to Earthquake Lake, has been assessed by DEQ as fully supporting all beneficial uses. This well is unlikely to impact the surface water quality significantly.

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 significant impact. The source of water is groundwater. Groundwater quality is not likely to be affected by the proposed well, as Potts Drilling, a licensed driller (license number WWC-512), has constructed the well in accordance with rules of the Board of Water Well Contractors. Water use will be measured with a meter supplied by DNRC. The well is

unlikely to have any significant impact on nearby surface water or to have any significant impact on nearby water right owners.

The U.S. National Park Service has been notified of this application pursuant to the State of Montana/U.S. National Park Service Compact, Article II, Section B.2.b.ii.3.(b).

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 significant impact. Potts Drilling, a licensed driller (license number WWC-512), has constructed the well in accordance with rules of the Board of Water Well Contractors. The diversion works should not create significant channel impacts, flow modifications, or barriers. No significant impacts to existing resources have been identified.

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 significant impact. According to a search of the MTNHP Species of Concern website conducted on December 3, 2014, 15 animal Species of Concern may be found within the project area: Bison, Wolverine, Little Brown Myotis, Grizzly Bear, Northern Goshawk, Golden Eagle, Evening Grosbeak, Cassin’s Finch, Clark’s Nutcracker, Green-tailed Towhee, Brewer’s Sparrow, Western Toad, Plains Spadefoot, Westslope Cutthroat Trout, an A Mayfly (*Caenis youngi*). One animal Special Status Species may be found within the project area: Bald Eagle.

Two plant Species of Concern may be found within the project area: Slender Indian Paintbrush and Dwarf Purple Monkeyflower. One plant Potential Species of Concern may be found within the project area: Suksdorf Monkeyflower.

As this proposed application is to divert water from a well located on private property within a development project, no significant impacts will occur to threatened, endangered, or special concern species. The pumping of groundwater will not decrease surface water flows to significantly impact any of these 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: Not applicable. According to a December 3, 2014, search of the USFWS Wetlands Mapper, no wetlands exist in the vicinity of the project. No wetlands are involved in the project.

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

Determination: Not applicable. No ponds are involved in the project.

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 significant impact. This well has been constructed by Potts Drilling, a licensed driller (license number WWC-512), in accordance with rules of the Board of Water Well Contractors, so there should not be significant impacts on nearby soil quality. The Bear Trap Ranch Subdivision 1 has already altered the soil properties and land characteristics of the project area. Use of water will occur in a manner consistent with locally accepted, historic practices and will not significantly impact soil quality. A December 3, 2014, search of the NRCS WSS website did not identify any saline seeps in the 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: No significant impact. This well has been constructed by Potts Drilling, a licensed driller (license number WWC-512), in accordance with rules of the Board of Water Well Contractors, so there should not be significant impacts on nearby vegetative cover. A small area was disturbed by drilling the well, but this should have no significant impact on the surrounding area's vegetative cover and neither should it allow the establishment 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: No impact. No deterioration of air quality will result from the drilling of this well or diversion of water from it.

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: Not applicable. The project is not located on State or Federal Lands. Furthermore, the Applicant made no mention of significant historical or archeological sites on the property.

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 significant impact. No other demands on environmental resources of land, water, and energy 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: No significant impact. Drilling wells for water supply and using water for domestic purposes and for lawn and garden irrigation are locally accepted practices within the state of Montana and the Hebgen Lake 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: No significant impact. There are significant recreational and wilderness activities in the area, but the proposed project is located entirely on private property in a rural subdivision and will not impact access to or the quality of recreational and wilderness activities.

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

Determination: No significant impact. Pumping groundwater for garden and lawn irrigation will not impact human health. The water will be used to supply one home for domestic purposes. A March 2011 DEQ Fact Sheet entitled “Individual Drinking Water Wells – Water Quality Monitoring & Treatment” notes that water quality from individual drinking water wells is monitored only by the owner and is “generally not subject to any drinking water standards.” The Applicant maintains sole responsibility for testing and treatment of water for any and all domestic purposes.

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: The project does not impact government regulations on private property rights.

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 impacts identified.
- (b) Local and state tax base and tax revenues? No significant impacts identified.
- (c) Existing land uses? No significant impacts identified. This well would allow the Applicant to irrigate land and to supply one house with domestic water.
- (d) Quantity and distribution of employment? No impacts identified.

- (e) Distribution and density of population and housing? No significant impacts identified.
- (f) Demands for government services? No significant impacts identified.
- (g) Industrial and commercial activity? No impacts identified.
- (h) Utilities? No impacts identified.
- (i) Transportation? No impacts identified.
- (j) Safety? No impacts identified.
- (k) Other appropriate social and economic circumstances? No impacts identified.

2. Secondary and cumulative impacts on the physical environment and human population:

Secondary Impacts: No secondary impacts have been identified.

Cumulative Impacts: No cumulative impacts have been identified.

3. Describe any mitigation/stipulation measures: There are no mitigation or stipulation measures anticipated 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: If the Applicant is not allowed to divert water from the existing well, they will not be able to irrigate the existing property or supply their home with water for domestic purposes. Since the property is located in a rural region, they cannot connect to a municipal system, but they may be able to haul water in. The no action alternative would be to not irrigate the lawn and garden, but would leave the house without a reliable source of water.

PART III. Conclusion

1. Preferred Alternative: The preferred alternative is to obtain a water right permit to use the drilled well.

2. Comments and Responses: None at this time.

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: The EA is the appropriate level of analysis because the proposed project is to obtain a permit for an already existing groundwater well in the YCGA for domestic use and for lawn and garden irrigation, which are locally accepted practices, and no significant adverse effects are anticipated. None of the identified impacts for any of the alternatives is significant as defined in ARM 36.2.524.

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

Name: Brent Zundel

Title: Water Resource Specialist

Date: December 4, 2014