

Montana Department of Natural Resources and Conservation
Water Resources Division
Water Rights Bureau

ENVIRONMENTAL ASSESSMENT
For Routine Actions with Limited Environmental Impact

Note: Instructions to DNRC staff for preparing this EA can be found at:
http://www.dnrc.state.mt.us/eis_ea.html

Part I. Proposed Action Description

1. Applicant/Contact name and address: **DAN GRUBER
PO BOX 1342
EAST HELENA, MT 59635**
2. Type of action: **Application for Beneficial Water Use Permit No. 41B-30016557**
3. Water source name: **Groundwater Well**
4. Location affected by action: **NE Sec 9, Twp 10N, Rge 3W, Lewis and Clark Co.**
5. Narrative summary of the proposed project, purpose, action to be taken, and objectives:
The applicant is requesting a year round appropriation of groundwater at a maximum rate of 72.4 gallons per minute (gpm) and a volume of 39.93 acre-feet (ac-ft) per year. The proposed groundwater appropriation will be used for domestic, lawn and garden, and fire protection purposes in the NE Sec 9, Twp 10N, Rge 3W, Lewis and Clark Co. The appropriation will be obtained from two wells completed to a depth of 161 and 201 feet in fractured bedrock.

The applicant proposes to allocate 13.1 acre-feet of their requested volume for domestic use at 47 homes, 26.4 acre-feet for 6.1 acres of lawn and garden, and 0.43 acre-feet for fire protection. Basin Closure compliance is not required because the Department of Natural Resources and Conservation (DNRC) has determined that the application meets the multiple domestic well exemption.

Agencies consulted during preparation of the Environmental Assessment:
(include agencies with overlapping jurisdiction)

**MT Natural Heritage Program - Species of Concern, T/E
NRCS Soil Survey
The Montana Noxious Weed Survey and Mapping System
DNRC- Bill Uthman, Hydrogeologist
MT Dept. of Fish, Wildlife and Parks - Montana Fisheries Information System
Montana Cultural Resource Information System - SHPO**

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 adverse impact.**

This proposed project would not affect chronically dewatered streams as identified by DFWP. The water to be diverted is from groundwater.

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 adverse impact.**

This proposed appropriation would not affect water quality in perennial streams. The water to be diverted is from groundwater.

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 adverse impact.**

The applicant demonstrated that the water is physically and legally available according to the DNRC evaluation procedures. In order to monitor any long-term groundwater depletions, the applicant will be required to take and report periodic water level measurements and the volume of water withdrawn. The applicant acknowledges a potential stream depletion impact of 19.6 acre-feet per year to nearby Sevenmile Creek. The applicant therefore proposes to mitigate potential impacts through augmentation.

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 adverse impact.**

Since this well is utilizing groundwater it would not impact any of the following: channel impacts, flow modifications, barriers, riparian areas, or dams. A licensed well driller drilled the wells in November 2001 in accordance with the Montana Board of Water Well Contractors construction standards. The 4-inch wells were completed to depths of 161 and 201 feet, respectively.

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 adverse impact.**

The MT Natural Heritage Program identified the Brewer's Sparrow, the Wedge-leaved Saltbrush, the Small Yellow Lady's-slipper, and the Lesser Rushy Milkvetch as a species of special concern in the vicinity of the project.

It is unlikely that the proposed project would have any impact on the habitats of the species of special concern. The Brewer's Sparrow is found in sagebrush areas of central Montana, therefore the proposed project should have no impact on the bird. The Small Yellow Lady's-slipper habitat does not include grasslands, therefore the proposed project should have no impact on the plant. The Wedge-leaved Saltbrush is generally found in vernal moist, alkaline soil around ponds and along streams in the valleys, and the proposed project should have no impact on the plant. The Lesser Rushy Milkvetch is found near the project area however there are no populations within the project boundaries.

Although antelope, deer, and other small mammals frequent the area the proposed subdivision is not located in an area with a high wildlife resource value.

