

DNRC Water Resources Division
 State Water Projects Bureau (SWPB)
 1424 9th Ave. Helena, MT 59620

Project Type – Canal Repairs
 EA Publication Date - 8/26/2019
 Information Telephone No. (406) 444-5775

MEPA ENVIRONMENTAL ASSESSMENT SUMMARY FORM

Project Name: Douglas Canal Rehabilitation Project – Headgate Replacement

Proposed Implementation Date: October 2019

Proponent: DNRC – State Water Projects Bureau

Type and Purpose of Action: The project consists of the replacement of the Douglas Canal Headgate, installation of a sediment curb adjacent to the Douglas Canal Diversion Dam, installation of a concrete measurement section in the canal, and the installation of a stilling well adjacent to Nevada Creek. Work generally includes removal of the existing headgate, construction of a new headgate, construction of a concrete lined section of canal, installation of a concrete sediment curb, construction of a stilling well, installation of appurtenant metal structures, regrading a section of the canal and construction of fencing. The total length of the project area is approximately 400 feet. The project is located approximately 6.2 miles southeast of Helmsville, Montana near Montana Highway 141. The project is owned by the DNRC and operated by the Nevada Creek Water Users Association (NCWUA).

Location: T12N, R10W; Section 9

County: Powell

I. PROJECT DEVELOPMENT

| RESOURCE | POTENTIAL IMPACTS AND MITIGATION |
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| <p>1. PUBLIC INVOLVEMENT, AGENCIES, GROUPS OR INDIVIDUALS CONTACTED:</p> <p>Provide a brief summary of the scoping and ongoing involvement for this project.</p> | <p>Inspections by SWPB indicated that the structure needed significant repair or replacement. Groups/agencies involved and/or contacted include:</p> <ul style="list-style-type: none"> • Nevada Creek Water Users Association • Army Corp of Engineers • MT Fish, Wildlife and Parks • MT Dept. of Environmental Quality • Land owner at the project location |

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| <p>2. OTHER GOVERNMENTAL AGENCIES WITH JURISDICTION, LIST OF PERMITS NEEDED:</p> | <p>The project is located entirely on private land. The DNRC SWPB possesses a permanent easement for the canal. Portions of the project are located within the high water mark of Nevada Creek.</p> <p>MT DEQ, MT DFWP, and the Army Corp were consulted, and the required permits have been obtained.</p> |
| <p>3. ALTERNATIVES CONSIDERED:</p> | <p>No Action Alternative: No action would result in the continued use of the existing headgate. No stream flow measurement sites would be developed. The ditch rider would continue to take intermittent canal flow measurements. At some point in the future the existing headgate will become inoperable and replacement will be required.</p> <p>Headgate Repair Alternative: The repair alternative would extend the useful life of the existing headgate, but the current extent of concrete and reinforcing steel degradation will necessitate the replacement of the structure in the future. The stream flow measurement site would not be developed. The ditch rider would continue to take intermittent canal flow measurements.</p> <p>Headgate Replacement Only Alternative: The replacement only alternative would replace the existing headgate. This reduces the risk of headgate failure. The stream flow measurement site would not be developed. The ditch rider would continue to take intermittent canal flow measurement.</p> <p>Headgate Replacement and Stream and Canal Flow Measurement Installation Alternative: This alternative allows for the replacement of the headgate. This reduces the risk of headgate failure and allows for increased ease of operation. This alternative also include the installation of flow measurement devices in Douglas canal and Nevada Creek. Having flow measurement devices in the canal and stream increases the accuracy of water delivery and decreases the amount of the ditch riders time that must be spent performing manual flow measurements.</p> |

Sediment Curb and Sluice Gate Alternative: This alternative consists of the installation of a concrete sediment curb across the Douglas Canal Inlet and the installation of a sluice gate in the existing diversion. The curb and sluice gate are designed to mitigate sediment deposits in Douglas Canal.

The Headgate Replacement and Stream and Canal Flow Measurement Alternative in combination with the Sediment Curb and Sluice Gate Alternative are the chosen alternatives.

II. IMPACTS ON THE PHYSICAL ENVIRONMENT

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| <p>4. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE:</p> <p>Are fragile, compatible or unstable soils present?</p> <p>Are there unusual geologic features?</p> <p>Are there special reclamation considerations?</p> | <p>Soils in the immediate project area consist of Saypo loam that is rarely flooded with 0 – 4% slopes. Further downstream, Douglas Canal has been excavated through an alluvial fan deposit that consist of Roy gravelly loam. These soils are not fragile or unstable. There are no unusual geologic features or any special reclamation considerations.</p> |
| <p>5. WATER QUALITY, QUANTITY AND DISTRIBUTION:</p> <p>Are important surface or groundwater resources present?</p> <p>Is there potential for violation of ambient water quality standards, drinking water maximum contaminant levels, or degradation of water quality?</p> | <p>The project is located on Nevada Creek and the Douglas Canal, both of which are important surface water resources. Appropriate precautions will be taken to limit short term increase in turbidity during construction. Required permits have been obtained.</p> |
| <p>6. AIR QUALITY:</p> <p>Will pollutants or particulate be produced?</p> <p>Is the project influenced by air quality regulations or zones (Class I air shed)?</p> | <p>Any impacts would be related to emissions from construction equipment and would be non-significant, minor, short-term, temporary, and end with the completion of the project. The project area is not influenced by any special air quality regulations.</p> |

