FINDING OF NO SIGNIFICANT IMPACT
FOR THE CITY OF WHITEFISH
WATER SOURCE AND TREATMENT CAPACITY EXPANSION PROJECT

TO: ALL INTERESTED PERSONS

Date: July 9, 2020
Action: Construction expansion for the City of Whitefish Surface Water Treatment Plant (WTP) and the Installation of Water Transmission and WTP associated Sewer Mains
Location of Project: Approximately 0.7 Miles NE of Whitefish, Montana
DWSRF Funding: $11,000,000
Total Project Cost: $12,418,000

An environmental review has been conducted by the Montana Department of Environmental Quality for improvements to the water system in Whitefish, Montana. The proposed project includes the addition of two Trident conventional package treatment trains to supplement the existing four Trident trains that presently serve the city. The footprint of the plant will be expanded to accommodate the new treatment trains plus two additional trains in the future. Space is also provided for future ultraviolet disinfection equipment, should that be needed. The project will include new water transmission main pipe and new sewer pipe to accommodate residual waste removal; additionally, a new pump and portable backup power generation at the Whitefish Lake pump station will be provided as part of the project. The purpose of the project is to make improvements needed to ensure an adequate supply of water necessary to protect public health.

The affected environment will primarily be in the vicinity of the existing WTP building approximately 0.7 miles northeast of the City of Whitefish and will extend west along Reservoir Road (see attached site location map). The human environment affected will include the City of Whitefish and the surrounding area. Based on the information provided in the references below, the project is not expected to have any significant adverse impacts upon terrestrial and aquatic life or habitat, including endangered species, water quality or quantity, air quality, geological features, cultural or historical features, or social quality.

This project will be funded with a low-interest loan from the Montana Drinking Water State Revolving Fund (DWSRF) Program, administered by the Montana Department of Environmental Quality and the Montana Department of Natural Resources and Conservation.

The Department of Environmental Quality used the following references in completing its environmental review of this project:
• Drinking Water State Revolving Fund Application for the City of Whitefish, Montana, April 24, 2020, prepared the City of Whitefish, Montana.
• City of Whitefish Basis of Design Report, March 2020, prepared by Morrison Maierle, Kalispell, Montana.
• Project Manuals and Construction Plans 03/02/2020 Water Source and Treatment Capacity Expansion Project, prepared by Morrison Maierle.

In addition to these references, letters were sent to the Montana Department of Fish, Wildlife and Parks, Montana Department of Natural Resources and Conservation, Montana Department of Environmental Quality, Montana State Historic Preservation Office, U.S. Army Corps of Engineers, and the U.S. Fish & Wildlife Service (Ecological Services). Responses were received from the U.S Fish & Wildlife Service, the Montana Department of Natural Resources, and the Montana Historical Society’s Historic Preservation Office. These references are available for review upon request by contacting:

Denver Fraser, P.E. 
Department of Environmental Quality
P.O. Box 200901
Helena, Montana 59620-0901
Phone: (406) 444-5318
Email: dfraser@mt.gov

Craig Workman, P.E.
Director of Public Works
City of Big Timber
P.O. Box 158
Whitefish, Montana 59937
Email: cworkman@cityofwhitefish.org

Comments on this finding or on the environmental assessment may be submitted to the Department of Environmental Quality at the above address. Comments must be postmarked no later than July 31, 2020. After evaluating all substantive comments received, the department will revise the environmental assessment or determine if an environmental impact statement is necessary. Otherwise, this finding of no significant impact will stand if no substantive comments are received during the comment period or if substantive comments are received and evaluated and the environmental impacts are still determined to be non-significant.

Sincerely,

Mark Smith, SRF Manager
Engineering Bureau
Water Quality Division
CITY OF WHITEFISH - WATER SOURCE AND TREATMENT CAPACITY EXPANSION PROJECT

ENVIRONMENTAL ASSESSMENT

I. COVER SHEET

A. PROJECT IDENTIFICATION

Applicant: City of Whitefish
Address: P.O. Box 158, Whitefish, MT 59937
DWSRF WRF Project No. Not yet assigned
DEQ E.Q. No. 20-1895

B. CONTACT PERSON

Name: Dana Smith, City Manager
City of Whitefish
Address: P.O. Box 158
Whitefish, MT 59937
Telephone: (406) 406-863-2406

C. ABSTRACT

The City of Whitefish (City) currently operates a surface water treatment plant (WTP), which treats water from tributaries to Haskill Creek (primary source) and from Whitefish Lake (secondary source). Water from Haskill Creek is collected from three intake points which all flow into one open reservoir northwest of the WTP. The City has three water rights to Haskill Creek which allow for a combined annual volume of 4362.9 acre-feet. The Whitefish Lake intake consists of a pipeline and two intake screens located off shore and submerged. The City owns four water rights to Whitefish Lake, three of which are used to feed the WTP through a 5,200-foot, 18-inch raw water transmission main. The three Whitefish Lake water rights used for the City’s domestic water allow for a combined annual volume of 3,182 acre-feet. The City presently serves a population of approximately 7,870.

