Montana Department of Environmental Quality

FINDING OF NO SIGNIFICANT IMPACT
FOR
GORE HILL COUNTY WATER DISTRICT
WATER SYSTEM IMPROVEMENTS PROJECT

TO: ALL INTERESTED PERSONS

Date:	April 19, 2021
Action:	Water System Improvements Project
Location of Project:	Great Falls, Cascade County, Montana
DEQ/DWSRF Funding:	$997,000
Total Project Cost:	$997,000

An environmental review has been conducted by the Montana Department of Environmental Quality (DEQ) for proposed funding for the Gore Hill County Water District water system improvements project. The proposed project involves drilling two new wells to replace old, deteriorated wells, lining leaking storage tanks, relocating the gas chlorination systems, installing radio telemetry and dialer systems in the pump houses, installing pressure sensing devices in the distribution system, and installing a transfer switch on the backup generator. The purpose of the project is to make improvements to the drinking water system that are needed to protect public health.

The affected environment will be the area within the District-owned properties and public rights-of-way. The human environment affected will include the public water system and the approximately 565 residents in the District-served subdivisions. Based on the environmental assessment, 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 through the Drinking Water State Revolving Fund Loan Program administered by the Montana Department of Environmental Quality (DEQ) and the Montana Department of Natural Resources and Conservation (DNRC).

The DEQ utilized the following references in completing its environmental assessment of this project: a Uniform Application and Uniform Environmental Checklist for Montana Public Facility Projects and the Gore Hill County Water District Preliminary Engineering Report (dated July 2020) which were prepared by Great West Engineering for the District, as well as Project Plans and Specifications (dated April 2021) prepared by Great West Engineering. Review of potential contaminant sources was also completed by the Source Water Protection Section of DEQ. In addition to these references, letters were sent to fourteen state and federal agencies. Responses have been received from the Montana Historical Society's Historic Preservation Office, the U.S. Fish and Wildlife

Service, the U.S. Army Corp of Engineers, and DNRC. These references are available for review upon request by contacting:

Sandie Koenig, P.E.
Department of Environmental Quality
P.O. Box 200901
Helena, MT 59620-0901
Phone (406) 444-6770
Email: sandie.koenig@mt.gov
or
Brian Blackford, General Manager
Gore Hill CWD
P.O. Box 63
Great Falls, MT 59403
(406) 761-6528

Comments on this finding or on the EA may be submitted to DEQ at the above address. Comments must be postmarked no later than 30 days after the date of publication of this FONSI in the newspaper. After evaluating substantive comments received, DEQ will revise the EA or determine if an EIS 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.

Signed,

Mark Smith, DWSRF Supervisor
Engineering Bureau

c: file

GORE HILL COUNTY WATER DISTRICT
WATER SYSTEM IMPROVEMENTS PROJECT

ENVIRONMENTAL ASSESSMENT

I. COVER SHEET

A. PROJECT IDENTIFICATION

Applicant:	Gore Hill CWD
Address:	P.O. Box 263
	Great Falls, MT 59403
Project Number:	EQ No. 21-1474

B. CONTACT PERSON

Name:	Brian Blackford, General Manager
	Gore Hill CWD
Address:	P.O. Box 263
	Great Falls, MT 59403
Telephone:	(406) 761-6528

C. ABSTRACT

The Gore Hill County Water District (the District) covers approximately 500 acres in Cascade County and is located approximately 1.5 miles south of the Great Falls International Airport. It provides potable water to numerous subdivisions that lie adjacent to one another including Anderson Heights, Buchanan Park, Castle Heights, Morris Tracts, Pretty Prairie Ranchettes and Western Estates. There are 226 households in these subdivisions with a total estimated population of 565 people.

The District hired Great West Engineering to prepare a Preliminary Engineering Report (PER) to address the performance and condition of the water system. The 2020 PER identified several issues. The following actions are proposed to address issues that are pertinent to this project:

- Drill replacement wells for both existing water supply wells that are old and deteriorated.
- Relocate the gas chlorination systems to fiberglass structures adjacent to the treatment buildings.
- Install an automatic transfer switch on the existing 65 kW backup generator to eliminate the need to manually start the generator in the event of a power outage.
- Install a radio telemetry system and dialer in each pumphouse to provide a way to alert the operator to problems including pump failures and power

outages.

