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# Montana Environmental Policy Act Environmental Assessment

# Flint Creek State Water Project

# Main Canal Improvements

# Granite County, MT

**Prepared By:**

**Department of Natural Resources and Conservation**

**Water Resources Division**

**State Water Projects Bureau**

**Helena, MT**

**November 2022**

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# Main Canal Improvements

# Granite County, MT

## PART I. TYPE AND PURPOSE OF PROPOSED ACTION

### A. Purpose and Need for Proposed State Action:

The Proposed Action involves canal lining improvements to address canal seepage and canal rehabilitation to improve conveyance efficiency on the Flint Creek Main Canal. The Flint Creek Main Canal, located in Granite County southwest of Philipsburg, Montana, was constructed in 1938. The main canal is part of the Flint Creek State Water Project owned by the Montana Department of Natural Resources & Conservation (DNRC) and administered by the State Water Projects Bureau (SWPB) within the Water Resources Division. The Flint Creek Project is operated and maintained through contract with the Flint Creek Water Users Association (FCWUA).

The goal of the Proposed Action is to reduce seepage and improve the hydraulic characteristics of the canal, providing resource benefits both upstream and downstream of the project. Upstream of the project, reducing seepage will allow East Fork reservoir to be maintained at a higher level for longer periods of time. This will reduce the amount of water taken out of East Fork of Rock Creek and benefit fish and wildlife, and the associated recreation opportunities in the Rock Creek watershed. Downstream of the project, reducing seepage will keep more water in the canal, allowing the water to be put to beneficial use for agriculture. The additional water in the canal will also benefit fish, wildlife, and the associated recreational opportunities in the Flint Creek watershed.

A secondary goal of the proposed action is to protect a recently installed East Fork siphon. The highly pervious reach of canal proposed to be lined is directly above the siphon. Seepage from the canal has potential to migrate down through the siphon pipe bedding, potentially undermining or floating the siphon.

A main canal seepage study, completed by the State Water Projects Bureau from 2010 to 2011, indicated the canal, immediately upstream of the siphon inlet was losing 15 to 30 acre feet per day. In past efforts, the SWPB and FCWUA have used bentonite clay to reduce seepage, with marginal success. Another canal section has been identified for rehabilitation immediately upstream of the Trout Creek drop. This vertical profile in this section of the canal has deteriorated over time creating an inconsistent slope in the canal and areas of ponding. Numerous trees, stumps, and vegetation line the banks of the canal hindering flow, reducing water conveyance. These conditions negatively affect water conveyance, increasing potential for seepage.

The project includes rehabilitation improvements to two segments of the Flint Creek Main Canal to address seepage, hydraulic capacity, conveyance, and improve maintenance access routes. ARPA funds will be directed toward the construction component of the project.

Segment 1 will consist of installation of approximately 1,200 feet of canal liner. This will address the current seepage issues along this segment of the canal by conserving irrigation water, reducing the potential for canal berm failure, and protecting a recently installed siphon located immediately downstream.

Segment 2 will consist of rehabilitating approximately 3,850-foot canal segment directly upstream of the Trout Creek drop. This canal segment is overgrown with trees and vegetation, hinders canal conveyance and reduces the capacity in the canal. Over time the channel geometry has also deteriorated leaving areas with inconsistent channel width, channel slope and areas of ponding. Recontouring the canal geometry, widening the canal bank, minor improvement to canal structures, and removing unwanted vegetation will increase the hydraulic capacity of the canal and improve access for canal maintenance.

The proposed project is located Northeast of East Fork Reservoir in Township 5N, Range 15W, Sections 24 and 36 and Township 5N, Range 14W, Section 19. The project location and vicinity map are provided as Figure 1.

The purpose of this Environmental Assessment is to consider the effects of the proposed action in accordance with the requirements of the Montana Environmental Policy Act (MEPA).

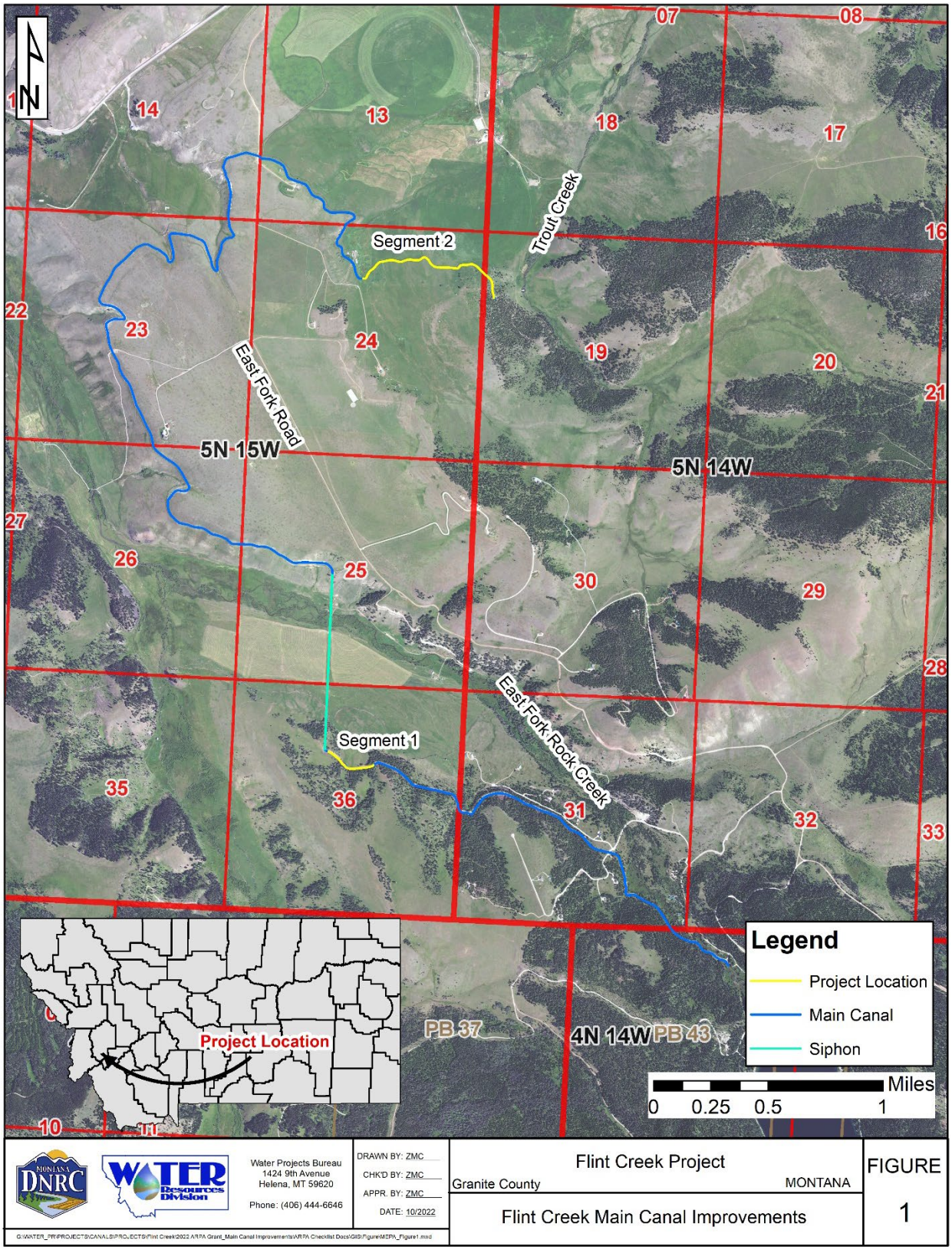


**Figure 1 - Project Location and Vicinity Map**

### B. Name of Project:

Flint Creek Main Canal Improvements

### C. Project Applicant:

Project Owner Applicant:
Montana DNRC, State Water Projects Bureau
1424 9th Avenue
Helena, MT 59620-1601

