

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: **City of Helena
316 N Park Ave
Helena MT 59623-0001**
2. Type of action: **Application to Change a Water Right No. 30050088-411
(Provisional Permit No. 30004542-411)**
3. Water source name: **Ground Water**
4. Location affected by project: **NE Quarter of Sec 24, Twp 10N, Rge 4W, Lewis and Clark County (vicinity of Capital High School in Helena)**
5. Narrative summary of the proposed project, purpose, action to be taken, and benefits:

The application proposes to add a point of diversion (ground water well) to municipal ground water Provisional Permit No. 411-30004542, and change a portion of the place of use. The additional ground water well is proposed to be located in the NENWNE Section 24, T10N, R4W, on property owned by Helena School District #1 (at Capital High School). The source aquifer is the Helena Valley-Fill Aquifer. The proposed diversion consists of an 8-inch diameter well drilled to a depth of 190 feet. The well will supply sprinkler and drip irrigation systems at Capital High School and Northwest Park. 29.2 acres of permitted irrigation are proposed to be retired from Centennial Field Park, located in the S2S2 Section 19 and N2N2 Section 30, T10N, R3W, and changed to 29.2 acres located in the NE Section 24, T10N, R4W. The 29.2 acres to be changed from the former permitted place of use, Centennial Field Park, have not been irrigated to date. The water right to be changed is unperfected.

Water will be used to irrigate lawns and athletic fields associated with a public school and municipal park. Water will be diverted from the new well at a flow rate of 350 gallons per minute (GPM), up to an annual volume of 61 acre-feet (AF). The new ground water well will not be operated simultaneously with the existing well that supplies the remaining water authorized on the existing permit to Bill Roberts Golf Course and other parks, so that the permitted flow rate of 350 GPM is not exceeded.

The DNRC shall issue an authorization to change to the applicant if the criteria in §85-2-402, MCA are met.

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

Dept. of Environmental Quality Website - TMDL 303d listing
MT. National Heritage Program Website - Species of Concern
USDI Fish & Wildlife Service Website - Endangered and Threatened Species in MT
USDA Natural Resources Conservation Service – Web Soil Survey
USDI Fish & Wildlife Service – Wetlands Online Mapper

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: **Minor impact.**

The source of supply for this application is ground water; therefore, it has not been identified as a chronically or periodically dewatered stream by DFWP. Tenmile Creek is the nearest surface water source that could be affected by the proposed well and is identified as a chronically dewatered stream from its mouth to river mile 13.4. The total length of Tenmile Creek is 29.4 miles. There is no significant impact to Tenmile Creek because the new well will exhibit similar pumping effects to the creek when compared to the ground water extraction effects of the existing permitted well. The two wells will not be operated simultaneously, as they can each produce the maximum authorized flow rate of 350 GPM.

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: **Low likelihood of impact.**

This change is to add a ground water well to an existing permit. As such, the source has not been listed as a water quality impaired or threatened stream by DEQ. There is a low likelihood that the new well will have a significant impact on water quality; pumping effects on the hydrologic system are not expected to change.

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: **Minor Impact.**

Forward solution modeling predicts that drawdown in the closest existing well to the proposed well would not exceed 2 feet, pumping for a period of 5 years. Drawdown of

this magnitude would not prevent a ground water user from reasonably exercising their water right. The proposed change will not modify the current irrigation timing, increase flow or volume, or access a different aquifer. A portion of the existing place of use, 29.2 acres, will be retired to allow for a new 29.2-acre place of use near Capital High School. As mentioned above, there should be no significant affect to adjacent surface water flows because impacts from the new well will be similar to impacts from the existing well.

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: **Low likelihood of impact.**

The proposed project will not have any negative effect on channel impacts, flow modifications, barriers, riparian areas, dams, or well construction. The proposed means of diversion is an 8-inch diameter well drilled in 2005 by Lindsay Drilling, a certified driller/contractor in the State of Montana. The well was drilled according to industry standards, and the well log is contained in the file. The majority of the place of use will be serviced via pipeline and divided into six irrigation zones with appropriately sized sprinkler heads to accommodate the proposed flow rate. One additional area will be irrigated by a drip irrigation system consisting of 66 emitter heads. The system has been in place and operating for several years and serviced by another water source.

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: **Low likelihood of impact.**

There are numerous species of concern in T10N R4W; however, the urban setting, past irrigation from another source and proposed similar water use render the impacts to these species insignificant. There is a low likelihood of impacts to any threatened or endangered species because of this project.

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: **Low likelihood of impact.**

No functional wetlands have been identified in the project area.

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

Determination: **Low likelihood of impact.**

There are no ponds involved with the proposed 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: **Low likelihood of impact.**

The predominant soil type in the area of Capital High is the Musselshell-Crago Complex, characterized by loam to sandy loam. The sodium adsorption ratio for this soil type is rated at 0.0, indicating little chance of saline seep issues. No degradation to soil quality should result because of this project.

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: **Low likelihood of impact.**

No adverse impacts to vegetative cover should result from this project. The new place of use has been irrigated by a different source of water in the past. The irrigated area is within a highly populated urban setting and there are numerous paved streets lessening the chances of noxious weed establishment or spreading. The landowner is responsible for controlling any noxious weeds on the property.