- Install pressure sensing devices in the distribution system that can communicate through the telemetry system and adjust system pressures based on actual distribution system pressure readings.
- Line the interior of the concrete storage tanks with an elastomeric urethane coating.

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.

The DEQ Engineering Bureau has prepared this Environmental Assessment (EA) to satisfy the requirements of the National Environmental Policy Act (NEPA) and the Montana Environmental Policy Act (MEPA).

D. COMMENT PERIOD

Thirty calendar days.

II. PURPOSE AND NEED FOR ACTION

The District's water system is in fair condition, but some system components are failing and in need of replacement. In addition, there are some other recommended enhancements that will improve the operations and management of the system. The following issues are pertinent to this project:

- The existing supply wells suffer from mineral encrustation and must be reamed out every three to four years to maintain the well's capacity. Each time this maintenance is performed, a portion of the well casing wall is removed reducing the structural integrity of the casing. There is fear that continued maintenance could result in a collapse of the casing.
- Gas chlorination systems are located too far away from the point of application to allow the District to maintain a consistent flow of chlorine.
- The backup generator is not equipped with an automatic transfer switch, which requires the generator to be manually started during power outages.
- There is no means of communication between the two pumphouses and there is no dialer system to notify the operator of system problems.
- There are no pressure sensing devices in the distribution system.
- The concrete storage tanks are leaking.

To address these issues, the system needs to drill two replacement wells, relocate the gas chlorination equipment closer to the application point, provide remote monitoring of pressures in the distribution system, provide a telemetry system and a dialer system,

install an automatic transfer switch on the backup generator, and line the concrete storage tanks.

A. EXISTING FACILITIES

The Gore Hill County Water District was created on July 9, 1974. The Gore Hill water system is supplied by two wells that are over 800 feet deep and are completed in the Madison aquifer. Both wells have a pumping capacity of 150 gpm. Both wells are treated with their own skid-mounted packaged treatment system which consists of gas chlorination for oxidation and disinfection followed by filtration with specialty media for arsenic, iron, and manganese removal. Storage is provided by four 50,000-gallon in-ground, concrete storage tanks. The distribution system consists of 33,800 lineal feet of 6- and 8-inch diameter water mains. Several of the mains terminate in dead ends which may lead to water quality problems from stagnation. Pressure for the distribution system is provided by two pump stations each containing two pumps that are operated in parallel. Water is supplied to the pump stations via the storage tanks and then pumped into the distribution system.

III. ALTERNATIVES INCLUDING THE PROPOSED ACTION

A. CONSIDERED ALTERNATIVES

The supply alternatives for addressing the District's supply needs included:

1. NO ACTION - The No Action alternative for the District's water supply system is considered a viable alternative. As long as the wells continue to function properly and required maintenance does not result in a complete failure of the casings, the wells can continue to be used. However, in the event that a well does fail, the District will find itself in an emergency situation.

2. WATER SUPPLY IMPROVEMENTS - This alternative consists of drilling a replacement well for both Well #1 and Well #2. The existing wells are completed to depths of 855 and 910 feet, respectively, and are completed in the Madison Formation. The wells currently produce approximately 150 gpm each. It is assumed the new wells will be of similar construction and capacity as the existing wells. This alternative also includes installation of an automatic transfer switch for the backup generator at Well #1, installation of slow opening check valves in both pump stations, and relocation of the gas chlorination systems at both sites.

The storage alternatives for addressing the District's storage needs included:

1. NO ACTION - The No Action alternative for the District's storage

facilities is considered a viable alternative. The tanks are still in decent structural condition although they appear to be leaking. Leakage from old concrete tanks is common and does not suggest failure is imminent. However, as leakage continues to increase, the District would be wasting treated water and the costs associated with treating and pumping that water.

2. INTERIOR LINING OF STORAGE TANKS - This alternative consists of applying an elastomeric urethane coating system to the interior surfaces of the concrete water tanks. The spray-applied product will result in a 60-mil flexible, impermeable tank liner that will eliminate the tank leakage.

