

**ENVIRONMENTAL ASSESSMENT**  
**For Routine Actions with Limited Environmental Impact**

**Part I. Proposed Action Description**

1. *Applicant/Contact name and address:* Town Pump, Inc.  
600 South Main St.  
Butte, MT 59701
2. *Type of action:* Application for Beneficial Water Use Permit No. 76M-30048273
3. *Water source name:* Groundwater
4. *Location affected by action:* SENESW Sec 21, T14N R20W, Missoula County
5. *Narrative summary of the proposed project, purpose, action to be taken, and benefits:*

Town Pump, Inc. applied for a Beneficial Water Use Permit to appropriate ground water for geothermal heating and cooling purposes at the newly expanded Town Pump Travel Center. DNRC requests a nonconsumptive ground water appropriation at the rate of 145 gallons per minute (GPM) and a volume of 48 acre-feet from January 1 through December 31, inclusive each year. The point of diversion and is located in the SENESW of Section 21, TWP 14N, RGE 20W, Missoula County, and the place of use is located in the SWNWSE of Section 21, TWP 14N, RGE 20W, Missoula County. The Town Pump Travel Center is located at the intersection of Interstate 90 and Hwy 93, which is locally known as the Wye. The appropriation will be pumped from a 488 foot deep extraction well and re-injected into the same aquifer in a 526 foot deep injection well.

DNRC shall issue a water use permit if the applicant meets the criteria in 85-2-311, MCA.

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

Montana Natural Heritage Program	Inventory of Cultural Resources
State Historical Preservation Office	Sensitive Plants and Animals
NRCS Soil Survey of Missoula Co.	Soil information

**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:* N/A the appropriation is for groundwater with no impact to surface water.

**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:* N/A the appropriation is for groundwater with no impact to surface 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:* No impact.

The proposed appropriation is nonconsumptive and all water appropriated will be returned to the same groundwater aquifer. The applicant calculated the zone of influence from pumping the requested flow rate for the full period of appropriation and determined flux (amount of groundwater flowing through the zone of influence in a year) to be 1,185 AF. The applicant proposes to divert 48 AF. for geothermal heating and cooling, which will be returned to the same groundwater aquifer making the appropriation non-consumptive. The zone of influence extends 3,440 feet at its widest dimension. There are three wells other than the applicants located within the zone of influence, however, drawdown estimates in those well shows that there will be no impact from the proposed appropriation. Surface water will not be depleted because the appropriation is non-consumptive.

**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 impact.

The wells were designed by a professional engineering firm and installed by Lindsay Drilling Company, a licensed well drilling company, per Title 37, Chapter 43 MCA and Title 36, Chapter 21 ARM. The proposed non-consumptive use of groundwater will not affect any surface water sources and will not impact any channels, cause any flow modifications, create any barriers or impact riparian areas, dams or other existing or future wells.

## **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 impact.

The Montana Historical Society (MHS) was contacted to determine if there are any threatened or endangered fish, wildlife, plants or aquatic species or any “species of special concern”, that could be impacted by the proposed project. MHS identified the following animal and plant species that are threatened, or have special status, that are located regionally.

Western Skink, a stonefly, bobolink, Gray Wolf, Bald Eagle, Westslope Cutthroat Trout and the Grasshopper Sparrow.

The proposed groundwater appropriation will occur at the intersection of Interstate 90 and Highway 93. The setting is commercial development and rural residential development. The proposed project is an approximately 14,000 square feet addition to the existing Town Pump Travel Center. The area of the addition is currently occupied by an existing building and parking spaces, and does not currently provide quality habitat for the above listed 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:* No impact.

The proposed project does not create or impact any wetlands.

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

*Determination:* No impact.

The proposed project does not create or impact 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:* No impact.

The soils in the vicinity of the project location are identified in the Natural Resources and Conservation Service (NRCS) Soil Survey of Missoula County as Argixerolls-Haploxerolls complex, 0 to 4 percent slopes. No water will come into contact with surface soils as a result of the proposed appropriation, and the proposed use of groundwater will not alter soil quality, stability or moisture content. The soils are not heavy in salts and saline seep will not occur at the project site as a result of the proposed appropriation of groundwater for heating and cooling purpose.

**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 impact.

The proposed project site is located in a developed commercial area surrounded by existing buildings and parking spaces. The project is located on private property and it is ultimately the land owner's responsibility to control the spread or 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.

Deterioration of air quality and/or adverse effects on vegetation due to increased air pollutants is not expected. The water will be diverted using an electric motor, therefore, there will be no emissions, and/or increased noise levels associated with the proposed appropriation of groundwater.

**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 impact.

The State Historic Preservation Office (SHPO) records indicate there have been several previously recorded sites and a few previously conducted cultural resource inventories completed in Section 21, T14N, R20W, Missoula County. SHPO feels that there is low likelihood cultural properties will be impacted and that a cultural resource inventory is unwarranted at this time.

**DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AND ENERGY** - *Assess any other impacts on environmental resources of land, water and energy not already addressed.*

All impacts to land, water, and energy have been identified and no further impacts are anticipated.

*Determination:* No impact.

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

The project is located in an area with no locally adopted environmental plans.

*Determination:* No impact.

**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.*

The proposed project will not inhibit, alter or impair access to the present recreational opportunities in the area. The project is not expected to create any significant pollution, noise, or traffic congestion in the area that may alter the quality of recreational opportunities in the Missoula valley.

*Determination:* No impact.

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

The project does not pose a significant risk to the human health. The Applicant's system is designed as a closed loop system where groundwater is not exposed to the atmosphere or other potential sources of contamination between extraction and re-injection.

*Determination:* No impact.

**PRIVATE PROPERTY** - *Assess whether there are any government regulatory impacts on private property rights.*

Yes \_\_\_ No **XX** *If yes, analyze any alternatives considered that could reduce, minimize, or eliminate the regulation of private property rights.*

*Determination:* No 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? None identified.
- (b) Local and state tax base and tax revenues? None identified.
- (c) Existing land uses? None identified.
- (d) Quantity and distribution of employment? None identified.
- (e) Distribution and density of population and housing? None identified.
- (f) Demands for government services? None identified.
- (g) Industrial and commercial activity? None identified.
- (h) Utilities? None identified.

- (i) Transportation? None identified.
- (j) Safety? None identified.
- (k) Other appropriate social and economic circumstances? None identified.

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

**Secondary Impacts**      None identified.

**Cumulative Impacts**      None identified.

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

No reasonable alternatives were identified in the EA.

**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:**

*PART III. Conclusion*

**1. Preferred Alternative**      None identified.

**2. Comments and Responses**

**3. Finding:**

Yes \_\_\_ No **XX** 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:*

AN EA IS THE APPROPRIATE LEVEL OF ANALYSIS FOR THE PROPOSED ACTION BECAUSE NO SIGNIFICANT IMPACTS WERE IDENTIFIED.

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

*Name:* Jim Nave

*Title:* Water Resource Specialist

*Date:* May 20, 2010