Project Funding Applicant:
Rex Radtke, President
Flint Creek Water Users Association
56 Radtke Ranch Lane
Hall, MT 59837

### D. Project Landowner:

Montana DNRC - State School Trust Lands
1539 11th Ave.
Helena, MT 59620-1601
406-444-5499

Vintage Valley LLC
2300 Charlotte Ave., Suite 103
Nashville, TN 37203-1877

George & Tammy Munis
Philipsburg, MT 59858

Right-of Way Easement Deeds for irrigation canal held by Montana DNRC, State Water Projects Bureau
1424 9th Ave.
Helena, MT 59620-1601

### E. Anticipated Schedule:

| | |
|---|---|
| Estimated Comment Period: | November 2022 |
| Estimated Decision Notice: | December 2022 |
| Estimated Construction: | October-December 2023 |
| Estimated Completion Date: | December 2023 |

### F. Location:

The proposed project is located northwest of East Fork Reservoir in Township 5N, Range 15W, Sections 24 and 36 and Township 5N, Range 14W, Section 19. The project location and vicinity map are provided as Figure 1.

### G. Project Size:

*Estimate the number of acres that would be directly affected that are currently:*

| LAND USE | |
|---|---|
| a. Developed: | |
| Residential | 0 |
| Industrial | 0 |
| b. Open Space/Woodlands/Recreation | <0 |
| c. Wetland/Riparian | <0 |
| d. Floodplain | 0 |
| e. Productive | |
| Irrigate Cropland | <0 |
| Dry Cropland | 0 |
| Forestry | 0 |
| Rangeland | <2 |
| Other | 0 |

### H. Local, State or Federal Agencies with Overlapping or Additional Jurisdiction:

#### a. Permits:

The majority of the project will not require permitting, as construction will take place in existing irrigation canal prisms when irrigation conveyance is not occurring. Canal structure improvements may require permitting next to ephemeral or perennial stream systems.

| Agency Name | Permits |
|---|---|
| U.S. Army Corps of Engineers | Clean Water Act Section 404 |
| Montana Fish, Wildlife, and Parks | SPA 124 Permit |
| Montana Department of Environmental Quality | 401 Certification<br>318 (turbidity) Authorization |

#### b. Other Overlapping or Additional Jurisdictional Responsibilities:

| Agency Name | Type of Responsibility |
|---|---|
| Montana Natural Heritage Program | Species of Concern |
| State Historic Preservation Office | Cultural Clearance |

### I. Description and Analysis of Reasonable Alternatives:

Two alternatives are considered for the proposed Flint Creek Main Canal Improvements project:

**Alternative A:** This alternative is the Proposed Alternative (i.e., Proposed Action). Two independent segments of canal improvements are considered under the Proposed Action. Segment 1 will consist of installation of approximately 1,200 feet of liner which will address the current seepage issues along this segment of the canal by conserving irrigation water, reducing the potential for canal berm failure, and protecting a recently installed siphon located immediately downstream. The extents of segment 1 are shown in Figure 2.

Segment 2 will be approximately 3,850-foot canal segment directly upstream of the Trout Creek drop. This canal segment, which is overgrown with trees and vegetation, hinders canal conveyance and reduces the capacity in the canal. Over time, the channel geometry has also deteriorated leaving areas with inconsistent channel width, channel slope and areas of ponding. Recontouring the canal geometry, widening the canal bank, minor improvements to canal structures (rehabilitating spalling/deteriorated concrete), and removing unwanted vegetation will increase the capacity of the canal and improve access for canal maintenance. The extents of segment 2 of the project are shown in Figure 3.

**Alternative B:** This alternative is the No-action alternative. Under the No-action Alternative canal lining, canal recontouring, and concrete rehabilitation would not occur, and uncontrolled canal seepage loses would continue.

