

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:*

Randy R. and Virginia J. Leighton  
PO Box 1402  
Trout Creek, MT 59874

2. *Type of action:* Application for Beneficial Water Use Permit 76N 30067192

3. *Water source name:* Engle Creek

4. *Location affected by project:* The place of use is generally located in Lot 2 of COS 3210MS S2SWSW of Section 23, Township 26N, Range 32W, and Lot 2 COS 3210MS N2NWNW of Section 26, Township 26N, Range 32W, Sanders County, MT.

5. *Narrative summary of the proposed project, purpose, action to be taken, and benefits:*

The Applicant proposes to divert water from Engle Creek, by means of a screened intake and pipeline, from January 1<sup>st</sup> to December 31<sup>st</sup> at 1 CFS up to 723 AF, from a point in Lot 2 COS 3210MS NENWNW of Section 26, Township 26N, Range 32W, Sanders County, MT for Hydroelectric Power Generation use from January 1<sup>st</sup> – December 31<sup>st</sup>. The proposed appropriation is non-consumptive; all water will return to Engle Creek approximately 240 feet downstream of where it is diverted. 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:*  
(include agencies with overlapping jurisdiction)

- U.S. Fish and Wildlife Service and Montana Natural Heritage Program: Endangered, Threatened Species and Species of Special Concern, Wetland Mapper program
- Montana Department of Fish Wildlife & Parks (DFWP); Dewatered Stream Information
- Montana Department of Environmental Quality's (MDEQ) Clean Water Act Information and PWS Drinking Water Watch databases
- U.S. Natural Resource Conservation Service (NRCS); web soil survey
- Montana Historical Society

**Part II. Environmental Review**

**1. Environmental Impact Checklist:**

<b>PHYSICAL ENVIRONMENT</b>
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**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.

Engle Creek is not listed by DFWP as chronically or periodically dewatered. Upon analysis by the Department Engle Creek is found to have water in excess of that requested by the Applicant.

*Determination:* No impact.

**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.

According to the MDEQ Clean Water Act website Engle Creek is not listed as impaired or threatened. The proposed diversion will not reduce the total volume of water in Engle Creek; the Department found that the proposed use will not affect water quality.

*Determination:* No impact.

**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:* N/A, project does not involve groundwater.

**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.

During operation of the power generation facility, water will be diverted from Engle Creek through a 6 inch Coanda-effect screened intake and attached pipe. 10 feet from the intake is a shut off valve. Water will be conveyed via a 6 inch diameter polyvinyl chloride (PVC) pipeline 200 feet at 20-22 feet of head pressure to the Cross-Flow hydro turbine which is a generator rated at 2 kilowatts per hour at 80% efficiency. A BuleWhite SM-RB600 digital flow meter will measure flow coming into the turbine. Electricity generated by the turbine will be transported 350 feet via a wire to an inverter and subsequently to the Applicant's residence and/or 8-10 unit bank of deep cycle batteries. After water passes through the hydro turbine, a 30 foot long 6 inch pipe discharges the water back into Engle Creek. The hydropower generation system was designed using industry standards and specifications. The

Department found that no significant negative impact will occur to existing water users and surface water resources from the proposed project.

*Determination:* No impact.

#### **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."

The Montana Natural Heritage Program website was reviewed to determine if there are any threatened or endangered fish, wildlife, plants or aquatic species or any "species of special concern" in Township 26N, Range 32W that could be impacted by the proposed project.

#### **Plants:**

The Diamond Clarkia (*Clarkia rhomboidea*) and Britton's dry rock moss (*Grimmia brittoniae*) are listed as a sensitive species by the United States Forest Service (USFS). The Yerba Buena (*Satureua douglasii*) is listed S3 by MFWP, meaning their populations are at risk because their numbers are very limited. This area has historically been disturbed, impact to the sensitive plant species has most likely already occurred.

#### **Animals:**

The Bull Trout (*Salvelinus confluentus*) and Grizzly Bear (*Ursus arctos*) are listed as threatened and the Westslope Cutthroat Trout (*Oncorhynchus clarkia lewisi*), Townsend's Big-eared Bat (*Corynorhinus townsendii*), Wolverine (*Gulo gulo*), Peregrine Falcon (*Falco peregrinus*), Harlequin Duck (*Histrionicus histrionicus*), and Fisher (*Martes pennanti*) are listed as sensitive species by the USFS. The Northern Alligator Lizard (*Elgaria coerulea*), Great Blue Heron (*Ardea herodias*), Brown Creeper (*Certhia americana*), Clark's Nutcracker (*Nucifraga columbiana*), Pacific Wren (*Troglodytes pacificus*), Western Skink (*Plestiodon skiltonianus*) are listed S3 to S3B by MFWP meaning their populations are at risk because their numbers are very limited. The Lake Trout (*Salvelinus namaycush*) is listed S2 by MFWP, meaning their populations are at risk because their numbers are extremely limited and/or rapidly declining. The proposed use is non-consumptive. An adequate quantity of water will still exist in Engle Creek to maintain existing populations of both threatened and sensitive species of fish. This parcel of land and adjoining parcels were historically disturbed, any impacts to sensitive mammal species or fish most likely have already occurred. The proposed project will not impact any threatened or endangered fish, wildlife, plants and aquatic species or any species of special concern.

*Determination:* No impact.

***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:* N/A, project does not involve wetlands.

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

*Determination:* N/A, project does not involve 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.

According to soil survey data provided by the NRCS, soil within the place of use consists mostly of gravelly, ashy, silt loam. Soils within the proposed place of use drain quickly and are not susceptible to saline seep. The use of water from Engle Creek will not cause degradation of soil quality and stability.

*Determination:* No impact.

**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.

The riparian area near the intake will be disturbed during installation. The Applicant has acquired all the necessary permits to work in and near Engle Creek. The Applicant will attempt to minimize disturbance and erosion and will utilize best management practices to minimize/stop the spread of noxious weeds.

*Determination:* Minimal Impact.

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

No air pollutants were identified as resulting from the Applicants proposed use.

*Determination:* No impact.

**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.

This project is not located on state or federal land and therefore this section is not applicable.

*Determination:* No impact.

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

This project will produce hydro power, therefore reducing the Applicants dependence on gas generators and/or propane.

*Determination: No impact.*

## **HUMAN ENVIRONMENT**

**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 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. The proposed place of use and diversion do not exist on land designated as wilderness.

*Determination: No impact.*

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

There should be no significant negative impact on human health from this proposed use.

*Determination: No impact.*

**PRIVATE PROPERTY** - *Assess whether there is 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 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:** None

**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 reasonable alternatives were identified in the EA.

**PART III. Conclusion**

**1. Preferred Alternative:** None identified.

**2. Comments and Responses:** None

**4. 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:

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: Melissa Brickl

Title: Hydrologist/Water Resource Specialist

Date: March 13, 2014