

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:* Utility Solutions, LLC, % Barbara Campbell, PO Box 10098, Bozeman, MT, 59773
2. *Type of action:* The Montana Department of Natural Resources and Conservation (DNRC) has received an Application For Beneficial Water Use Permit #30019215-41H.
3. *Water source name:* Nine (9) Wells
4. *Location affected by project:* Sections 1, 11 & 12 Township 2 South, Range 4 East, and Sections 6 & 7 Township 2 South Range 5 East, Gallatin County, Montana. Water will be supplied to Black Bull Run Subdivision, and Middle Creek Parklands Subdivision, located within the Utility Solutions, LLC Service Area # 4.
5. *Narrative summary of the proposed project, purpose, action to be taken, and benefits:*
The applicant proposes to divert 373 GPM from nine wells to provide up to 194.6 acre feet of water to supply 628 families, for municipal/ multiple domestic/commercial purposes within the aforementioned subdivisions. The DNRC shall issue a permit if the applicant proves that the criteria in # 85-2-311, MCA, are met.
6. *Agencies consulted during preparation of the Environmental Assessment:*
(include agencies with overlapping jurisdiction)

Montana Department of Environmental Quality
Montana State Historic Preservation Office
Montana Natural Resource Information System
Gallatin County Planning Office
Gallatin Local Water Quality District
Gallatin County Planning Office
Montana Department of Fish, Wildlife and Parks

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: The source of water is alluvial groundwater diverted from nine wells, ranging from 56 to 78.5 feet deep. Groundwater has no designation as chronically or periodically dewatered. If this groundwater is tributary to the surface water in the area, there may be some affect to the West Gallatin River. The West Gallatin River is considered chronically dewatered by DFWP from Shedd's bridge (Four Corners) to the mouth, and periodically dewatered from Gallatin Gateway to Shedd's bridge.

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: Groundwater in the area is identified as Class 1 for protection purposes. This is the base class used unless sampling shows a specific conductance greater than 1000 micro-siemens. Sampling for area subdivision proposals has shown the specific conductance to be below this level (per telecommunication with DEQ).

Effluent from septic systems containing nitrates and pathogenic microorganisms can infiltrate ground water and reach water supply wells. Elevated levels of nitrates in drinking water can cause various health effects including a serious illness in infants known as "blue baby syndrome". Microbial contaminants including fecal coliform, E coli, and cryptosporidium may cause gastrointestinal problems that can be particularly serious in infants and people with compromised immune systems. The U.S. Environmental Protection Agency has designated a Maximum Contaminant Level (MCL) of 10 mg/L nitrate (as N) and any occurrence of microbial contaminants as thresholds that must not be exceeded in water from public water systems.

Gallatin County began permitting on-site water treatment systems in 1966. Prior to that, on-site wastewater treatment systems were not required to meet any standards. In 1993, the State of Montana adopted minimum standards for on-site wastewater treatment systems that mandated all counties in Montana follow the minimum standards. The amount of nitrate released to the environment from a septic system depends on the composition of the wastewater and the design of the septic tank and drain field. Effluent from a properly functioning septic system contains roughly two to seven times the drinking water limit of 10 mg/L nitrate (Wilhelm et al, 1994). Once released to ground water, the persistence of nitrate and microbial contaminants depends on the physical and chemical conditions in soils and aquifer materials encountered by septic effluent. Dilution and denitrification, a process that uses organic carbon to convert nitrate to nitrogen gas, can lower nitrate concentrations in ground water.

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: A total of nine (9) wells in Section 11 Township 2 South, Range 4 East, Gallatin County, obtain water from the alluvial system with a depth to at least 56 feet. Alluvium consists of an average of 55 feet of uniformly coarse sand and gravel (Hackett and others, 1960). Test wells for the Utility Solutions LLC, application were drilled into Alluvium.

The main sources of recharge to ground water within this area is seepage from irrigation canals, tributaries of the West Gallatin River, return flows from flood irrigation, and snowmelt. Ground water discharges to the West Gallatin River and its tributaries and through evapotranspiration by riparian vegetation, or leaves the area as underflow (Hackett and others, 1960).

Therefore, any impacts to ground water quality or supply probably would not be favorable. In addition, ground water within this area appears to be hydraulically connected to surface water, and any new uses could result in impacts on surface water flows.