**Other Alternatives Considered:** No other alternatives were analyzed.

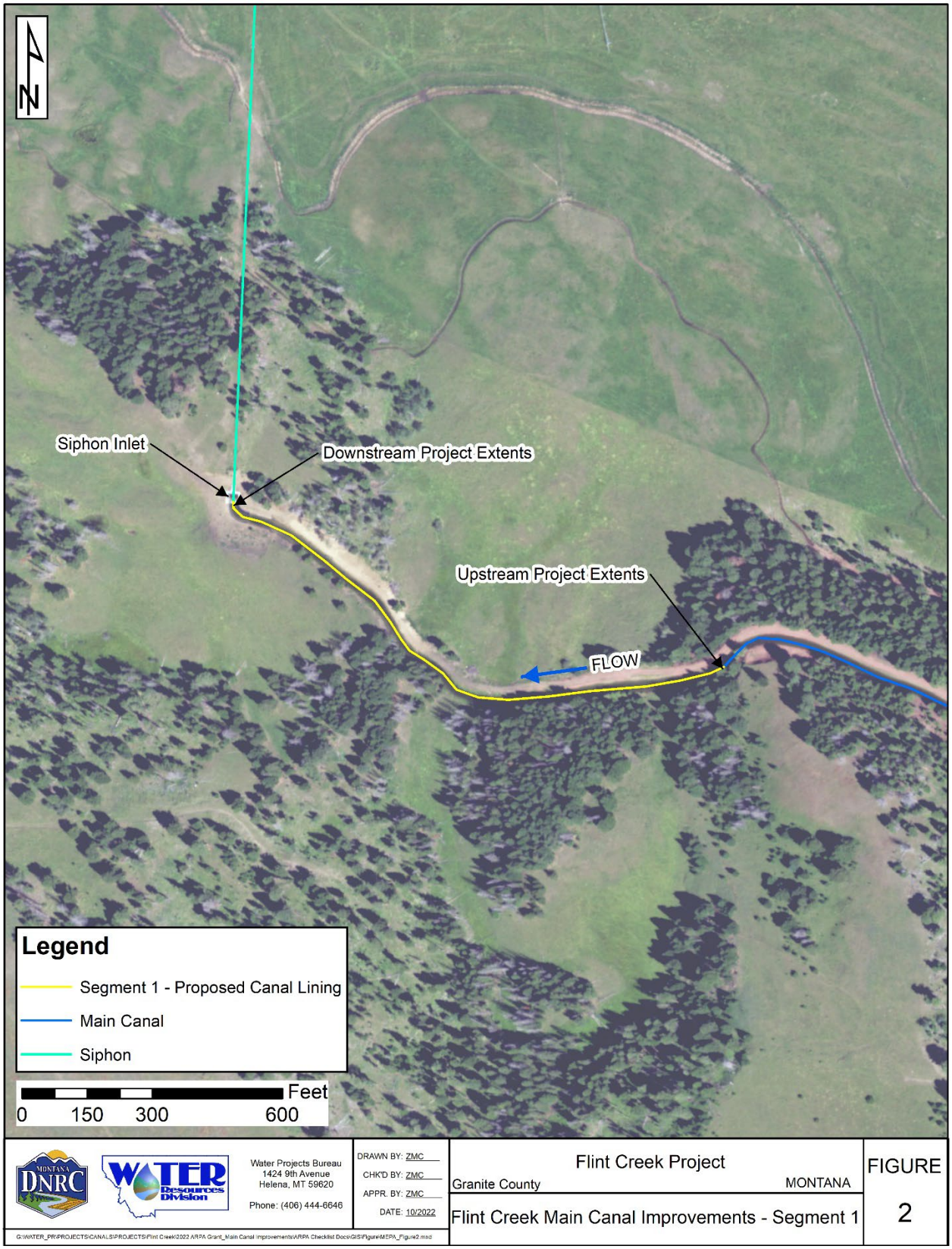


**Figure 2 – Segment 1 Project Location**

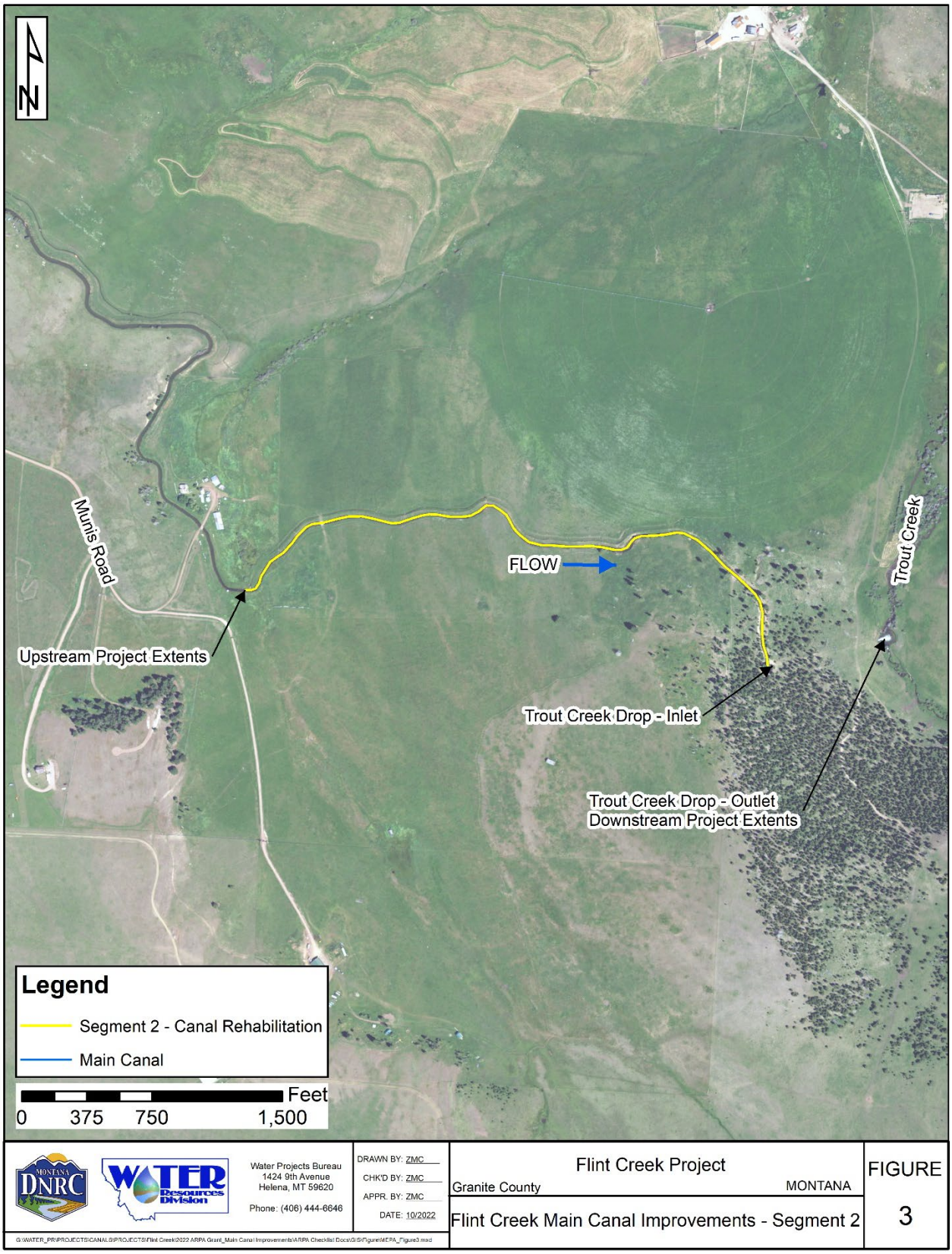


**Figure 3 – Segment 2 Project Location**

## J. Narrative Summary of the Proposed Action:

The Proposed Action involves canal lining improvements and canal rehabilitation to address canal seepage and improved canal conveyance on the Flint Creek Main Canal. The proposed project has involved coordination with the Flint Creek Water Users Association to identify areas in need of maintenance and/or rehabilitation. The proposed canal rehabilitation includes the following:

- Segment 1 includes recontouring and lining approximately 1,200 feet of the Flint Creek Main Canal immediately upstream of the siphon inlet. Recontouring includes clearing and grubbing of vegetation in the canal, shaping the canal to the typical geometric shape as shown in Figure 4 and widening the maintenance access route. A geosynthetic composite membrane canal liner will be utilized to minimize seepage loss. The canal liner will be anchored into the canal berm on each side as well as the upstream and downstream terminus. Ballast rock will be added along the canal invert to stabilize and anchor the liner against buoyancy forces.
- Segment 2 includes rehabilitating approximately 3,850 feet of the Flint Creek Main Canal immediately upstream of the Trout Creek drop structure. The rehabilitation includes removal of trees, stumps, vegetation and re-construction of the canal geometric section. The re-construction will include reinforcement of the bank section by repairing eroded areas, re-shaping the canal, adjustment to the bottom profile to provide a consistent grade, and construction of a wider canal bank to allow for access for future cleaning and maintenance. See Figure 4 for the typical geometric canal section.

Photos 1 and 2 provide representative views of the existing conditions in the proposed segment 1 project area. Photos 3 and 4 provide representative views of the existing conditions in the proposed segment 2 project area.