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| <p>7. VEGETATION COVER, QUANTITY AND QUALITY:</p> <p>Will vegetative communities be permanently altered?</p> | <p>The current vegetative community consists of common native grasses, forbs, woody shrubs and a mix of coniferous and deciduous trees (Rocky Mountain Douglas-fir Forest and Woodland classification).</p> <p>Impacts are insignificant, very small and localized. Disturbed areas will be reclaimed and reseeded after the project is completed with a suitable native seed mix.</p> |
| <p>8. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:</p> <p>Is there substantial use of the area by important wildlife, birds or fish?</p> | <p>No</p> |
| <p>9. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:</p> <p>Are any federally listed threatened or endangered species or identified habitat present?</p> <p>Any wetlands?</p> <p>Any sensitive species or Species of Special Concern?</p> | <p>Federally listed Bull Trout are not likely to be present in this section of Nevada Creek according to the <u>The Big Blackfoot River Fisheries and Restoration Investigations for 2006 and 2007.</u></p> <p>There are several small wetlands adjacent to the project area. A small portion of the sediment curb installation will take place within a mapped wetland. After installation of the curb, the area will be returned to it's preconstruction state. Stream restoration actives associated with a separate project will also enhance wetland and aquatic habitat in the areas adjacent to the Douglas Canal diversion.</p> |

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| | <p>According to the MTNHP Species Snapshot, there are 16 animal and 0 plant species of concern in the HUC6- Middle Nevada Creek Water Shed (170102030407). The following are the State Species of Special Concern in the area: Fauna: Canada Lynx, Fisher, Little Brown Myotis, Wolverine, Brown Creeper, Clark's Nutcracker, Evening Grosbeak, Flammulated Owl, Great Grey Owl, Northern Goshawk, Pileated Woodpecker, Sharp-tailed Grouse, Veery, Bull Trout, Westslope Cutthroat, and Margaritifera Falcata. Flora State Species of Special Concern: Whitebark Pine. This species is also federal ESA candidate species</p> <p>The proposed project will not have any effects on the species of concern or their associated habitats.</p> |
| <p>10. HISTORICAL / ARCHAEOLOGICAL :</p> <p>Are any historical, archaeological or paleontological resources present?</p> | <p>A Class I (literature review) level review was conducted by the DNRC staff archaeologist for the area of potential effect (APE). This entailed inspection of project maps, DNRC's sites/site leads database, land use records, General Land Office Survey Plats, and control cards. Because proposed developments are consistent with continued operation of the Douglas Canal Diversion Dam and Headgate and associated irrigation works, No Effect to Heritage Properties is expected. No additional archaeological or historical investigative work will be conducted in response to this proposed development. However, if previously unknown cultural or paleontological materials are identified during project related activities, all work will cease until a professional assessment of such resources can be made.</p> |
| <p>11. AESTHETICS:</p> <p>Is the project on a prominent topographic feature?</p> <p>Will it be visible from populated or scenic areas?</p> <p>Will there be excessive noise or light?</p> | <p>The project location and access is located on private land. The site is nominally visible from nearby county roads, and the public generally cannot see the area, due to there being no legal public access to the site.</p> |

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| | Any increase in noise associated with the construction would be non-significant, temporary, and end with completion of the project. |
| <p>12. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY:</p> <p>Will the project use resources that are limited in the area?</p> <p>Are there other activities nearby that will affect the project?</p> | The project would not change the existing demand/use of water in the area. Resources used for the project are common to the area. There are no other activities nearby that would affect the project. |
| <p>13. OTHER ENVIRONMENTAL DOCUMENTS PERTINENT TO THE AREA:</p> <p>Are there other studies, plans or projects on this site?</p> | This project will not impact any other plans or studies. |

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| III. IMPACTS ON THE HUMAN POPULATION | |
| <p>14. HUMAN HEALTH AND SAFETY:</p> <p>Will this project add to health and safety risks in the area?</p> | No |
| <p>15. INDUSTRIAL, COMMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION:</p> <p>Will the project add to or alter these activities?</p> | The project will have positive impacts on agriculture by allowing the continued use of the canal. Inaction and subsequent failure of the headgate could have negative impacts to agriculture in the area. |
| <p>16. QUANTITY AND DISTRIBUTION OF EMPLOYMENT:</p> <p>Will the project create, move or eliminate jobs? If so, estimated number.</p> | Other than the employment related to the actual construction, the project will not create nor impact any jobs in the area. |
| <p>17. LOCAL AND STATE TAX BASE AND TAX REVENUES:</p> <p>Will the project create or eliminate tax revenue?</p> | The project will have no impacts on the local and state tax base and tax revenues. |

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| <p>18. DEMAND FOR GOVERNMENT SERVICES:</p> <p>Will substantial traffic be added to existing roads?</p> <p>Will other services (fire protection, police, schools, etc.) be needed?</p> | <p>The project will not increase traffic nor add to demand for government services.</p> |
| <p>19. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS:</p> <p>Are there State, County, City, USFS, BLM, Tribal, etc. zoning or management plans in effect?</p> | <p>There are no locally adopted environmental plans, goals, zoning or management plans that would be affected by the project.</p> |
| <p>20. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES:</p> <p>Is wilderness or recreational areas nearby or accessed through the project location?</p> <p>Is there recreational potential within the project location?</p> | <p>The proposed headgate replacement will not impact any recreation resources, as there is no legal public access to the project. There are no wilderness areas in the immediate vicinity of the project.</p> |
| <p>21. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING:</p> <p>Will the project add to the population and require additional housing?</p> | <p>The project will not impact the density and distribution of population and housing.</p> |
| <p>22. SOCIAL STRUCTURES AND MORES:</p> <p>Is some disruption of native or traditional lifestyles or communities possible?</p> | <p>The project will not disrupt any traditional lifestyles or communities.</p> |
| <p>23. CULTURAL UNIQUENESS AND DIVERSITY:</p> <p>Will the action cause a shift in some unique quality of the area?</p> | <p>The project will not impact the cultural uniqueness and diversity of this rural area.</p> |