Raw water from either or both sources flows into a 16-inch combined header inside the WTP Building where it can be injected with primary coagulant, filtration aid, and chlorine and is then intended to be mixed. The chemically treated water is evenly split to four Trident treatment units, each with a 1 million gallon per day (MGD) capacity (approximately 700 gpm over 24 hours). Each train consists of a contact adsorption clarifier (CAC) using buoyant plastic media, and a mixed media filter. The CAC process is a form of high-rate clarification, using upflow hydraulics and relying on adsorption of floc to the buoyant media rather than gravity settling. Filter effluent from all the trains is then chlorinated and flows to the clearwell below the WTP. After the required detention time (clearwell volume divided by production rate x baffle factor), the finished water is pumped from the clearwell to a 1 MG reservoir for additional chlorine contact time and storage before being sent to distribution. The filters and clarifiers are backwashed regularly, and each has a production to waste cycle before going back into service. Backwash waste from the plant is injected with alum and sulfur dioxide before reaching a settling basin. From the settling basin, clarified water is discharged to a wetland adjacent to the basin and into an unnamed tributary of Whitefish Lake. The City currently has an MPDES permit for this discharge. Sludge from the pond is removed manually.
The City of Whitefish (City), through a 2020 Preliminary Engineering Report (PER) prepared by Morrison Maierle, has investigated the needs of their Public Water Supply (PWS). The City presently lacks firm capacity in their existing WTP to meet the needs of the system; therefore, the addition of treatment capacity is necessary to provide adequate capacity, fire protection, protect public health, and improve system reliability. The existing Whitefish surface water treatment plant does not meet DEQ-1 design requirements (i.e., must be capable of meeting the PWS maximum day demand with one filter train removed from service).

The firm capacity of the WTP is currently rated by the DEQ at 3.0 MGD. Therefore, the City is limited in finished water production for adequate supply to their present population and growing service area. This is currently only a concern during peak summer demand season, but will worsen with increased population and the anticipated service area expansion. DEQ initially denied a deviation request to temporarily exceed the firm capacity of the plant during peak demand in conjunction with water conservation efforts. DEQ had notified the City that water main extensions, subdivisions, or Municipal Facility Exclusions would not be reviewed until the firm capacity of the WTP was expanded. A later deviation request submitted on behalf of the City, in which the DEQ granted the City permission to allow connection of up to 1,500 additional equivalent residential units (ERUs), was approved. However, it is still necessary as part of the deviation for the City to pursue a capacity upgrade to accommodate long term population growth.

The project will be funded by a DEQ Drinking Water State Revolving Fund loan. Environmentally sensitive characteristics such as wetlands, floodplains, and threatened or endangered species are not expected to be adversely impacted as a consequence of the proposed project. No significant long-term environmental impacts were identified during the preparation of this document.

Under Montana law (75-6-112, MCA), no person, including a municipality or county, may construct, extend, or use a public water system until the DEQ has reviewed and approved the plans and specifications for the project.

D. COMMENT PERIOD

Twenty-one (21) calendar days.

II. PURPOSE AND NEED FOR ACTION

A. EXISTING FACILITIES

For the existing water system, surface water from tributaries to Haskill Creek (primary source) and from Whitefish Lake (secondary source) are treated with conventional filtration (recently re-classified from direct filtration to conventional for CT purposes) and disinfection with gas chlorination. Conventional treatment is provided with four Trident package water treatment trains. Each treatment train is capable of producing 1.0 million gallons per day (MGD); therefore, firm treatment capacity is 3.0 MGD with one treatment train out of service.