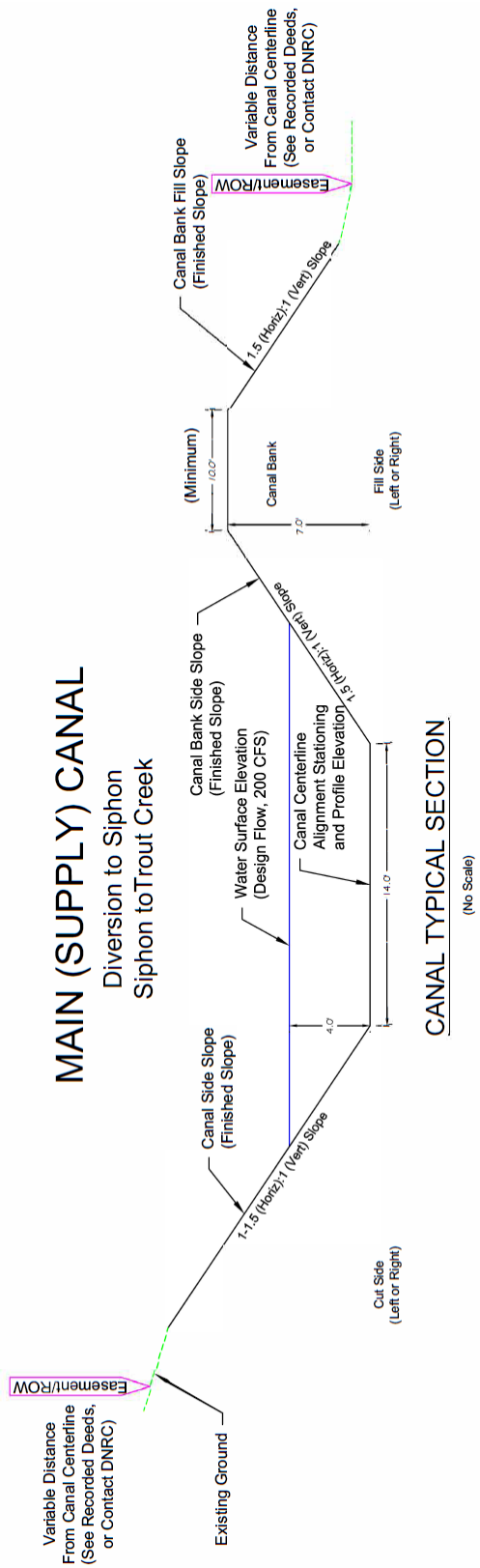


**Figure 4 - Typical Canal Section**

**Photo 1 – Looking to the Southeast from the Downstream Extents of Segment 1**

**Photo 2 – Looking to the South from Upstream Extents of Segment 1**

**Photo 3 – Looking to the East from Downstream Extents of Segment 2**

**Photo 4 – Looking to the Northeast from Upstream Extents of Segment 2**

## K. Evaluation and Listing of Mitigation, Stipulation, or Other Control Measures Enforceable by the Agency or Another Government Agency:

The project will employ Best Management Practices, which are designed to reduce or eliminate environmental effects, and namely sediment transport to waterways, during construction. DNRC SWPB would develop the final design and specifications for the Proposed Action to include these requirements. All county, state, and federal permits listed in Section H above may be obtained by DNRC as required. A private contractor selected through the State's Public contracting processes would complete the construction.

# PART II. ENVIRONMENTAL REVIEW CHECKLIST

***Evaluation of the impacts of the Proposed Action including secondary and cumulative impacts on the Physical and Human Environment.***

## A. PHYSICAL ENVIRONMENT

### 1. Land Resources

| 1. LAND RESOURCES<br><br>Will the proposed action result in: | IMPACT | | | | | |
|---|---|---|---|---|---|---|
| | Unknown | None | Minor | Potentially Significant | Can Impact Be Mitigated | Comment Index |
| a) Soil instability or changes in geologic substructure? | | | X | | | 1a. |
| b) Disruption, displacement, erosion, compaction, moisture loss, or over-covering of soil, which would reduce productivity or fertility? | | | X | | | 1b. |
| c) Destruction, covering or modification of any unique geologic or physical features? | | X | | | | |
| d) Changes in siltation, deposition or erosion patterns that may modify the channel of a river or stream or the bed or shore of a lake? | | X | | | | |
| e) Exposure of people or property to earthquakes, landslides, ground failure, or other natural hazard? | | X | | | | |

1a. The segment 1 project area (non-water) is comprised primarily of Worock gravelly loam, cool (15 to 35 percent slopes). The Natural Resources Conservation Service (NRCS) describes the soil type as well drained and derived from weathered igneous rock. This soil type does not have a hydric rating and is classified as Not Prime Farmland (NRCS 2022).

The segment 2 project area (non-water) is comprised primarily of Julius loam (4 to 8 percent slopes). The NRCS describes the soil type as well drained and derived from weathered tuff. This soil type does not have a hydric rating and is classified as Farmland of statewide importance.

Construction of the project would result in short-term soil instability in areas where excavation occurs. These areas would be restored following completion of the project.

1b. Temporary, short-term adverse effects are anticipated due to the increased potential for erosion during construction caused by heavy equipment working along the canal. These potential adverse effects would be limited to the time needed to construct the project and until soils are stabilized. Standard Best Management Practices would be implemented to mitigate the short-term construction impacts. Also, this project will be constructed during the fall when irrigation season has been completed and the canal has been shut down for the season.

## 2. Air

| 2. AIR<br><br>Will the proposed action result in: | IMPACT | | | | | |
|---|---|---|---|---|---|---|
| | Unknown | None | Minor | Potentially Significant | Can Impact Be Mitigated | Comment Index |
| a) Emission of air pollutants or deterioration of ambient air quality? | | | X | | | 2a. |
| b) Alteration of air movement, moisture, or temperature patterns or any change in climate, either locally or regionally? | | X | | | | |
| c) Adverse effects on vegetation, including crops, due to increased emissions of pollutants? | | X | | | | |

The project area is in an area that is in full attainment of National Ambient Air Quality Standards (NAAQS). The project area is not influenced by any special air quality regulations.

2a. Implementation of the Proposed Action would result in minor and short-term increase of emissions from operation of construction equipment. There would be a temporary increase in diesel exhaust from equipment used during construction. Dust may be temporarily generated during construction of the Proposed Action. Best Management Practices would be followed during all phases of construction to minimize emission risks and reduce dust. These impacts are anticipated to occur over a relatively short timeframe during construction and have no long-term adverse effect on the local or regional air quality. Minimal area of disturbance is anticipated and, therefore, issues due to fugitive dust and/or airborne particulates are expected to be negligible during construction.

## 3. Water

| 3. WATER<br><br>Will the proposed action result in: | IMPACT | | | | | |
|---|---|---|---|---|---|---|
| | Unknown | None | Minor | Potentially Significant | Can Impact Be Mitigated | Comment Index |
| a) Discharge into surface water or any alteration of surface water quality including but not limited to temperature, dissolved oxygen or turbidity? | | X | | | | |
| b) Changes in drainage patterns or the rate and amount of surface runoff? | | X | | | | |
| c) Alteration of the course or magnitude of floodwater or other flows? | | X | | | | |
| d) Changes in the amount of surface water in any water body or creation of a new water body? | | X | | | | 3d. |
| e) Exposure of people or property to water related hazards such as flooding? | | X | | | | |
| f) Changes in the quality of groundwater? | | X | | | | |
| g) Changes in the quantity of groundwater? | | X | | | | |
| h) Increase in risk of contamination of surface or groundwater? | | | X | | | 3h. |
| i) Effects on any existing water right or reservation? | | X | | | | |
| j) Effects on other water users as a result of any alteration in surface or groundwater quality? | | X | | | | |
| k) Effects on other users as a result of any alteration in surface or groundwater quantity? | | X | | | | |
| l) Will the project affect a designated floodplain? | | X | | | | |
| m) Will the project result in any discharge that will affect federal or state water quality regulations? | | X | | | | |

Segment 1 of the project is located within East Fork Rock Creek watershed (hydrologic unit code [HUC10] 1701020207). Segment 2 of the project is located within Upper Flint Creek watershed (HUC10 1701020201). Both segments of the project are located within the Flint-Rock subbasin (HUC8 17010202). The Flint-Rock subbasin has a drainage area of approximately 1,820 square miles.

The project is located on the Flint Creek Main Canal at the upper extents of the East Fork Rock Creek water quality assessment unit. The section of the East Fork Rock Creek adjacent Flint Creek Main Canal diversion is listed as impaired on the State of Montana 303(d) list of impaired waterbodies. The assessment unit documented the East Fork Rock Creek as not fully supporting the beneficial uses of aquatic life and primary contact recreation. Drinking water and agricultural beneficial uses were not assessed (DEQ 2022).

A Total Maximum Daily Loads and Water Quality Improvement Plan was published in September 2013 for the Rock Creek watershed (DEQ 2013). This report designates the East Fork Rock Creek as having impairments from sedimentation/siltation, water temperature, total phosphorous, total nitrogen, nitrate/nitrite, alterations in streamside vegetative cover, low flow alterations, and chlorophyll-α (DEQ 2013).