B. PROPOSED ACTION

The proposed project includes:

- Drill replacement wells for both existing water supply wells that are old and deteriorated.
- Relocate the gas chlorination systems to fiberglass structures adjacent to the treatment buildings to maintain a consistent flow of chlorine.
- Install an automatic transfer switch on the existing 65 kW backup generator to eliminate the need to manually start the generator in the event of a power outage.
- Install a radio telemetry system and dialer in each pumphouse to provide a way to alert the operator to problems including pump failures and power outages.
- Install pressure sensing devices in the distribution system that can communicate through the telemetry system and adjust system pressures based on actual distribution system pressure readings.
- Line the interior of the concrete storage tanks with an elastomeric urethane coating.

The existing wells will also be abandoned once the new wells are operational.

C. TOTAL ESTIMATED COSTS

The total estimated cost of the proposed project is approximately $997,000. The District anticipates receiving a Drinking Water State Revolving Fund loan to finance the project. Average monthly water rates are expected to increase from approximately $52 to approximately $80 for residents.

IV. AFFECTED ENVIRONMENT

A. PLANNING AREA

The Gore Hill County Water District covers 500 acres on the eastern edge of the Sun River Bench, near Interstate 15, 1.5 miles south of the Great Falls International Airport. The Sun River Bench is bound by the Missouri River to the south and east and the Sun River to the north. The District services potable water to numerous subdivisions that lie adjacent to one another including Anderson Heights, Buchanan Park, Castle Heights, Morris Tracts, Pretty Prairie Ranchettes and Western Estates. Figure 1 presents an overall site map of the District.

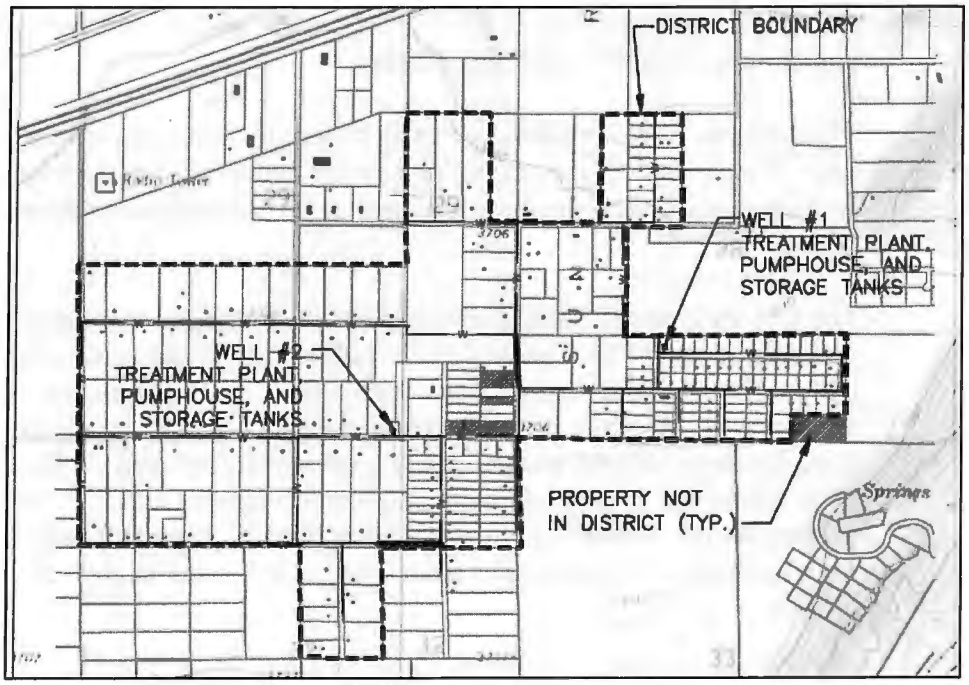

Figure 1. District Boundary

B. POPULATION AND FLOW PROJECTIONS

The current population of the District is estimated to be 565 people based on active user accounts (226 connections with 2.5 people per connection). The 2020 PER estimated a growth rate of 5 percent over 20 years which translates into an increase of 28 residents for a total of 593 people. Since there are vacant lots within the District boundary, this estimate is considered to be conservative.

Projected water use is based on the water demands developed by Great West Engineering in the 2020 PER. Table 3-4 of that report lists a 2040 average day demand of 30 gallons per minute and a maximum day demand of 90 gallons per minute using a maximum day peaking factor of 3.