B. PROPOSED PROJECT

Multiple options for increasing the City’s source and treatment capacity were considered in planning documents previously developed by others. Those options generally included modifying the Whitefish Lake Intake, increasing the Whitefish Lake Intake Pump Station capacity, adding additional Trident treatment trains, changing the treatment process type to
membrane filtration, adding UV disinfection, expanding the backwash settling tank, adding a sanitary sewer, and increasing finished water pumping capacity. The proposed project includes the following:

1. Installation of one additional raw water pump at Whitefish Lake.
2. Expansion of the existing WTP building to house proposed treatment units, including up to four additional Trident package conventional treatment trains, as well as future ultraviolet disinfection.
3. Install two additional Trident package conventional treatment trains with the space to add two additional trains in the future.
4. Add on additional reservoir transfer pump.
5. Provide a portable backup generator and electrical connection provisions for the Whitefish Lake Intake Pump Station.
6. Install approximately 3,000 feet of 8-inch sanitary sewer in Reservoir Road to accommodate residual waste removal
7. Install approximately 2,900 feet of 24-inch water transmission, including approximately 1,900 feet of 18-inch water transmission main replacement

By constructing these improvements, the City will ensure that an adequate supply of safe water will be delivered to the users of the system and public health and safety with respect to the water supply will be ensured.

III. ALTERNATIVES INCLUDING THE PROPOSED ACTION

A. CONSIDERED ALTERNATIVES

1. NO ACTION—This alternative is unacceptable, since the City presently lacks firm capacity to provide water to its existing users during the summer months. Failure to carry out the proposed improvements could result in events that threaten the health and safety of the water system users.

2. SELECTED ALTERNATIVE—The selected alternative, the proposed project described above in Section II B, was chosen from options briefly identified below and described in greater detail in the May 2020 PER developed by Morrison-Maierle. Additional alternative analyses were performed by others and is available through the City. Other alternatives considered were:
   a. Changing from conventional surface water treatment to alternative membrane filtration. Converting to membrane filtration would require costly equipment purchases and operational requirements; additionally, the options did not consider how to implement membrane filtration while maintaining water treatment operations during construction (the same plant building would be required).
   b. Adding ultraviolet disinfection was also considered in order to enhance disinfection and better utilize the available capacity of the treatment system. The ability to add ultraviolet disinfection in the future is a consideration in the design of the plant, but would not have addressed the clarification and capacity needs of the system presently and into the future.

B. TOTAL ESTIMATED COSTS

The estimated total cost of the proposed project is $12,418,000. The City anticipates receiving a Drinking Water State Revolving Fund loan to finance the project for
$11,000,000. The remaining $1,418,000 will be obtained for City cash reserves. The average monthly water rate is expected to stay the same as the current level of $55.14.

IV. AFFECTED ENVIRONMENT

A. PLANNING AREA

The City of Whitefish is located at the south end of Whitefish Lake in Flathead County in Montana. Whitefish sits at an elevation of 3,028 feet and has a population of approximately 7,870 people.

B. POPULATION AND FLOW PROJECTIONS

The City of Whitefish and the surrounding area continue to experience population growth. Historical population data presented in the table below was taken from U.S. Census data. The percent change between 2010 and the estimated 2018 is approximately 24%, which is a significant increase over eight years and equates to 2.9% growth per year. Population projections developed by others in previous planning documents assumed 2.5% annual growth and an average day per capita demand of 210 gpcd (average for 2015 through 2018). This analysis resulted in a projected demand of 4.0 mgd in 2020 and 6.6 mgd in 2040.

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<th>Year</th>
<th>Population</th>
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<td>1990</td>
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<td>2000</td>
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<tr>
<td>2010</td>
<td>6,354</td>
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<tr>
<td>2018</td>
<td>7,870*</td>
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</table>

*U.S. Census population estimate July 1, 2018.

C. NATURAL FEATURES

The WTP and Reservoir Road are situated in a forested semi-residential area in hilly terrain. Forest and recreational resources surround the project sites. Access to Whitefish Trail, primarily used for pedestrian and bicycle recreation, is adjacent to the project site. The predominant soil type in the development area is Whitefish gravelly silt loam.

Whitefish Lake Intake Pump Station is located on the east shore of Whitefish Lake, which is used as the secondary water source for the City of Whitefish as well as for various forms of recreation. All properties surrounding the project sites are privately owned. Work on this project will follow environmental permitting regulations including for construction stormwater and stream crossings will be permitted.

D. MAPS

Figure 1 shows an aerial photo of the project area for Whitefish. The figure shows the existing WTP near the east end of the project area and the proposed water and sewer main work areas. Figure 2 shows an overall view of Whitefish, MT. The Water Treatment Plant location is also noted in Figure 2.
Figure 1. Whitefish Project Area

Figure 2. City of Whitefish, Google Earth Map
V. ENVIRONMENTAL IMPACTS OF PROPOSED PROJECT

No adverse impacts to the environment are anticipated by implementation of the proposed water system improvements. All the WTP work, transmission main piping, residuals collection piping, and appurtenances will be located within existing City owned property, easements, and right-of-way’s.