3d. The project will reduce the amount of water taken out of East Fork of Rock Creek and benefit fish and wildlife, and the associated recreation opportunities in the Rock Creek watershed. Downstream of the project, reducing seepage will keep more water in the canal, allowing the water to be put to beneficial use for agriculture. The additional water in the canal will also benefit fish, wildlife, and the associated recreational opportunities in the Flint Creek watershed.

3h. The use of heavy equipment during construction may result in a slight risk of contamination from petroleum products and a temporary increase in sediment delivery to Trout Creek. Permit requirements and Best Management Practices will be followed during all phases of construction to minimize these risks.

## 4. Vegetation

| 4. VEGETATION<br><br>Will the proposed action result in: | IMPACT | | | | | |
|---|---|---|---|---|---|---|
| | Unknown | None | Minor | Potentially Significant | Can Impact Be Mitigated | Comment Index |
| a) Changes in the diversity, productivity or abundance of plant species (including trees, shrubs, grass, crops, and aquatic plants)? | | X | | | | 4a. |
| b) Alteration of a plant community? | | X | | | | |
| c) Adverse effects on any unique, rare, threatened, or endangered species? | | X | | | | 4c. |
| d) Reduction in acreage or productivity of any agricultural land? | | X | | | | |
| e) Establishment or spread of noxious weeds? | | | X | | | 4e. |
| f) An effect on wetlands, or prime and unique farmland? | | | X | | | 4f. |

The general land cover type for project is predominantly classified as Rocky Mountain Lower Montane, Foothills, and Valley Grassland, which is typified by perennial bunch grasses and forbs and sparse shrub cover. Other less prominent land cover types include Cultivated Crops, Rocky Mountain Lodgepole Pine Forest, Northern Rocky Mountain Lower Montane Riparian Woodland & Shrub, and Rocky Mountain Subalpine-Upper Montane Grassland.

4a. The Proposed Action would have no impact on the plant diversity, productivity, or abundance. Impacts to existing vegetation would be negligible under the Proposed Action. A minor impact on vegetation that fringe the canal would occur during construction. The construction area footprint would be minimized to avoid impacting existing vegetation to the extent possible.

4c. According to the Montana Natural Heritage Program (MTNHP), the following thirty-nine plant Species of Concern that may occur in the project vicinity include Adoxa Moschatellina, Carex Crawei, Draba Densifolia, Oxytropis Lagopus, Botrychium Paradoxum, Botrychium Simplex, Delphinium Glaucescens, Gentianopsis Simplex, Ranunculus Hyperboreus, Stipa Lettermanii, Ultricularia Intermedia, Agoseris Aurantiaca Var Carnea, Bottychium Ascendens, Botrychium Crenulatum, Botrychium Pedunculosum, Cypripedium Parviflrum, Elodea Bifoliata, Erigeron Linearis, Mimulus Suksdorfili, Physaria Carinata, Primula Incana, Stellaria Crassifolia, Thalictrum Alpinum, Meesia Triquetra, Botrychium Lanceolatum, Botrychium Pinnatum, Carex Stenoptila, Drosera Rotundifolia, Eleocharis Rostellata, Kobresia Simpliciuscula, Micranthes

Apetala, Orobanche Corymbosa, Pinus Albicaulis, Polygonum Austiniae, Ranunculus Pedatifidus, Rubus Arcticus, Trichophorum Cespitosum, Botrychium Hesperium, Isoetes Echinospora (MTNHP 2022a). Due to on-going vegetation management occurring in the canal, none of these sensitive plant species is expected to occur in the immediate project area and no impact on these species is anticipated. The MTNHP report is provided as Appendix B.

The U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) tool was used to identify threatened or endangered species with potential to occur in the project vicinity. According to the IPaC query, the Whitebark Pine has potential to occur in the project vicinity (USFWS 2022). The MTNHP Natural Heritage Map Viewer Generalized Observations database was reviewed to identify any documented observations of Whitebark Pine in the immediate project area. Per the MTNHP database, Whitebark Pine has not been documented in the project area (MTNHP 2022b). No impact to Whitebark Pine is expected to occur. The IPaC report is provide as Appendix C.

4e. Soils disturbed during construction have potential to colonize with noxious weeds. To mitigate this risk, disturbed areas would be reseeded with a native reclamation seed mix where necessary to reduce the establishment of weeds. The contractor will be required to bring in clean equipment to the project site.

4f. A wetlands investigation was completed using the U.S Fish and Wildlife Services National Wetlands Inventory Mapper. The inventory report indicates there is a Palustrine Emergent wetland adjacent to segment 1 of the Flint Creek Main Canal Improvements, see Figure 5. The investigation did not indicate there was any wetlands in or near segment 2 of the project. The project will minimize impacts to any wetlands in the area and will be limited to the canal and berm.

Segment 1 of the project protects critical farmland directly adjacent to the canal, which has a history of oversaturated soil.