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

Determination: **Low likelihood of impact.**

The project will not result in the deterioration of air quality; the well proposed for addition in this change will use an electrically driven motor to power the pump.

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: **Low likelihood of impact.**

The new well is located on property owned by Helena School District #1, at Capital High School. There are no known archeological or historical sites near the proposed project.

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: **Low likelihood of impact.**

No additional impacts are anticipated at this time.

HUMAN ENVIRONMENT

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

Determination: **Low likelihood of impact.**

The proposed action is consistent with municipal practices in the 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: **Low likelihood of impact.**

No adverse impact to recreational or wilderness activities is expected because of this project.

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

Determination: **Low likelihood of impact.**

The proposed action does not create any negative impacts to human health.

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: **Low likelihood of impact.**

No government regulatory impacts are known at this time.

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? **None.**

(b) Local and state tax base and tax revenues? **None.**

(c) Existing land uses? **None.**

(d) Quantity and distribution of employment? **None.**

- (e) Distribution and density of population and housing? **None.**
- (f) Demands for government services? **None.**
- (g) Industrial and commercial activity? **None.**
- (h) Utilities? **Slight increase in electrical demand to supply motor for new pump.**
- (i) Transportation? **None.**
- (j) Safety? **None.**
- (k) Other appropriate social and economic circumstances? **None.**

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

Secondary Impacts: **No adverse secondary impacts have been identified.**

Cumulative Impacts: **No adverse cumulative impacts have been identified.**

3. *Describe any mitigation/stipulation measures:*

If the change were authorized according to the Preliminary Determination ordered by the Department, the Applicant would be subject to the following conditions:

1. WATER MEASUREMENT RECORDS REQUIRED

THE APPROPRIATOR SHALL INSTALL A DEPARTMENT APPROVED IN-LINE FLOW METER AT A POINT IN THE DELIVERY LINE APPROVED BY THE DEPARTMENT. WATER MUST NOT BE DIVERTED UNTIL THE REQUIRED MEASURING DEVICE IS IN PLACE AND OPERATING. ON A FORM PROVIDED BY THE DEPARTMENT, THE APPROPRIATOR SHALL KEEP A WRITTEN MONTHLY RECORD OF THE FLOW RATE AND VOLUME OF ALL WATER DIVERTED, INCLUDING THE PERIOD OF TIME. RECORDS SHALL BE SUBMITTED BY NOVEMBER 30 OF EACH YEAR AND UPON REQUEST AT OTHER TIMES DURING THE YEAR. FAILURE TO SUBMIT REPORTS MAY BE CAUSE FOR REVOCATION OF THE CHANGE AUTHORIZATION. THE RECORDS MUST BE SENT TO THE WATER RESOURCES REGIONAL OFFICE LOCATED AT 1424 NINTH AVENUE, PO BOX 201601, HELENA, MT 59620-1601. THE APPROPRIATOR SHALL MAINTAIN THE MEASURING DEVICE SO IT ALWAYS OPERATES PROPERLY AND MEASURES FLOW RATE AND VOLUME ACCURATELY.

2. IMPORTANT INFORMATION – WATER MONITORING

THE APPROPRIATOR SHALL COORDINATE AND MONITOR APPROPRIATIONS OF WATER BETWEEN THE GROUND WATER WELL AUTHORIZED IN THIS ORDER AND THE GROUND WATER WELL PERMITTED IN PROVISIONAL PERMIT NO. 411 30004542. EACH WELL MAY APPROPRIATE A FLOW RATE OF UP TO 350 GALLONS PER MINUTE, BUT THE TWO WELLS MAY NOT APPROPRIATE WATER SIMULTANEOUSLY. THE COMBINED FLOW RATE

BETWEEN THE TWO WELLS SHALL NOT EXCEED 350 GALLONS PER MINUTE. OPERATIONS OF THE TWO WELLS MUST BE RECORDED TO CLEARLY SHOW THE TIME THAT EACH WELL IS OPERATING, AND THE RECORDS SHALL BE SUBMITTED TO THE DEPARTMENT UPON REQUEST. THE APPROPRIATOR SHALL SUBMIT AN OPERATION PLAN TO THE DEPARTMENT PRIOR TO APPROPRIATING WATER, OUTLINING ITS PROPOSED DIVERSION SCHEDULE. THE PLAN MUST BE APPROVED BY THE DEPARTMENT'S WATER RESOURCES REGIONAL OFFICE LOCATED AT 1424 NINTH AVENUE, PO BOX 201601, HELENA, MT 59620-1601 PRIOR TO APPROPRIATING WATER.

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: Deny the application. This alternative would result in none of the benefits of quality water being available for turf irrigation on Helena Capital High or Nothwest Park.

PART III. Conclusion

1. *Preferred Alternative:*

The preferred alternative is the proposed alternative, but only if the Applicant provides the necessary criteria required for issuance of a Change Authorization.

2. *Comments and Responses:*

There have not been any comments and/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:

None of the identified impacts for any of the alternatives are significant as defined in ARM 36.2.524.

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

Name: Douglas Mann

Title: Water Resources Specialist - LRO

Date: 3/10/2011