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*: Kurt Tedhams Trust, Box 1299, Thompson Falls MT 59873

2. Type of action: Application to Change an Existing Irrigation Water Right 76N 30066124

3. Water source name: Mosquito Creek

4. Location affected by project: NW¼SE¼, NE¼SE¼, SW¼SE¼, SE¼SE¼ of Section 14 and NE¼ of Section 23 all in Township 22N, Range 30W, Sanders County approximately 5.5 miles northwest of Thompson Falls and adjacent to the Clark Fork River on the east.

5. Narrative summary of the proposed project, purpose, action to be taken, and benefits: The DNRC shall issue a change authorization if an applicant proves the criteria in 85-2-402 MCA are met.

   Applicant proposes to add two ponds as storage and secondary diversions for a sprinkler irrigation system for irrigation on 107.31 acres in the NW¼SE¼, NE¼SE¼, SW¼SE¼, SE¼SE¼ of Section 14 and NE¼ of Section 23 all in Township 22N, Range 30W, Sanders County from Statement of Claim 76N 105405. Pond #1 will have a surface area of 0.08 acres and capacity of 0.16 AF and Pond #2 will have a surface area of 1.75 acres and a capacity of 7 AF. Irrigation diversion from the ponds will be reduced to a maximum volume of 155.14 AF. Conveyance to Applicant's place of use has not changed. Source of water will still be Mosquito Creek, which is located to the west of the place of use. Place of use is approximately 5.5 miles northwest of Thompson Falls and adjacent to the Clark Fork River on the east.

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

   Natural Resources and Conservation Service soil maps
   Montana Department of Environmental Quality
   United States Fish and Wildlife Wetland Mapper
   Montana Natural Heritage Program
   Department of Fish, Wildlife and Parks

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: Source of supply for this application is Mosquito Creek, which is a tributary to the Clark Fork River. Mosquito Creek is not listed as a chronically or periodically dewatered stream by DFWP. Mosquito Creek is a tributary to the Clark Fork River. This stretch of the Clark Fork is not list by DFWP as being chronically or periodically dewatered. No impact from this diversion.

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: Source of supply for this application is Mosquito Creek, which is tributary to the Clark Fork River. Mosquito Creek is not listed water quality impaired or threatened by DEQ. The Clark Fork River between the Flathead River to Thompson Falls was assessed for impairment to aquatic life per DEQ metals assessment methods. Total Dissolved Gas was added as a cause of impairment, but it was determined that the production of this gas is primarily from the Thompson Falls Dam and a natural falls. No impact from this diversion.

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.

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: The present headgate is the historic concrete headgate measuring 24.6 feet across Mosquito Creek with two 4-foot by 2.15-foot outlets allowing flow through of the creek. The Tedhmas – Matthews weir is located to the side and measures 2-feet by 2-feet and is capable of discharging a flow up to 8 CFS. Conveyance of water down the 2,097-foot ditch from the headgate to the splitter box on Tedhams property has not changed. Conveyance capacity of water in the historic/current maintained ditch using the software Flowmaster calculates to 1,060 gpm at peak flow using a width of 2.56 feet and a height of 1.35 feet and a total ditch length of 2,097 feet. Once water arrives at the splitter box, Matthews' water traveling north goes through a 4-inch PVC pipe while Tedhams water travels south. The splitter box consists of a concrete box with a +/-18-inch CMP pipe inlet under the railroad from Mosquito Creek on the west side. Flow diversions to Matthews and Tedhams are controlled with bricks and orifice plates. Mr.

Matthews places bricks in from of his 4-inch PVC pipe and checks his flow to his property with a bucket and stop watch to make adjustments as needed. Mr. Tedhams has an orifice plate in front of his 12-inch pipe with a 4-inch hole in it to provide an even flow. Tedhams' water flowing south from the splitter box is now going through a 12-inch PVC main 170 feet to the first storage pond. Mannings equation calculates a maximum discharge of 932 GPM through this pipe. Pond #1 with a surface area of 0.08 acres and a maximum depth of 4 feet has a calculated capacity of 0.16 AF. An excavated ditch approximately 524 feet long, a wetted perimeter of 3.91 feet and a top width of 3.21 feet carries water from pond #1 to pond #2. Manning's equation calculates a maximum discharge of 972 GPM within this ditch. Pond #2 with a surface area of 1.75 acres and a maximum depth of 8 feet has a calculated capacity of 7 AF. The pump from Pond #2 to be used for sprinkler irrigation is a Mercedes-Benz OM161 engine and a Berkely B3ZRM centrifugal pump running at a maximum of 2,250 rpm with a peak output of 396 GPM at a 142 foot total dynamic head. The pump feeds to a 6-inch underground irrigation main that runs north and south on the property with risers to deliver water to the hand lines. These sprinkler lines consist of 40 foot sections of pipe with a sprinkler on the end of each section. At any one time, there is one mile of sprinkler line useable with a maximum of 132 sprinkler heads capable of an output of 3 GPM each or 396 GPM total.

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: The Montana Natural Heritage Program 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. They identified the following animal and plant species that are threatened, or have special status, that are located regionally: Wolverine, Little Brown Myotis, Fisher, Grizzly Bear, Great Blue Herron, Evening Grosbeak, Bobolink, Pileated Woodpecker, Peregrine Falcon, Cassin's Finch, Harlequin Duck, Northern Alligator Lizard, Westslope Cutthroat Trout, Bull Trout, North Idaho Monkeyflower and Clustered Lady's-slipper. These species are found throughout this region and not necessarily at this particular spot. No immediate 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: No wetlands. No impact.

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

Determination: These ponds have been in existence for 40 years. Owner is just now getting the property water rights for said ponds. No impact.

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: The majority of soils in this area are Lionwood Ashy Loam and are well drained with a moderately high capacity to transmit water. 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.*

Determination: Land has been, is and will continue to be productive farmland. No impact.

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

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.*

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.*

Determination: None

HUMAN ENVIRONMENT

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

Determination: No change. 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: No change, No impact.

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

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?* No impact.

(*b)* *Local and state tax base and tax revenues?* No change.

(c) *Existing land uses?* No change; no impact.

(*d)* *Quantity and distribution of employment?* No impact.

(e) *Distribution and density of population and housing?* No impact.

(f) *Demands for government services?* No impact.

(g) *Industrial and commercial activity?* No impact.

(h) *Utilities?* No impact.

(i) *Transportation?* No impact.

(j) *Safety?* No impact.

(k) *Other appropriate social and economic circumstances?* No impact.

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

Secondary Impacts None

Cumulative Impacts None

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:* Project should be completed as proposed.

PART III. Conclusion

1. Preferred Alternative

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: Elements for this change have been in place for years.

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

Name: Kathy Olsen
Title: Kalispell Deputy Regional Manager
Date: August 13, 2015