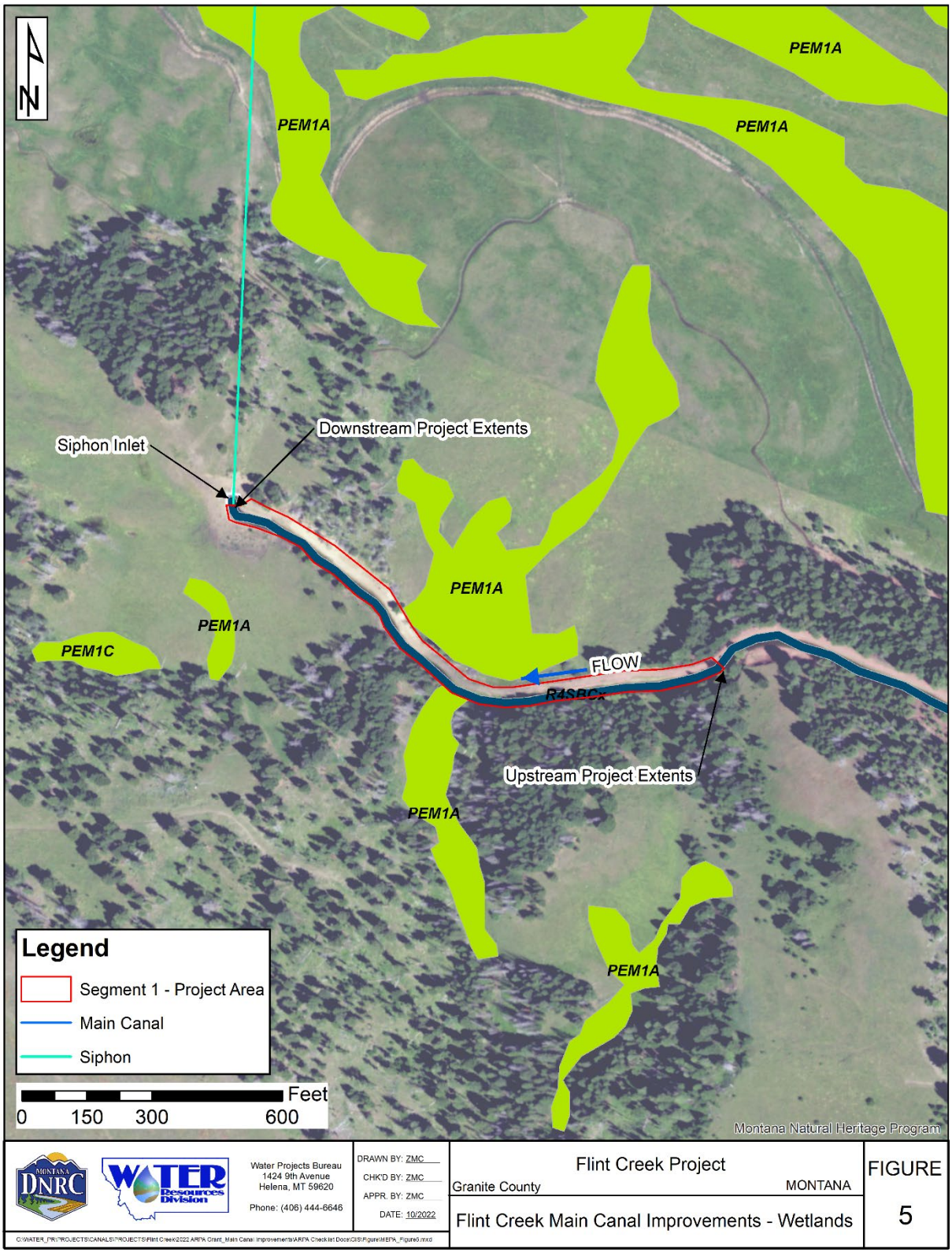


**Figure 5. Delineated Wetland and Conceptual Extent of Segment 1**

## 5. Fish/Wildlife

| 5. FISH/WILDLIFE<br>Will the proposed action result in: | IMPACT | | | | | |
|---|---|---|---|---|---|---|
| | Unknown | None | Minor | Potentially Significant | Can Impact Be Mitigated | Comment Index |
| a) Deterioration of critical fish or wildlife habitat? | | X | | | | 5a. |
| b) Changes in the diversity or abundance of game animals or bird species? | | X | | | | |
| c) Changes in the diversity or abundance of nongame species? | | X | | | | |
| d) Introduction of new species into an area? | | X | | | | |
| e) Creation of a barrier to the migration or movement of animals? | | X | | | | |
| f) Adverse effects on any unique, rare, threatened, or endangered species? | | X | | | | 5f. |
| g) Increase in conditions that stress wildlife populations or limit abundance (including harassment, legal or illegal harvest or other human activity)? | | X | | | | |
| h) Will the project be performed in any area in which T&E species are present, and will the project affect any T&E species or their habitat? (Also see 5f.) | | X | | | | See 5f. |
| i) Will the project introduce or export any species not presently or historically occurring in the receiving location? | | X | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| j) | Is the project located within critical sage grouse habitat defined by the Montana Executive Order 12-2015? | | X | | | | 5j. |

The project vicinity provides habitat for a variety of wildlife including black bears, great blue heron, golden eagle, bald eagle, raccoon, fisher, snakes, white-tailed deer, mule deer and elk. The Montana Natural Heritage Program (MTNHP) has documented golden eagles, pileated woodpeckers, long-legged myotis, bald eagles in the project vicinity (MTNHP 2022).

Upstream of the project area there is a vertical flat plate fish screen that prevents fish from becoming in entrained in the Flint Creek Main Canal. Therefore, the observations of fish from the Montana Natural Heritage Program are more than likely from the East Fork of Rock Creek and/or Trout Creek which was included in the area of interest polygon.

5a. The Proposed Action would have no impact on critical fish or wildlife habitats. The Proposed Action would result in recontouring the Flint Creek Main Canal. The Flint Creek Main Canal has a vertical flat plate fish screen immediately downstream of the diversion which prevent entrainment of fish in the canal. The construction of the project will be completed in the fall after irrigation season has been completed, which will limit disturbances to the area.

5f. The MTNHP was consulted to provide a custom environmental summary report for the project area that includes Species of Concern (SOC) that may occur in the project area vicinity. According to the MTNHP, the following SOC may occur in the project vicinity: sixteen mammal species (Long-legged Myotis, Wolverine, Fisher, Fringed Myotis, Little Brown Myotis, Long-eared Myotis, Pebble's Shrew, Silver-haired Bat, Canada Lynx, North American Water Vole, Grizzly Bear, North American Porcupine, Western Pygmy Shrew, Western Spotted Skunk, Townsend's Big-eared Bat, and Hoary Bat), three fish species (Bull Trout, Westslope Cutthroat Trout, and Lake Trout), thirty one bird species (Bald Eagle, Golden Eagle, Pileated Woodpecker, Cassin's Finch, Clark's Nutcracker, Evening Brosbeak, Great Gray Owl, Northern Goshawk, Broad-tailed Hummingbird, Green-tailed Towhee, Rufous Hummingbird, Veery, Barrow's Goldeneye, Boreal Owl, Brown Creeper, Trumpeter Swan, Meesia Triquetra, American Bittern, Harlequin Duck, Lewis's Woodpecker, Long-billed Curlew, Gray Crowned Rosy-Finch, Hooded Merganser, American White Pelican, Bobolink, Brewer's Sparrow, Flammulated Owl, Sage Thrasher, Short-eared Owl and Great Blue Heron), two insect species (Bombus Suckleyi and Rhyacophila Betteni), and one amphibian (Western Toad) (MTNHP 2022a). The MTNHP report is provided as Appendix B.

The U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) tool was used to identify threatened or endangered species with potential to occur in the project vicinity. According to the IPaC query, five federally listed species as potentially affected by activities within the project vicinity: Canada Lynx (threatened),

North American Wolverine (proposed threatened), Grizzly Bear (threatened) Monarch Butterfly (candidate), and Whitebark Pine (proposed threatened); see Section 4c above (USFWS 2022). There are no designated critical habitats in the project vicinity. Due to the lack of suitable habitat in the immediate project area, Canada Lynx, North American Wolverine, and Grizzly Bear are not expected to occur. No observations have been documented of Canada Lynx, North American Wolverine, or Grizzly Bear by the MTNHP in the project vicinity (MTNHP 2022). Suitable habitat for monarch butterfly is also lacking. The primary larval host plant for this species, milkweed, has not observed in the project area. The USFWS IPaC report is provided as Appendix C.

Due to the relatively small project footprint, short construction period, and lack of suitable habitat that precludes species' occurrence in the project area, no impacts to any SOC or federally listed threatened or endangered species is anticipated as a result of the project. The Proposed Action is anticipated to have no effect on threatened or endangered species. Adverse cumulative effects are not anticipated.

5j. The Montana Sage Grouse Habitat Conservation Program mapping tool was reviewed, and the project area does not intersect with any Greater Sage-Grouse habitat types protected under Executive Order 12-2015 (i.e., General Habitat, Core Area, or Connectivity Area) (MTSGHCP 2022). The proposed project would have no effect on the Greater-Sage Grouse.

## B. HUMAN ENVIRONMENT

### 6. Noise/Electrical Effects

| 6. NOISE/ELECTRICAL EFFECTS<br><br>Will the proposed action result in: | IMPACT | | | | | |
|---|---|---|---|---|---|---|
| | Unknown | None | Minor | Potentially Significant | Can Impact Be Mitigated | Comment Index |
| a) Increases in existing noise levels? | | | X | | | 6a. |
| b) Exposure of people to severe or nuisance noise levels? | | X | | | | |
| c) Creation of electrostatic or electromagnetic effects that could be detrimental to human health or property? | | X | | | | |
| d) Interference with radio or television reception and operation? | | X | | | | |

6a. Operation of construction equipment would cause a temporary, minor increase in noise levels at the project site. Any increase in noise level at the construction site would be short-term and minor. Construction would occur during daylight hours only.