C. NATURAL FEATURES

The topography is generally flat, lying at an elevation of 3,700 feet above mean sea level. The underlying geology of the area consists of the Marias River and Blackleaf shale formations. Soils are loams with some fine sand, and vegetation consists of native grasses and weeds. Land use within the district is primarily residential. Surrounding land use is mostly agricultural, such as range and pasture.

The climate is typical of the weather patterns of the high plains of north central Montana. Summer days are warm to hot with cool nights. Winter is often cold with occasional sub-zero temperatures caused by Arctic air masses from Canada. However, winter warming often occurs from frequent Chinook winds, which may produce temperature rises of 40 degrees F in a day. Fall and spring months are transition periods with variable weather.

The entire district, including all water system facilities, is outside of the 500-year and 100-year floodplains, as defined by the Federal Emergency Management Agency maps. Similarly, there are no streams or wetlands within the district boundaries.

The U.S. Fish and Wildlife Service identifies four species in Montana as endangered and twelve species as threatened. The endangered animal species include the whooping crane, black-footed ferret, pallid sturgeon, and white sturgeon. Threatened animal species in the state include the grizzly bear, Canada lynx, northern long-eared bat, piping plover, yellow-billed cuckoo, red knot, bull trout, meltwater lednian stonefly, and western glacier stonefly. Threatened plant species are the Spalding's catchfly, water howellia, and Ute ladies'-tresses. No impact on any of these species is anticipated as a consequence of the proposed project.

Construction will take place on the sites near water system facilities in previously disturbed areas. Therefore, no native vegetation is expected to be impacted by the construction. Similarly, the sites do not provide prime habitat for wildlife, and as a result no impacts on wildlife are anticipated.

V. ENVIRONMENTAL IMPACTS OF PROPOSED PROJECT

A. DIRECT AND INDIRECT ENVIRONMENTAL IMPACTS

1. Housing and Commercial Development – The project area is within the District boundaries in a residential area. The proposed improvements are not expected to have an impact on housing and any future commercial development.

2. Land Use – The proposed water system improvements are within the District boundaries. The proposed sites for each well are in the vicinity of

the existing wells. No further land use changes are expected as a result of this project.

3. Floodplains and Wetlands – The project area does not lie within the 100-year floodplain. No wetlands have been identified on the proposed construction sites.

4. Cultural Resources – Montana State Historic Preservation Office (SHPO) was contacted to complete a cultural resource file search for the Gore Hill County Water District area. SHPO indicated that there have been a few previously recorded cultural resource sites in the District but that impacts to cultural properties are not anticipated to be an issue with the proposed improvements within the District. The office responded that there is a low likelihood that cultural properties will be impacted and that a cultural resource inventory is unwarranted at this time. See Section IX: Agencies Consulted of this report for a summary of their comments.

5. Fish and Wildlife – The area around the District supports a vast array of wildlife including mule deer, whitetail deer, antelope, coyote, rabbit, skunk, weasel, rodents and others. Common bird species include the bald eagle, black-billed magpie, American robin, Canadian goose, osprey, blackbird, sparrow, warbler, common waterfowl, other raptors, game birds and others. Considering the scale and scope of the project, no significant long-term impacts on fish, wildlife, or biological resources is expected.

6. Water Quality – Impacts on water quality are expected to be minor and short-term and can be controlled through proper construction practices.

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

8. Public Health – The proposed project is not expected to have adverse impacts on public health, and should instead enhance public health by replacing old, deteriorated wells and improving system operations.

9. Energy - During construction of the proposed project, additional energy will be used, causing a direct short-term impact on this resource. For long-term impacts, it is expected that an increase in energy usage to operate the well pumps for the new wells will not be significant since the wells are replacing existing wells and will be absorbed into existing operations and maintenance costs for the current water system.

10. Noise - Short-term impacts from increased noise levels may occur during construction activities. The construction period will be limited to normal daylight hours to avoid early morning or late evening construction related

disturbances. In the long-term, no increase in noise levels associated with this project will occur.

11. Environmental Justice – Environmental Justice Executive Order 12898: The proposed project will not result in disproportionately high or adverse human health or environmental effects on minority or low-income populations. All persons in the District would benefit from an improved water system from both a public health and safety basis and an economic basis. No disproportionate effects among any portion of the community are expected.