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 functional wetlands have been identified.**

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

Determination: **No pond development is involved in this 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 to soil quality, stability, or moisture content. According to the NRCS soil survey the predominant soils within the project area are the Crago gravelly loam and the Crago-Pensore channery loams. The soil conditions are suitable for road construction. The project is not in an area known to be susceptible to saline seep problems.**

There are no known geologic hazards within the proposed subdivision.

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 adverse impact.**

The vegetative cover on the proposed project area consists of native grasses and small shrubs. The grass and shrubs will be damaged during construction. The Montana Noxious Weed Survey and Mapping System did not identify any noxious weeds within the project vicinity. However, the applicant's environmental assessment noted a small infestation of Russian Knapweed within the project boundaries and on surrounding properties. The developer is responsible for the establishment or spread of noxious weeds until such time the proposed subdivision is turned over to the water users. All disturbed areas would be revegetated to provide erosion control.

AIR QUALITY - Assess whether there will be a deterioration of air quality or adverse effects on vegetation due to increased air pollutants.

Determination: **No significant adverse impact.**

During construction there may be deterioration of air quality due to exhaust from construction vehicles and dust from exposed soils. There may also be a deterioration of air quality due to the increased traffic within the subdivision. In addition, if any of the homes have wood burning stoves/fireplaces that are burned improperly, there may be noticeable or objectionable odors that could affect air quality and /or be offensive to other property owners. This impact would be temporary during the winter months when there is an air inversion.

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

Determination: **No significant adverse impact.**

According to the Montana Cultural Resource Information System (CRIS), there have been cultural resource surveys in the general area that have yielded finds. However, there are no archaeological or cultural sites located within the project area. Based upon the lack of site specific data about the finds in the general areas, the Montana State Historic Preservation Office recommended a reconnaissance survey be conducted in order to determine if any cultural sites exist and if any impact would occur from this project. Because the project is located on private property, it is at the landowner's discretion to conduct this survey.

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 additional impacts to environmental resources were identified.**

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 adverse impact. The Lewis and Clark County Comprehensive Land Use Plan designates this property as conducive for single family residence.**

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 adverse impact.**

The proposed project would not impact access to or the quality of recreational and wilderness activities. The applicant wishes to make a cash donation in lieu of parkland dedication.

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

Determination: **No significant adverse impact.**

The proposed subdivision will utilize a public wastewater system and treatment facility. Plans and specifications for distribution and storage will have to be approved by DEQ. Solid waste will be disposed of at the City of Helena landfill transfer station. The landowners can either haul their own waste or have a private hauler pick up and dispose of the solid waste.

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 adverse 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 adverse impact.**
- (b) Local and state tax base and tax revenues? **No significant adverse impact. This subdivision project will increase the local and state tax base and revenues. The magnitude of the potential increase in tax revenue is estimated to be greater than \$75,000.**
- (c) Existing land uses? **No significant adverse impact. The land is classified as non-irrigated pasture land that has not been used to any extent. The land at the moment is vacant.**
- (d) Quantity and distribution of employment? **No significant adverse impact. This proposed project has the potential to increase the demand for services in the Helena area and create employment opportunities.**
- (e) Distribution and density of population and housing? **No significant adverse impact. The development of this subdivision would increase the population growth outside the city limits of Helena. There will be 47 households at full development.**
- (f) Demands for government services? **No significant adverse impact. There would be greater demand for a number of government and local services. The residents of the subdivision would need fire and police protection, and bus service for schools. There will also be a need for medical/health care services, solid waste disposal, postal services, road maintenance, etc....**
- (g) Industrial and commercial activity? **No significant adverse impact. This subdivision is strictly for domestic and lawn and garden uses.**
- (h) Utilities? **No significant adverse impact. This proposed project would create the need for new facilities for electrical power, natural gas, telephone lines, and cable television lines. All utilities will be installed underground in accordance with Lewis and Clark County Subdivision Regulations.**
- (i) Transportation? **No significant adverse impact. The streets that will be impacted by this subdivision are Birdseye Road and Chapparral Road. Birdseye is a north-south route located east of the proposed development. Chapparral Road is an**

east-west route located south of the proposed development. The proposed subdivision will have new public access roads constructed to meet the Lewis and Clark County road specifications.

