

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:

Dry Creek Canal Co.	Andy Brummond, Montana Fish, Wildlife and Parks
PO Box 1185	PO Box 200701
Big Timber MT 59011	Lewiston MT 59457-0938

2. Type of action: Permit to Appropriate Water 43BJ 30063877

3. Water source name: Boulder River

4. Location affected by project: The POD is the headgate for the Dry Creek Canal, which is in the SWNWNE Section 10, T1S, R14E, Sweet Grass County. The place of use is 2,400 ft of the Dry Creek Canal Company's (DCC) ditch and a 125 ft return channel.

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

The applicant proposes to divert water from the Boulder River, via the DCC headgate from November 1st – May 15th for fisheries habitat improvement. This permit will allow trout to reach the upper section of the Dry Creek Canal year round. Historically, the canal was dewatered at the end of the irrigation season. Adult trout would become entrained in the canal and Trout redds would be desiccated; hundreds of fish and thousands of incubating trout eggs were killed. Diverting 10 CFS of water into the DCC November 1st -May 15th will preserve flows so that trout will not become entrained and/or die after the irrigation season. To ensure water is available year round for fish in the DCC, the requested period of diversion overlaps the DCC period of diversion by one day. 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

-Montana Department of Fish Wildlife & Parks (MFWP); Dewatered Stream Information

-Montana Department of Environmental Quality (MDEQ); TMDL 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.*

According to the 2005 Department of Fish, Wildlife and Parks Impaired Stream List the Boulder River 2.5 miles downstream of the proposed point of diversion is chronically or periodically dewatered. Dewatering refers to a reduction in stream flow below the point where stream habitat is adequate for fish. For this project diverted water (10 CFS) will travel down the DCC for approximately 2,400 feet and then return to the Boulder River via a waste gate and return channel that is 125 ft long. The proposed use will not significantly worsen the already dewatered reach of the Boulder River because the diverted water will return to the Boulder River within one hour and the proposed use is 95-96% efficient. The proposed use will increase the volume of water and amount of time that water will flow in the DCC, thus slightly increasing groundwater recharge below the ditch. Baseflow within the bypassed reach of the Boulder River may slightly increase because of the increased groundwater recharge occurring below the canal. The proposed use will not worsen the already dewatered reach of the Boulder.

Determination: No significant 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 Montana Department of Environmental Quality's 303(d) list the Boulder River is impaired five miles upstream of its mouth to the confluence with the Yellowstone River. Heavy metals (Cu, Ch, Pb, Iron, Ni) from mining discharge, nitrogen and phosphorous and algal growth have been documented as being above state water quality standards within the 5 mile reach. The proposed diversion and use of water is upstream of the impaired stream reach. The proposed use is 95-96% efficient and increased flows within the canal will be used to improve fish habitat. No pollutants will be added to the Boulder River. The proposed use will not change the water quality of the Boulder River.

Determination: No significant 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.*

The proposed use will increase the volume of water and amount of time that water will flow in the DCC, thus slightly increasing groundwater recharge below the ditch. Baseflow within the bypassed reach of the Boulder River may slightly increase because of the increased groundwater recharge occurring below the canal. Groundwater supply will not be reduced and quality will not be affected.

Determination: No significant impact.

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.*

Water will be diverted from the Boulder River into the DCC existing headgate and canal. The canal's average width is 20 ft and its depth 0.5 ft. The DCC has a total capacity of 222 CFS. No channel modifications will occur at the point of diversion. Water will flow down the canal approximately 2,400 ft; at which point water will either be returned to the Boulder River via a waste gate and 125 ft return channel or continue flowing down the ditch to meet legal demands. The riparian zone and east bank of the Boulder River will be modified with the creation of the return channel. The return channel is 8 ft wide at the bottom and 17 ft wide on the top and 3-4 ft deep. A reputable engineering company has designed the project and will construct the waste gate and return channel. Flow within the bypassed reach of the Boulder will be modified; 10 CFS will be diverted from the reach. However, within one hour the 10 CFS, minus losses due to evaporation and seepage, will return to the Boulder River. More water will be available to plants along the DCC because of the increased volume and time water is flowing in the canal.

Determination: A moderate impact on vegetation and soils within the riparian area and east bank of the Boulder River from the construction of the return channel.

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."*

According to the US Fish and Wildlife Service and Montana Natural Heritage Program in Township 1S, Range 14E there are no plant, bird, amphibian, fish or invertebrate endangered or threatened species. There is one endangered animal, the grizzly bear. This project will disturb a small portion of riparian habitat along the Boulder River. The noise and commotion associated with the construction and operation of this project are of short duration and will minimally impact the noted endangered species.

Determination: No significant 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.*

Within the first mile from the DCC's headgate freshwater emergent wetlands border the east side of the canal and forest/shrub riparian vegetation border the west side of the canal. Wetlands and riparian vegetation currently exist; however they have not been identified or classified by COE and therefore are not considered functional.

Determination: No impact.

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 well draining Shambo loams. The return channel will cross both Shambo and Meadowcreek-Nesda loams, which drain poorly. Both soils have undetectable levels of salt and will not produce saline seep. Soil will be moved in order to create the return channel; soil in and near the return channel may be unstable for a period of time until the channel is completed. A reputable engineering company developed the specs for the wastegate and return channel and will install both. No pollutants will be added to the water flowing through the canal or soil; soil quality will not be degraded. The moisture content of the soil will remain the same or slightly increase due to increase seepage from the canal Nov 1st thru May 15th.

Determination: No significant 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.*

Soil and vegetation will be disturbed during the construction of the return channel and wastegate. There is a possibility of noxious weeds being spread and establishing themselves within the disturbed site. It is expected that the company installing the wastegate and return channel will take an active role to reduce that risk.

Determination: No significant impact

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

The proposed project will not impact air quality.

Determination: No significant 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.

Determination: NA - project not located on State or Federal Lands

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

There should be no significant impacts on other environmental resources of land, energy, and water from this proposed use.

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.*

This proposed use is not inconsistent with locally adopted environmental plans and goals for Sweetgrass County.

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.*

Determination: Not applicable, the proposed place of use and diversion do not exist on land designated as wilderness.

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

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

Determination: No impact

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: 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? No significant impact
- (b) Local and state tax base and tax revenues? No significant impact
- (c) Existing land uses? No significant impact
- (d) Quantity and distribution of employment? No significant impact
- (e) Distribution and density of population and housing? No significant impact
- (f) Demands for government services? No significant impact
- (g) Industrial and commercial activity? No significant impact
- (h) Utilities? No significant impact
- (i) Transportation? No significant impact
- (j) Safety? No significant impact
- (k) Other appropriate social and economic circumstances? No significant impact

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

Secondary Impacts: No significant impact

Cumulative Impacts: This proposed use of water is expected to have no negative impact on surface water and will not impact the quantity and quality of ground water.

3. *Describe any mitigation/stipulation measures:* No mitigations or stipulations exist for the application.

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:*

This proposed project is reasonable, given the information provided by Montana Fish Wildlife and Parks. The no action alternative will result in additional fish becoming entrained in the DCC, desiccation of redds and fish mortality.

PART III. Conclusion

1. *Preferred Alternative:* To issue the permit and allow this project to continue

2 **Comments and Responses:** None to report

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: No significant environmental impacts were identified. No EIS required.

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

Name: Melissa Brickl

Title: Hydrologist / Specialist

Date: 1.11.2013