12. Cumulative Effects –This project involves drilling two new water supply wells, relocating the gas chlorination system, and adding pressure sensors, telemetry, and tank liners. Based on the size and scope of the proposed project, no significant secondary or cumulative impacts are anticipated with the proposed improvements.

B. UNAVOIDABLE ADVERSE IMPACTS

Short-term construction-related impacts, such as noise, dust and traffic disruption, will occur but can be minimized through proper construction management. Energy consumption during construction cannot be avoided. No permanent direct, indirect, or cumulative adverse impacts are anticipated as a result of the proposed project.

VI. AGENCY ACTION, APPLICABLE REGULATIONS, AND PERMITTING AUTHORITIES

All water supply and conveyance improvements will be designed to meet 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.

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

VII. PUBLIC PARTICIPATION

On June 16, 2020, the District held a Public Hearing, at which the proposed project was explained in detail, including the purpose, the proposed area of the project, activities, budget, funding, and financial impacts that may result for local citizens because of the project. The public was then given the opportunity to ask questions and express opinions regarding the project and potential environmental impacts. People in attendance were supportive of the project and commended the Board for taking a proactive approach to address water system issues.

VIII. REFERENCE DOCUMENTS

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

A. Preliminary Engineering Report- prepared for the Gore Hill County Water District by Great West Engineering, Helena Montana, July 2020.

B. Drinking Water State Revolving Fund Application for the Gore Hill County Water District, Great Falls, Montana, May 2020, prepared by Great West Engineering, Helena Montana.

C. Uniform Environmental Checklist for Montana Public Facility Projects, July 2020, prepared by Great West Engineering, Helena Montana.

IX. AGENCIES CONSULTED

Fourteen state and federal agencies were contacted regarding the proposed construction of this project. Four agencies responded and below is a summary of each response received:

A. The Montana Historical Society, State Historic Preservation Office (SHPO) reviewed the proposed project and conducted a cultural resource file search for the proposed project area. In a letter dated January 28, 2021, SHPO states "According to our records there have been a few previously recorded sites within the designated search locales…Based on previous ground disturbance in the area, we feel that there is a low likelihood cultural properties will be impacted."

B. The Department of Natural Resources and Conservation reviewed the proposed project and responded in an email dated February 1, 2021 stating "…it appears the project is not located within a regulated floodplain and as such should not require a floodplain permit." This was confirmed by Cascade County in an email dated February 3, 2021 which stated that "The subject area is not located in the Regulated Flood Hazard Area and will not require a Floodplain Permit Application…"

C. The U. S. Fish and Wildlife Service (FWS) reviewed the proposed project and responded in an email dated February 5, 2021. With regard to this project, FWS had no concerns regarding federally listed or proposed threatened or endangered species or other trust species.

D. The U.S. Army Corps of Engineers reviewed the proposed project. A response letter dated February 3, 2021 noted that any work involving the placement of dredged or fill material in jurisdictional waters of the U.S. would require a permit. For this project, a Department of the Army (DA) permit is not required as no waters of the U.S. will be impacted.

X. RECOMMENDATION FOR FURTHER ENVIRONMENTAL ANALYSIS

❑ EIS ❑ More Detailed EA X No Further Analysis

Rationale for Recommendation: As discussed in the Preliminary Engineering Report prepared by Great West Engineering, the Gore Hill County Water District determined that replacement of their wells and other water system improvements will ensure public health is protected. Through this EA, the DEQ has verified that none of the adverse impacts of the proposed project are significant; therefore, an environmental impact statement is not required. The environmental review was conducted in accordance with the Administrative Rules of Montana (ARM) 17.4.607, 17.4.608, 17.4.609 and 17.4.610. This EA is the appropriate level of analysis because none of the adverse effects of the impacts are significant. A Finding of No Significant Impact (FONSI) will be issued and legally advertised in the local newspaper and distributed to a list of interested agencies. Comments regarding the project will be received for 30 days before final approval is granted.

EA prepared by:

Sandie Koenig, P.E. 4-16-21 Date

Approved By:

Robert Ashton for
Mark Smith, P.E. 4/16/2021 Date
Mark Smith