A. DIRECT ENVIRONMENTAL IMPACTS

Soils Suitability, topographic and Geologic Constraints
No soil, topography, or geological constraints are present for the proposed project. Based on the existing conditions and soils types, the impacts of the proposed water project will have no significant effect on the soils or topography.

Land Use
Project work will occur at the Whitefish Lake Intake Pump Station, Reservoir Road, and the WTP, all located within close proximity to one another, approximately 1.75 miles north of downtown Whitefish.

Floodplains and Wetlands
The WTP is approximately 0.7 miles east of Whitefish Lake. There are no floodplains associated within the project area. A crossing of a surface water with the new water main will require US Army Corps of Engineers and local agency permitting. The WTP expansion and water main installation will have temporary impacts to stream flow and water quality. Water will be temporarily diverted using the methods noted in #6 of the Joint Application for Proposed Work in Montana’s Streams, Wetlands, Floodplains, and other Water Bodies document (this document is available from the City of Whitefish, Morrison Maierle, or DEQ). Additionally, BMP’s will be utilized to minimize impacts to water quality. Once construction is complete, stream flow and water quality will be back to pre-construction conditions.

On April 27, 2020, the Montana DEQ Water Protection Bureau provided document regarding Authorization No. MTB010220 Short Term Water Quality Standard for Turbidity Related to Construction Activity Pursuant to 75-5-318, MCA. This authorization is valid from April 27, 2020, through April 27, 2021.

Historical/Cultural Resources
The Montana State Historic Preservation Office was contacted and provided the following from Damon Murdo, “I have conducted a cultural resource file search for the above-cited project located in Section 24, T31N R22W. According to our records there have been no previously recorded sites within the designated search locale. The absence of cultural properties in the area does not mean that they do not exist but rather may reflect the absence of any previous cultural resource inventory in the area, as our records indicated none.

It is SHPO’s position that any structure over fifty years of age is considered historic and is potentially eligible for listing on the National Register of Historic Places. If any structures are to be altered and are over fifty years old, we would recommend that they be recorded, and a determination of their eligibility be made prior to any disturbance taking place.

As long as there will be no disturbance or alteration to structures over fifty years of age, we feel that there is a low likelihood cultural properties will be impacted. We, therefore, feel that a recommendation for a cultural resource inventory is unwarranted at this time. However, should structures need to be altered or if cultural materials be inadvertently discovered during this project, we would ask that our office be contacted, and the site investigated.”
**Biological Resources and Vegetation**

The Fish Wildlife Service provided an email that stated, “thank you for your April 30, 2020, letter requesting U.S. Fish and Wildlife Service comment on the proposed subject project in Whitefish, Montana.

The U.S. Fish and Wildlife Service reviewed your letter. Based on the information provided, we have no comments regarding federally-listed or proposed threatened or endangered species or other trust species. Additional information regarding listed species that may occur within the project footprint may be obtained using the IPaC project-planning tool, which streamlines the USFWS environmental review process at https://ecos.fws.gov/ipac/ [ecos.fws.gov]."

**Surface Water and Groundwater**

The proposed water system project will have no impacts on surface water/water quality, quantity or distribution. Likewise, the project will have no impact on groundwater resources. Available groundwater information, in the proposed project area, indicates that all construction will be above the groundwater elevation.

**Socio-Economic/Environmental Justice and Public Health**

This project will benefit all community members regardless of socio-economic status and ensure that properly treated water is provided to the public now and in the future.

**Air Quality**

Short-term negative impacts on the air quality will occur from heavy equipment, dust and exhaust fumes during project construction. Proper construction practices and dust abatement measures will be implemented during construction to control dust, thus minimizing this problem.

**Growth** – The City of Whitefish and the surrounding area continue to experience population growth. Historical population data presented in the table below was taken from U.S. Census data. The percent change between 2010 and the estimated 2018 is approximately 24%, which is a significant increase over eight years and equates to 2.9% growth per year. Population projections developed by others in previous planning documents assumed 2.5% annual growth and an average day per capita demand of 210 gpcd (average for 2015 through 2018). This analysis resulted in a projected demand of 4.0 mgd in 2020 and 6.6 mgd in 2040. The proposed improvements and additional space for the installation of future treatment facilities should be capable of serving the projected population out to 2041. The proposed improvements to the WTP and associated piping will be a positive feature for the community and will allow the City of manage its growth in a proactive manner within its service area.

**Energy**

No increased long-term energy consumption is anticipated.

**Noise**

Short-term impacts from increased noise levels will occur during construction of the proposed project improvements. Construction activities are anticipated to last less than 90 days and will occur only during daylight hours. Post-construction, no noise level impacts are expected.