## 7. Land Use

| 7. LAND USE<br><br>Will the proposed action result in: | IMPACT | | | | | |
|---|---|---|---|---|---|---|
| | Unknown | None | Minor | Potentially Significant | Can Impact Be Mitigated | Comment Index |
| a) Alteration of or interference with the productivity or profitability of the existing land use of an area? | | X | | | | 7a. |
| b) Conflicted with a designated natural area or area of unusual scientific or educational importance? | | X | | | | |
| c) Conflict with any existing land use whose presence would constrain or potentially prohibit the proposed action? | | X | | | | |
| d) Adverse effects on or relocation of residences? | | X | | | | 7d. |

No specific land use or management plan exists for the proposed project area. No zoning or management plans relevant to the project area have been identified.

7a. Segment 1 of the project is located on public land owned by the State of Montana – State School Trust Lands managed by Montana DNRC. Segment 2 of the project is located on private property, which Montana DNRC holds an irrigation easement Deed. The community of Philipsburg, with a population of 841 in 2020 (USCB 2022), is the nearest population area to the project area.

7d. There is no housing or residences within the project area and no impact or relocation of residences would occur.

## 8. Risk/Health Hazards

| 8. RISK/HEALTH HAZARDS<br><br>Will the proposed action result in: | IMPACT | | | | | |
|---|---|---|---|---|---|---|
| | Unknown | None | Minor | Potentially Significant | Can Impact Be Mitigated | Comment Index |
| a) Risk of an explosion or release of hazardous substances (including, but not limited to oil, pesticides, chemicals, or radiation) in the event of an accident or other forms of disruption? | | | X | | | 8a. |
| b) An effect on an existing emergency response or emergency evacuation plan, or create a need for a new plan? | | X | | | | |
| c) Creation of any human health hazard or potential hazard? | | X | | | | |
| d) Use of any chemical toxicants? (Also see 8a.) | | | X | | | See 8a. |

8a. No impact to human health and safety is anticipated to occur as a result of the Proposed Action. Construction of the proposed project is not anticipated to create any human health and safety concerns to the general public. The construction contractor will have specific safety protocols in place during construction to protect its employees.

There is a minor and temporary risk of fuel or oil from heavy equipment accidently releasing on the project site during construction. The contractor would follow their standard spill prevention protocols and should have absorbent materials on site to respond to an accidental release. Similarly, standard Best Management Practices such as conducting daily startup inspection of all hydraulic lines and cylinder seals will reduce the potential for a release.

## 9. Community Impact

| 9. COMMUNITY IMPACT<br><br>Will the proposed action result in: | IMPACT | | | | | |
|---|---|---|---|---|---|---|
| | Unknown | None | Minor | Potentially Significant | Can Impact Be Mitigated | Comment Index |
| a) Alteration of the location, distribution, density, or growth rate of the human population of an area? | | X | | | | 9a. |
| b) Alteration of the social structure of a community? | | X | | | | |
| c) Alteration of the level or distribution of employment or community or personal income? | | X | | | | 9c. |
| d) Changes in industrial or commercial activity? | | X | | | | 9d. |
| e) Increased traffic hazards or effects on existing transportation facilities or patterns of movement of people and goods? | | X | | | | 9e. |

9a. The Proposed Action would have no effect on the density and distribution of population and housing. The proposed project has no potential to influence population distribution or housing given the nature of the work.

9c. The Proposed Action would have no long-term effect on the quantity or distribution of employment. Implementation of the Proposed Action would result in minor and short-term beneficial impacts on employment due to the creation of temporary construction jobs necessary to construct the project. There would also be a onetime increase in spending to procure the construction materials, some of which may be purchased locally.

9d. No impact on industrial or commercial activities or production would occur as a result of the Proposed Action because these activities do not currently exist in the immediate project area.

9e. Construction of the project would result in additional traffic on East Fork of Rock Creek Road to transport materials, equipment, and laborers to the project site. There would be no change to existing traffic patterns, however, and any traffic-related effects would be short-term and minor.

## 10. Public Services/Taxes/Utilities

| 10. PUBLIC SERVICES/TAXES/UTILITIES<br><br>Will the proposed action result in: | IMPACT | | | | | |
|---|---|---|---|---|---|---|
| | Unknown | None | Minor | Potentially Significant | Can Impact Be Mitigated | Comment Index |
| a) An effect upon or result in a need for new or altered governmental services in any of the following areas: fire or police protection, schools, parks/recreational facilities, roads or other public maintenance, water supply, sewer or septic systems, solid waste disposal, health, or other governmental services? If any, specify: | | X | | | | 10a. |
| b) An effect upon the local or state tax base and revenues? | | X | | | | 10b. |
| c) A need for new facilities or substantial alterations of any of the following utilities: electric power, natural gas, other fuel supply or distribution systems, or communications? | | X | | | | |
| d) An increased use of any energy source? | | X | | | | |
| e) Any change or increase in projected maintenance costs. | | X | | | | |

Segment 1 is located on public land owned by the State of Montana - State School Trust Lands managed by Montana DNRC. Segment 2 is located on private property, which Montana DNRC holds an irrigation easement Deed.

10a. The Proposed Action would have no effect on the demand for government services and no requirements for fire protection, police, schools, or other governmental services.

10b. The project would have no effect on local and state tax base or tax revenues.

## 11. Aesthetics/Recreation

| 11. AESTHETICS/RECREATION<br><br>Will the proposed action result in: | IMPACT | | | | | |
|---|---|---|---|---|---|---|
| | Unknown | None | Minor | Potentially Significant | Can Impact Be Mitigated | Comment Index |
| a) Alteration of any scenic vista or creation of an aesthetically offensive site or effect that is open to public view? | | X | | | | |
| b) Alteration of the aesthetic character of a community or neighborhood? | | X | | | | |
| c) Alteration of the quality or quantity of recreational/tourism opportunities and settings? | | X | | | | 11c. |
| d) Impacts to wild or scenic rivers, trails or wilderness areas? | | X | | | | |

The existing project area aesthetics are defined by the surrounding mountains and farmlands, and the Flint Creek Main Canal and associated infrastructure. Segment 1 of the project is located on State of Montana - State School Trust Lands managed by Montana DNRC. Segment 2 of the project is located on private property in which Montana DNRC holds an irrigation easement Deed for the Flint Creek Main Canal.

11c. Implementation of the Proposed Action would have beneficial impact on the recreational opportunities in the drainage by allowing more water to remain in the watershed. The project area is strictly used for irrigation and farming. Therefore, recreational activities would not be impacted by the project.

## 12. Cultural/Historic Resources

| 12. CULTURAL/HISTORICAL RESOURCES<br><br>Will the proposed action result in: | IMPACT | | | | | |
|---|---|---|---|---|---|---|
| | Unknown | None | Minor | Potentially Significant | Can Impact Be Mitigated | Comment Index |
| a) Destruction or alteration of any site, structure or object of prehistoric historic, or paleontological importance? | | X | | | | 12a. |
| b) Physical change that would affect unique cultural values? | | X | | | | |
| c) Effects on existing religious or sacred uses of a site or area? | | X | | | | |
| d) An effect on historic or cultural resources? (Also see 12.a.) | | X | | | | See 12a. |

12a. A cultural resources inventory was conducted by the DNRC in 2017 and the Proposed Action would not impact any known structure or object of prehistoric historic, or paleontological importance. The Proposed Action would, however, impact the Flint Creek Water Project, an identified historic resource. The Flint Creek Water Project is recommended eligible for listing in the National Register of Historic Places for its association with Criterion A values, and for the integrity it retains in the vicinity of the project area.

