Part I. Proposed Action Description

1. Applicant/Contact name and address: Troy C & Joy C Smith
   550 Cedar Hills Road
   Whitehall, MT 59759

2. Type of action: Application to Change an Existing Irrigation Water Right

3. Water source name: Muddy Creek

4. Location affected by project: Section 4, T14S, R10W, Beaverhead County
   Section 33, T13S, R10W, Beaverhead County

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

The Applicant is seeking to change Statement of Claim No. 41A 95584-00, which uses water from Muddy Creek for the purpose of irrigation. The Applicant proposes to change the point of diversion from SESWNW of Section 33, T13S, R10W to SWNWNE of Section 4, T14S, R10W. A concrete fish barrier has already been installed at the point of diversion and is proposed to duly serve as a dam to divert water for this change. Using this new point of diversion would allow the Applicant to achieve the elevation necessary to change the method of irrigation to flood irrigation through contour conveyance ditches.

The Applicant also proposes to change the place of use from NE Section 4, T14S, R10W to the east half of Section 4, T14S, R10W. From the damned reservoir in Muddy Creek, the Applicant proposes to feed the west ditch using a 12-inch pipe installed with a slide gate and measuring weir. The Applicant proposed to irrigate as many acres as possible. As the new method will involve conveyance losses, the Department’s Technical Report found that 23.60 acres is the maximum number of acres that could be irrigated using the west ditch without exceeding historic diverted volume.

The DNRC shall issue a change authorization if an applicant proves the criteria in 85-2-402 MCA are met.
6. Agencies consulted during preparation of the Environmental Assessment:
   (include agencies with overlapping jurisdiction)

   - Montana Department of Environmental Quality (MDEQ)
     - TMDL Information
   - Montana Natural Heritage Program
     - Endangered-Threatened Species
   - Montana Department of Fish Wildlife & Parks
     - Dewatered Stream Information
   - U.S. Fish & Wildlife Service
     - National Wetlands Inventory Mapper
   - United States Department of Agriculture – Natural Resources Conservation Service
     - Web Soil Survey
   - Beaverhead County
     - Growth Policy; ‘Right to Farm and Ranch’ Ordinance
   - Montana Fish, Wildlife & Parks
     - Westslope Cutthroat Trout Conservation Strategy for the Missouri River Headwaters of Southwest Montana

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.

   Muddy Creek has not been identified by Montana FWP as a chronically or periodically dewatered stream. Because proposed use is subject to reductions set by Montana Water Court Case 41A-234, flow rate and consumptive use will not exceed or increase the flow rate historically diverted or the historic volume consumptively used.

   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.

   Muddy Creek is listed as Category 5 in MDEQ’s 303(d) list of Impaired Waters, from the confluence of Sourdough and Wilson Creek to the mouth (Big Sheep Creek).

   The proposed changes in point of diversion and place of use will not result in an increase in the number of acres irrigated. No change in farming land use practices were considered in this application and therefore no impacts to water quality are expected.
**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 project’s source is surface water limited to the volume historically used.

**Determination:** Not applicable.

**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.

The proposed change in point of diversion consists of an already-installed concrete fish barrier that will duly serve as a dam to divert water. The Applicant proposes to feed the west ditch using a 12-inch pipe from the damned reservoir. A slide gate and measuring weir will accompany the 12-inch pipe. The conveyance ditch involved with this change is already in place, so no further excavation impacts will be incurred. Ongoing operation and maintenance of the diversion works will have negligible impacts to the channel and riparian areas.

**Determination:** No significant 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 used to identify threatened or endangered fish, wildlife, plants, or aquatic species, or any Species of Concern within Township 14 South, Range 10 West. Species of Concern within the vicinity of the project area include:

- Hoary Bat (*Lasiurus cinereus*)
- Little Brown Myotis (*Myotis lucifugus*)
- Long-eared Myotis (*Myotis evotis*)
- Pygmy Rabbit (*Brachylagus idahoensis*)
- Wolverine (*Gulo gulo*)
- Brewer’s Sparrow (*Spizella breweri*)
- Cassin’s Finch (*Haemorhous cassinii*)
- Clark’s Nutracker (*Nucifraga columbiana*)
- Golden Eagle (*Aquila chrysaetos*)
- Greater Sage-Grouse (*Centrocercus urophasianus*)
- Green-tailed Towhee (*Pipilo chlorurus*)
- Log-billed Curlew (*Numenius americanus*)
- Sage Thrasher (*Oreoscoptes montanus*)
• Westslope Cutthroat Trout (*Oncorhynchus clarkii lewisii*)
• Agastache cusickii (*Cusick's Horsemint*)
• Carex idaho (Idaho Sedge)
• Eriogonum soliceps (*Railroad Canyon Wild Buckwheat*)
• Kobresia simplciouscula (*Simple Kobresia*)
• Pedicularis contorta var. ctenophora (*Pink Coil-beaked Lousewort*)
• Phacelia incana (*Hoary Phacelia*)
• Primula alcalina (*Alkali Primrose*)
• Primula incana (*Mealy Primrose*)
• Thalictrum alpinum (*Alpine Meadowrue*)
• Sphagnum centrale (*A Peat moss*)
• Sphagnum fimbriatum (*Fringed Bogmoss*)
• Rhizoplaca haydenii (*Hayden's Rimmed Navel Lichen*)

Prior to August of 2018, the Applicant installed the fish barrier by replacing their existing irrigation headgate, protecting westslope cutthroat trout in Muddy Creek. Per the ‘Westslope Cutthroat Trout Conservation Strategy for the Missouri River Headwaters of Southwest Montana’ report prepared by Montana Fish, Wildlife & Parks with partners from other agencies (issued January 7, 2022), updated demographic surveys and genetic testing are needed to develop a conservation plan for this population.

The proposed project will not require a significant disturbance to riparian or upland habitats as a result of the change in point of diversion or place of use. Species of Concern listed above may not rely directly on habitats found at the project location. The project is in a Core Area for sage grouse and was reviewed by the Montana Sage Grouse Habitat Conservation Program; a letter from the program is in the water right change application file.

**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.

The US Fish and Wildlife Service Online Wetland Mapper identifies the Muddy Creek channel as Freshwater Emergent Wetland with Riverine Wetland near drainages along the west and east slopes. No impacts to wetlands are expected as a result of this change.

**Determination**: No significant impact.

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

**Determination**: Not applicable – the 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.
The USDA Web Soil Survey identifies the primary soil type for the project place of use as Bellcanyon, Nikat, and similar soils, well-drained gravelly loams that are nonsaline to very slightly saline. Return flows will be unaffected by this change. It is not anticipated that there will be degradation to the soil nor development of a saline seep caused by development of this project.

_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.

The diversion installation has already been completed prior to this application, so any impacts to existing vegetative cover likely will have already occurred. No additional land use development will occur as a result of this change; existing agricultural land use will continue. It is not anticipated that authorization of a water right change will contribute to the establishment or spread of noxious weeds in the project area. Noxious weed prevention and control will be the responsibility of the landowners.

_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.

There will be no impact to air quality associated with authorization of the proposed water right change.

_Determination_: Not applicable.

**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_: Not Applicable – this project is 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.

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

_Determination_: No significant 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 proposed project is consistent with the Beaverhead County Growth Policy (revised and adopted June 20, 2005), as well as with Beaverhead County’s ‘Right to Farm and Ranch’ ordinance (adopted July 19, 2004).

*Determination:* No significant 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 project area is located on private property and will not affect access to recreational activities or the quality of recreational and wilderness activities.

*Determination:* No significant impact.

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

The proposed changes will not impact human health.

*Determination:* No significant 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 known impacts.

**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? None.

(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 secondary impacts have been identified.

Cumulative Impacts: No cumulative impacts have been identified.

3. Describe any mitigation/stipulation measures:

The Applicant would be required to cease diverting water if a call is made by a senior water user. The Department will place a measurement condition on this change authorization, requiring the Applicant to install an in-line flow meter and submit records to the Department. No additional mitigation or stipulation measures have been identified.

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:

The proposed alternative is reasonable and is within accepted practices for irrigation. The only other alternative to this proposed action would be the no action alternative. The no action alternative would mean not authorizing this change in point of diversion and place of use.

PART III. Conclusion

1. Preferred Alternative: The preferred alternative is to grant the change application if the Applicant can prove that the criteria in §85-2-402, MCA, are met.

2 Comments and Responses: None.

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 is significant as defined in ARM 36.2.524. Therefore, the EA is the appropriate level of analysis and an EIS is not necessary.

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

Name: Mallory Scharf
Title: Water Resource Specialist
Date: 2/28/22