**B. UNAVOIDABLE ADVERSE IMPACTS**

Short-term construction related impacts, such as noise, dust and traffic disruption, will occur but should be minimized through proper construction management. Energy consumption during construction cannot be avoided.
C. CUMULATIVE IMPACTS

This project addresses the existing water utility needs and will have no subsequent negative cumulative effects on resources, ecosystems, or human communities. The projected growth of Whitefish over the next 20 years is not expected to cause cumulative effects beyond the capacity of the resources. Further environmental analysis would be required for any discussion of cumulative impacts beyond this scope and time frame.

VI. PUBLIC PARTICIPATION

Community discussions have taken place to address the City’s growth and water treatment capacity. A public meeting was conducted for a rate increase on September 16, 2019. The construction planned for Reservoir Road is expected to be challenging due to site special constraints, traffic control, and areas of deep trenching. Therefore, the City is planning to hold a public meeting and distribute flyers to area residents in order to field residents’ concerns and inform them of what may be expected during construction.

VII. AGENCY ACTION, APPLICABLE REGULATIONS, AND PERMITTING AUTHORITIES

All improvements will be designed to meet Montana DEQ requirements. Proper State regulatory review and approval of the project plans and specifications will be provided. All applicable local, federal and state permits will be required including, but not limited to, a crossing of a surface water with the new water main will require US Army Corps of Engineers and local agency permitting. A construction storm water SWPPP permit is required of the contractor. There is Coordination and Encroachment permitting with the Flathead County Road and Bridge Department.

All appropriate easements and access will be addressed with regards to the water system infrastructure improvements.

VIII. REFERENCE DOCUMENTS

The following documents were utilized in the environmental review of this project and are considered to be part of the project file:

B. City of Whitefish Basis of Design Report, March 2020, prepared by Morrison Maierle
C. City of Whitefish – Uniform Application Form for Montana Public Facility Projects, April 24, 2020, Prepared by the City of Whitefish.

IX. AGENCIES CONSULTED

Several federal and state government agencies were sent letters on April 30, 2020, requesting a review of the proposed water system improvements project. The agencies that provided recent comments include the following:

A. U.S. Fish and Wildlife Service reviewed the project and provided a comment email that stated, “Based on the information provided, we have no comments regarding federally-listed or proposed threatened or endangered species or other trust species.” The full email can be provided upon request.
B. Montana Department of Natural Resources reviewed the project and provided a comment email that stated, “I have reviewed the proposed project for compliance to Montana floodplain and water right regulations.” The full email can be provided upon request.

Water rights: Is the proposed additional water source capacity covered by the City’s water right’s? Existing water rights limit the pumping rate to 1,100 GPM and volume to 3,182 AF/year. See attached water right abstracts. The Applicant has not quantified what the proposed additional water capacity or additional source capacity will be. A water right must be in place prior to construction of the project.

Floodplain: Modifications to the intake facility referred to in the letter, are to be within the existing facility. Based on 2009 LiDAR the existing facility appears to be above the BFE, 3004.23’ NAVD 88. There does not appear to be any floodplain permitting issues.”

The attachment included with the email can be provided upon request. The question on water rights was answered, and the plant capacity increase is intended to function within the existing water rights.

C. Montana Historical Society’s Historic Preservation Office reviewed the project and provided a comment email stating, “According to our records there have been no previously recorded sites within the designated search locale.” The email also states, “As long as there will be no disturbance or alteration to structures over fifty years of age, we feel that there is low likelihood cultural properties will be impacted. We, therefore, feel that a recommendation for a cultural resource inventory is unwarranted at this time. However, should structures need to be altered or if cultural materials be inadvertently discovered during this project, we would ask that our office be contacted, and the site investigated.” The full email can be provided upon request.

X. RECOMMENDATION FOR FUTURE ENVIRONMENTAL ANALYSIS

[ ] EIS [ ] More Detailed EA [X] No Further Analysis

Rationale for Recommendation: Through this EA, The Montana DEQ has verified that none of the adverse impacts of the City of Whitefish Water Source and Treatment Capacity Expansion Project are significant. Therefore, an environmental impact statement is not required. Based on this EA, a Finding of No Significant Impact (FONSI) will be issued and legally advertised in the local newspaper and distributed to a list of interested government agencies. Comments regarding the project will be received for 21 days before final approval of the EA is granted. This environmental review was conducted in accordance with the Administrative Rules of Montana (ARM) 17.4.607 thru 17.4.610.

EA Prepared By: 

Denver Fraser, P.E. 07/09/2020

EA Reviewed By: 

Mark Smith, P.E. 7/9/2020