According to the 2017 Cultural Resources Inventory performed by the DNRC in 2017 possible impacts to the Flint Creek Water Project and associated recommendations are excerpted below:

"Because the Flint Creek Water Project is actively used and maintained, various levels of rehabilitation and improvement work will occur to site 24GN0964 over the life of the system. Future proposed developments should be reviewed, and effects assessed on a case by case basis."

The Cultural Resource Inventory System (CRIS) updated forms for 24GN0964 is shown in Appendix E.

Consultation with the State Historic Preservation Office (SHPO) has not been conducted specific to the Proposed Action. The Proposed Action would involve minor ground disturbances within the State of Montana land and DNRC held irrigation easement to implement the canal improvements and no impact on any historic structures is expected. If cultural materials are discovered during construction, work would cease and the DNRC would be contacted for a more in-depth investigation and further consultation with SHPO as necessary.

## C. SIGNIFICANCE CRITERIA

### 13. Summary Evaluation of Significance

| 13. SUMMARY EVALUATION OF SIGNIFICANCE<br><br>Will the proposed action, considered as a whole: | IMPACT | | | | | |
|---|---|---|---|---|---|---|
| | Unknown | None | Minor | Potentially Significant | Can Impact Be Mitigated | Comment Index |
| a) Have impacts that are individually limited, but cumulatively considerable? (A project or program may result in impacts on two or more separate resources that create a significant effect when considered together or in total.) | | X | | | | |
| b) Involve potential risks or adverse effects, which are uncertain but extremely hazardous if they were to occur? | | X | | | | |
| c) Potentially conflict with the substantive requirements of any local, state, or federal law, regulation, standard or formal plan? | | X | | | | |
| d) Establish a precedent or likelihood that future actions with significant environmental impacts will be proposed? | | X | | | | |
| e) Generate substantial debate or controversy about the nature of the impacts that would be created? | | X | | | | |

Minor and temporary impacts to the physical environment are anticipated during construction of the Proposed Action. These minor impacts would be short-term, and the improvements would benefit the resource and general public over the long-term. The Proposed Action would have no negative cumulative effects on the biological, physical, and human environments. The Proposed Action will not result in significant environmental impacts and should result in tangible environmental benefits.

## PART III. NARRATIVE EVALUATION AND COMMENT

Implementation of the Proposed Action would have minor adverse effects to water quality due to soil excavation from construction within the associated canal. The Proposed Action would also result in short-term construction impacts due to emissions, noise, energy consumption, and temporary soil disturbance resulting from the operation of construction equipment. These impacts are short-term and will last only as long as construction does, after which a return to baseline conditions would be expected. The anticipated impacts should be adequately mitigated through reclamation and revegetation of the project site and standard Best Management Practices implemented by the contractor during construction.

The Proposed Action would have no negative cumulative effects on the biological, physical, and human environments. The Proposed Action will not result in significant environmental impacts and should result in several important benefits to the environment. The Proposed Action would have beneficial impacts through prevention of future failures of the Flint Creek Main Canal.

Based on the limited scope of the project, short construction period, and lack of suitable habitat in the project area, no impacts to federally listed species are anticipated.

Soils disturbed during construction could colonize with weeds. Disturbed areas would be reseeded with a native seed mix where necessary to reduce the establishment of weeds. In conjunction with county weed control district, FCWUA would use methods to control weeds in the project area as part of their operations and maintenance.

# PART IV. PUBLIC PARTICIPATION

### A. Public Involvement:

Due to the limited scope of the proposed action, the DNRC did not perform any formal public scoping for this project and no public comment was sought. DNRC will post a draft of this Environmental Assessment for public comment for 30 days on the DNRC – Public Notices webpage.

Regulatory agencies and adjacent landowners will be informed of the project via the Joint Application for Work in Montana's Streams, Wetlands, Floodplains, and Other Water Bodies.

### B. Duration of Comment Period:

The public comment period will extend for (30) thirty days. Written comments will be accepted until 11:59 p.m., December 2, 2022, and can be e-mailed to Zachariah.Campbell@mt.gov or mailed to the address below:

Flint Creek Main Canal Improvements Project
DNRC Water Resources Division
State Water Projects Bureau (SWPB) c/o Zachariah Campbell, EI
1424 9th Ave.
Helena, MT 59620

# PART V. EA PREPARATION

**A. Based on the significance criteria evaluated in this EA, is an EIS required? NO *If an EIS is not required, explain why the EA is the appropriate level of analysis for this proposed action.***

Based on an evaluation of impacts to the physical and human environment under MEPA and criteria established in ARM 36.2.524, this environmental review revealed no significant negative impacts and, therefore, an EIS is not necessary, and an environmental assessment is the appropriate level of analysis. Similarly, the evaluation of impacts under NEPA revealed no significant impacts as defined by Council on Environmental Quality (CEQ) regulations found at 40 CFR 1508.27 and, therefore, and EIS in not necessary, and an environmental assessment is the appropriate level of analysis.

In determining the significance of the impacts, the DNRC assessed the severity, duration, geographic extent, and frequency of the impact, the probability that the impact would occur or reasonable assurance that the impact would not occur. DNRC also assessed the growth-inducing or growth-inhibiting aspects of the impact, the importance to the state and to society of the environmental resource or value affected, any precedent that would be set as a result of an impact of the Proposed Action that would commit DNRC to future actions; and potential conflicts with local, federal, or state laws. As this EA revealed no significant impacts from the proposed action, an EA is the appropriate level of review and an EIS is not required.

### B. Person Responsible for Preparing the EA:

Zachariah Campbell, EI
Canals Engineer
Montana DNRC – State Water Projects Bureau
424 9th Avenue Helena, MT 59620

### C. List of Agencies Consulted During Preparation of the EA:

Montana Department of Environmental Quality - Rock Creek Watershed TMDLs

Montana Department of Natural Resources and Conservation - Montana Cultural Resource Form (24GN0964)

Montana Natural Heritage Program - Environmental Summary Report online request

U.S Census Bureau - 2020 Census, Granite County

USDA, Natural Resources Conservation Service - Custom Web Soil Survey online request

U.S. Fish and Wildlife Service - Information for Planning and Consultation online request

# PART VI. REFERENCES


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MTNHP. 2022b. Natural Heritage Map Viewer Generalized Observations database. Accessed at <https://mtnhp.org/mapviewer/?t=7>. Accessed on August 29, 2022.

MTSGHCP (Montana Sage Grouse Habitat Conservation Program). 2022. Montana Sage Grouse Habitat Conservation Map. Accessed at <https://sagegrouse.mt.gov/ProgramMap>. Accessed on August 29, 2022.

NRCS (USDA Natural Resources and Conservation Service). 2022. Custom Soil Report for Granite County Area, Montana. Report developed August 25, 2022.

USCB (US Census Bureau). 2022. 2020 Decennial Census. Accessed at < https://www.census.gov/>. Accessed on August 29, 2022.

USFWS (U.S. Fish and Wildlife Service). 2022. IPaC custom report. Accessed August 29, 2022.


# APPENDICES

A. USDA Natural Resources Conservation Service Custom Soil Report for Granite County Area, Montana
B. Montana Natural Heritage Program Environmental Summary Report
C. U.S. Fish and Wildlife Service Information for Planning and Consultation Report
D. Department of Environmental Quality - Assessment Record Summary (TMDL)
E. Flint Creek Water Project - Cultural Resource Inventory System (24GN0964)