

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: Daniel W. Wells
4241 Cedar Wood Lane
Billings, MT. 59106
2. Type of action: Application No. 30029329-43Q – Beneficial Water Use Permit
3. Water source name: Groundwater (Three Wells)
4. Location affected by project: NW1/4, Section 9, Township 1 South, Range 25 East
Yellowstone County
5. Narrative summary of the proposed project, purpose, action to be taken, and benefits:

The applicant is applying to use groundwater from three wells approximately 70 feet deep and pump up to 450 gpm and up to 132 acre feet of water annually for Granite Park Subdivision. Water will be used to provide drinking water for 121 homes and irrigate up to 37 acres. Two wells were constructed to develop aquifer information necessary for this application process. Each well was pump testing separately and the second well was monitored during each test. A third well will be drilled prior to the development of phase two if the provisional permit is issued. 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:

Montana Natural Heritage Program
Montana Historic Preservation Office
Montana Department of Environmental Quality
Montana Department of Natural Resources and Conservation Hydrogeologists

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: Source of water is 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: Source of water is 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: Granite Park Subdivision is located within a half mile of Hogan Slough, a tributary to the Yellowstone River which is more than four miles away. A groundwater model

was used to evaluate the potential for surface water depletions. The depletions modeled were 17 gpm during non-irrigation season and 70 gpm during the irrigation season. For the purpose of this evaluation, the consultant assumed there was a hydraulic connection between the slough and this localized groundwater system.

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: A total of three water wells will be drilled for this 121 home subdivision. Two water wells have been drilled by a water well contractor licensed by the Board of Water Well Contractors. A third well will be drilled by the same prior to phase two. The platted subdivision has been approved by the Montana Department of Environmental Quality. The land proposed for development of this subdivision was existing irrigated farmland.

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: Contacted the Natural Heritage Program. They stated the following species are sensitive to this area; spotted bat, western hog nosed snake, and the milk snake. Since this area has historically been farmed, this area has been disturbed and any natural vegetation and wildlife have since been impacted from farming practices. The development includes three water wells, so a groundwater model was used to evaluate the potential for surface water depletions. The depletions modeled were 17 gpm during non-irrigation season and 70 gpm during the irrigation season on a local surface water source, Hogan's Slough, approximately half a mile away. For the purpose of this evaluation, the consultant assumed there was a hydraulic connection between the surface source and this localized groundwater system.

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: Development is being located on existing farm ground and not an existing wetland.

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

Determination: There are no ponds mentioned in the plans.

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: Development is on existing farmland and no known saline seep exists.

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: Development is being built on existing farmland. Assumed the owner sprayed weeds to prevent them from reducing crop yields.

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

Determination: Dust created during construction should not be different from previous farming practices during seedbed preparation and harvesting. The developer will normally spray water to compact roads and control dust during construction. The subdivision after construction and

development will reduce or eliminate historical dust events experienced from previous farming practices.

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

Determination: Contacted the cultural records manager and there is a low likelihood cultural properties will be impacted by this development.

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: The addition of 121 new homes will increase the use of existing road ways, impact the demand for fire protection, waste disposal, and more have been addressed by city-county planning.

HUMAN ENVIRONMENT

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

Determination: Subdivisions already exist nearby and by this same developer and these issues are normally addressed during permitting by the city-county planning board. This project would not be inconsistent with any other local planning or goals.

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: Existing private farmland being developed for a subdivision should not impact existing public access to recreational or wilderness opportunities in this area.

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

Determination: Unknown, development will increase the density of houses where farmland once existed.

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:

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? Yes, changing from farmland to 121 home subdivision.
- (b) Local and state tax base and tax revenues? Yes, 121 new houses will increase tax base.
- (c) Existing land uses? Yes, changing from existing farmland to a subdivision with 121 new houses.
- (d) Quantity and distribution of employment? Yes, short term impact will be felt during the development of the subdivision and construction of 121 new homes.
- (e) Distribution and density of population and housing? Yes, localized increase in the density of 121 new houses.

- (f) Demands for government services? Yes, housing will impact the local student population in this area.
- (g) Industrial and commercial activity? No, location is near a large population center.
- (h) Utilities? Yes, 121 new houses will use more water, gas and electricity.
- (i) Transportation? No local public transportation exists beyond the city limits.
- (j) Safety? Yes, increasing the density of 121 new homes will potentially impact the traffic in this area and create safety concerns.
- (k) Other appropriate social and economic circumstances? Unknown

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

Secondary Impacts: Unknown beyond what has been discussed.

Cumulative Impacts: Unknown beyond what has been discussed.

- 3. Describe any mitigation/stipulation measures:** Not issuing the provisional permit may result in no development or a modified water system. The developer could re-design the presently planned central water system for the entire subdivision and allow each lot owner to drill individual wells on each lot under MCA 85-2-306. Montana Department of Environmental Quality has permitted this development as designed.

- 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:** Not issuing the provisional permit may result in no development or a modified water system. The developer could re-design his water system from a centralized water distribution system for each home in the subdivision to allow each lot owner to drilling individual wells on each lot under MCA 85-2-306. Montana Department of Environmental Quality has permitted this development as designed.

PART III. Conclusion

- 1. Preferred Alternative:** Allow the beneficial water use permit to be issued for a central water system and continue the development of the subdivision without having 121 individual wells being drilled in a localized development.

- 2. Comments and Responses** None received.

- 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 significant adverse impact. An EA is sufficient for this level of action.

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

Name: Keith Kerbel
Title: Regional Manager
Date: March 21, 2008