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: The Natural Heritage Program was contacted. Bald Eagles are a threatened species that may be seen within the proposed area. Westslope Cutthroat Trout may inhabit the water of the West Gallatin River. These species would not be directly affected by the issuance of this permit. Indirect affects could occur by this development, if the groundwater in the area is connected to the river (see above discussion on groundwater). The Dwarf Purple Monkeyflower & Slender Wedgegrass may be found at the proposed place of use. These are species of concern.

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: Any functional wetlands that exist within the proposed Sections 1 & 12 T2S R4E, or Sections 6 & 7 T2S R5E may be affected by the creation of these proposed developments.

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

Determination: This application is not proposing to construct any ponds.

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: Soil quality may be enhanced with the addition of additives such as topsoil, and fertilizer to domestic lawns & gardens. Soil stability should be unchanged. This application does not propose to supply water for lawn irrigation. There is no evidence of saline seep.

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: Existing vegetative cover will be altered by these subdivisions. Noxious weeds may spread if the lot owners do not control them.

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

Determination: Air quality may be altered if any of the proposed 628 homes have woodstoves, or fireplaces. Additional vehicles will create additional auto emissions.

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

Determination: SHPO has been contacted. According to their records there have been a few previously recorded historic irrigation ditches within the designated search locales. They recommend that a cultural resource inventory be conducted in order to determine whether or not sites exist and if they will be impacted.

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: There will be additional demand for energy, and materials, to supply and construct 628 new homes.

HUMAN ENVIRONMENT

LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS - Assess whether the proposed project is inconsistent with any locally adopted environmental plans and goals.

Determination: The Gallatin County Planning board was contacted. The Black Bull Run Subdivision has been approved for preliminary plat approval. Middle Creek Parklands application has been submitted to the County Commissioners. They have not heard this one yet.

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: This project is located on private land, with no access to recreational or wilderness activities. No impact is expected.

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

Determination: No impact on human health is expected.

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: Private property rights are not impacted by this proposed action.

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? Depending on who moves into these developments, cultural diversity may be enhanced, or altered.
- (b) Local and state tax base and tax revenues? It is unknown if additional taxes will be collected.
- (c) Existing land uses? Land use changes from agricultural to residential development will occur. Open space will be transformed into two subdivisions, for 628 families. New roads and development will change the nature of the area as it now exists.
- (d) Quantity and distribution of employment? New construction may bring new workers to the area.
- (e) Distribution and density of population and housing? The population of the Four Corners area will be increased by at least 628 families.
- (f) Demands for government services? The demand for government services will be increased. The Gallatin County Sheriff, James R Cashell wrote that demand for their services has increased 300%, with no increase in staff since 1983. The Sheriffs ability to respond to emergencies is at a very dubious level right now and will only deteriorate further with the addition of these major developments.
- (g) Industrial and commercial activity? These developments do call for increased commercial activity.
- (h) Utilities? The demand for additional utilities will be increased.

- (i) Transportation? Traffic on Huffine Lane will become more congested by these developments. Additional people driving to Bozeman may make the road more dangerous.
- (j) Safety? As more people drive on Huffine Lane, it may become less safe for those already using the road.
- (k) Other appropriate social and economic circumstances? The building economy will benefit from this development. More people being relocated to the area usually brings with it more social problems. The Monforton School will be overcrowded by the additional kids that these new subdivisions will bring. Monforton will need to increase the size of the school. This will be an increased tax burden on the existing homeowners in the area.

2. ***Secondary and cumulative impacts on the physical environment and human population:*** Secondary impacts to the physical environment, or human population have not been identified. It appears that this source of water is hydraulically connected to the West Gallatin River. The cumulative impact of additional wells could impact water users on the river, unless potential water loss is mitigated. The cumulative impact on human population will be an increase in people living in the Four Corners area.

3. ***Describe any mitigation/stipulation measures:***

The applicant has filing a change application to remove ground from irrigation. The applicant has surface water rights that may be used to mitigate potential loss of water from the West Gallatin River.

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: This alternative would be to not subdivide this ground, and maintain the current use.

Proceed Alternative: Proceed with the application as filed. Require the applicant to show that they can prove by a preponderance of evidence that they have met the criteria in MCA # 85-2-311. Public notice the application, and if objections are received, send the application in for a hearing.

PART III. Conclusion

Based on the significance criteria evaluated in this EA, is an EIS required? No

Finding:

Yes ___ No X

If an EIS is not required, explain why the EA is the appropriate level of analysis for this proposed action: No significant environmental impacts have been identified.

DNRC has determined that this EA is the appropriate level of environmental review for this development.

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

Name: Jan R Mack

Title: Water Resources Specialist

Date: June 22, 2006