- (j) Safety? **No significant adverse impact.** There may be safety impacts created by the increased traffic on Birdseye Road. The subdivision would increase the need for emergency services such as fire, police and medical. The response time for the emergency services may increase due to the growth of the Helena Valley area and limited resources and personnel. The Lewis and Clark Fire District will provide fire protection, the Lewis and Clark Sheriff's Department will provide police protection, and St. Peter's Community Hospital will provide ambulatory service. Onsite fire protection will be provided by a 0.43 acre-foot fire protection reservoir.
- (k) Other appropriate social and economic circumstances? **No significant adverse impact.**

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

Secondary Impacts: **No significant adverse impact.** The population in the Northeast and Northwest Helena Valley increased by 50% between 1990 and 2000 indicating the demand for groundwater development will continue. There are no other pending groundwater permit applications within the vicinity of the project, as most houses in the area rely on individual wells. At this time DNRC is not aware of problems related to reduced water levels, and elevated levels of nitrate in the vicinity of the project. In other areas of the Helena valley DNRC concluded that declining groundwater levels resulting from limited recharge during the recent drought probably is the primary cause of well problems.

Cumulative Impacts:

All foreseeable development in the vicinity of the proposed project will rely on groundwater from the alluvial aquifer or underlying fractured bedrock. When the Helena Valley started to be developed, the subdivisions were spread out and not situated in close proximity to each other. A few were developed with community water systems, however most had individual wells and septic systems. The valley is growing at an unprecedented rate at this point in time.

Almost all development in the vicinity of the project relies on individual wells. A list of wells within the radius of influence (8,000 feet) of the proposed wells indicates a total volumetric use of 1,244 acre-feet per year. The applicant is asking for 39.9 acre-feet per year for domestic, lawn and fire protection purposes. The total volume available within the radius of influence is calculated to be 5760 acre-feet per year. If the growth continues at the present rate the cumulative impacts to the aquifer could have significant adverse affects. However, at this time the cumulative impacts are unknown.

Describe any mitigation/stipulation measures: The permit, if issued would be subject to all prior existing water rights in the source of supply. The applicant would be required to submit a yearly report of monthly flow rate and volume measurements to the DNRC. Periodic water level measurements in the vicinity of the proposed subdivision will also be required. The applicant has requested enough volume to connect up to six additional home sites to the public water-supply system if

mitigation is required in the future. In addition, an augmentation plan is being developed by the applicant to mitigate steam depletion from Sevenmile Creek.

This application will go through the DNRC public notice procedure, and water users concerned with potential impacts will be given the opportunity to object to the application. The decision by the DNRC to grant or deny the application would not be made until these review processes are completed.

3. 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 no action alternative would prevent the applicant from obtaining water to develop domestic and lawn and garden irrigation for the subdivision. If the permit were denied the individual lot owners in the subdivision would have to construct their own wells to be used for domestic and lawn and garden. The result could be a greater potential for an adverse impact to water quality and quantity because of the 47 new wells that would be drilled to service home sites.**

PART III. Conclusion

1. Preferred Alternative: **Issue the permit as applied for by the applicant, or in some modified form considered reasonable. As stated above the potential for adverse affect would seem to be greater with individual new wells being constructed in the area.**
2. Comments and Responses: **There have not been any comments or responses 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: **Based on a consideration of the criteria found in DNRC Administrative Rule 36.2.524, "Determining the Significance of Impacts," there is not a sufficient adverse impact. An EA is sufficient for this level of action. The possible impacts from the community water system and wells for the subdivision are not significant adverse impacts and thus do not warrant and EIS.**

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

Name: Eric Chase

Title: Water Resources Specialist

Date: 4/3/06