

**FINDING OF NO SIGNIFICANT IMPACT
FOR
TOWN OF SUPERIOR WATER SYSTEM IMPROVEMENTS**

TO: ALL INTERESTED PERSONS

Date: November 25, 2008
Action: Funding Water Main Replacements
Location of Project: Superior, Montana
DEQ Funding: \$297,532.
Total Project Cost: \$1,236,000.

An environmental review has been conducted by the Montana Department of Environmental Quality (DEQ) for proposed funding for improvements to the Town of Superior Water System. The proposed project involves water main replacement projects. The purpose of the project is to replace old and undersized water mains in order to protect public health and the integrity of the drinking water infrastructure.

The affected environment will primarily be the area of Superior, Montana and the immediate vicinity. The human environment affected will include residents and visitors of Superior. 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 in part with low interest loans through the Montana Drinking Water State Revolving Fund Program, administered by the Montana Department of Environmental Quality and the Montana Department of Natural Resources and Conservation.

The DEQ utilized the following references in completing its environmental review of this project: Water System Preliminary Engineering Report, For the Town of Superior, May 2006 Design Report for Town of Superior Phase 1 Water System Improvements, undated, Contract Documents and Specifications, August 2008, Uniform Application Form for Montana Public Facility Projects for the Town of Superior Water Facility Improvement, Water Replacement, May 22, 2007, Construction Drawings for the Town of Superior, Montana, Town of Superior Water System Improvements Project, received August 2008, SOIL INVESTIGATION Water System Improvements – Phase 1 For the Town of Superior, October 2008.

In addition to these references, letters of inquiry were sent to the Montana Department of Fish, Wildlife & Parks, the United States Fish and Wildlife Service, the Montana Department of Natural Resources & Conservation, the United States Army Corps of

Engineers, the Montana State Historic Preservation Office and the Montana Department of Environmental Quality.

References are available for review upon request by contacting:

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P.O. Box 200901
Helena, MT 59620-0901
Phone (406) 444-6770
Email: mgolz@mt.gov

Or:

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Town of Superior
P.O. Box 729
Superior, MT 59872
(406) 822-4672
Email: townofsuperior@blackfoot.net

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,

Todd Teegarden, Chief
Technical & Financial Assistance Bureau

c: file

TOWN OF SUPERIOR WATER REHABILITATION PROJECT
ENVIRONMENTAL ASSESSMENT

I. COVER SHEET

A. PROJECT IDENTIFICATION

Applicant: Town of Superior
Address: P.O. Box 729
Superior, MT 59872
Project Number: DWSRF not assigned yet

B. CONTACT PERSON

Name: Michael Wood, Mayor
Address: Town of Superior
P.O. BOX 729
Superior, MT 59872
Telephone: (406) 822-4672

C. ABSTRACT

The Water System Preliminary Engineering Report for the Town of Superior (May 2006) identified the distribution system (water mains) as the primary problem area for the water system. Old and undersized pipes occur in several areas of town and create deficiencies in water pressure and delivery. The preliminary engineering report examined and recommended phases of improvements. Phase 1, the subject of this environmental review, would replace a significant quantity of those pipes in areas that provide the most advantage to the water system while respecting the Town's budgetary limits. The improvements will reduce the overall maintenance requirements, increase system reliability, and will eliminate old and undersized water mains.

The approximate cost of the water distribution work is \$1.236 million, of which \$297,532 will be borrowed by the Town of Superior from the Drinking Water State Revolving Fund (DWSRF) loan program. \$600,000 will come from the Treasure State Endowment Grant Program, \$100,000 from a DNRC grant and the Town will provide \$238,468.

Environmentally sensitive characteristics such as wetlands, floodplains, threatened or endangered species and historical sites are not expected to be adversely impacted as a result of the proposed project. Additional environmental impacts related to land use, water quality, air quality, public health, energy, noise, and growth were also assessed. No significant long-term environmental impacts were identified.

While planning this project the engineers discovered that it was possible that the project might encounter contaminated soils during construction. The Department of

Environmental Quality and the engineers have been working to address that issue. In some parts of town mine tailings are present and those tailings may contain unacceptable levels of contaminants such as Arsenic or Lead. Contaminated soils may be excavated unavoidably during the installation of pipelines. A significant amount of sampling has already been conducted to determine the likelihood of encountering contaminants and to assist the DEQ and the engineers to develop an appropriate response to contaminants that are encountered during construction. Low level contaminated soils may be left in place, but if certain levels are exceeded the contractor would be required to remove the soil and eventually dispose of it in a classified waste repository.

The project will be constructed using standard construction methods and to minimize or eliminate pollutants during construction, best management practices will be implemented. A Stormwater Discharge General Permit and a construction-dewatering permit from the DEQ may be required prior to construction. No permits other than plan and specification review and approval are required from the State Revolving Fund (SRF) section of the DEQ for this project.

The DEQ, Technical & Financial Assistance 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 (30) calendar days

II. PURPOSE OF AND NEED FOR ACTION

A. WATER FACILITIES

The drinking water distribution system improvements are necessary in order to address deficiencies to help the Town of Superior provide water users with a safe, reliable water supply. The main health and safety issue associated with the current water system is the risk of contamination from old and undersized mains, and low water pressures during high flow events and the inability to provide fire flows in certain areas. If a deteriorating water main breaks, the break could cause a loss of fire service, contamination, and a loss of water service.

A sound distribution system is important for public health and safety. Replacing these water mains will reduce the public health and safety risk to the residents and visitors of the Town of Superior.

Approximately \$4.2 million for 3 phases of improvements to the distribution system have been identified. This environmental assessment covers only the first phase, \$1.236 million, of improvements. The other phases will be implemented in the future as they become necessary and as the budget allows.

III. ALTERNATIVES INCLUDING THE PROPOSED ACTION AND COSTS

A. WATER DISTRIBUTION SYSTEM

1. NO ACTION

The “no action” alternative was not considered beyond initial screening. This alternative will not remedy the problems, but would simply defer them to the future and allow problems to accumulate and perhaps increase in severity. As water mains deteriorate, the possibility of water system contamination and loss of water service will increase. Based on these concerns for public health and safety, the no action alternative was not recommended.

2. PROPOSED ACTION

The Phase 1 work consists of water distribution system improvements at five sites in Superior (see Figure 2):

- **Site 1** is along Diamond Road and Iron Mountain Road near the Town Pump filling station, convenience store and casino on the south side of Interstate 90. The work in this area will replace 1½-inch, 2-inch and 3-inch mains with 12-inch AWWA C900 DR 18 PVC mains. The 12-inch mains will greatly improve system pressures and fire protection on the south side of I-90. Two new fire hydrants will be installed. One significant change was made to the work proposed in the PER at this site. The location of the crossing of the Montana Rail Link / Burlington Northern Santa Fe Railroad (MRL/BNSF) right-of-way (ROW) and Montana Department of Transportation (MDT) ROW was moved approximately 680 feet southeast to near the location of the existing Iron Mountain Road crossing. The crossing can be made perpendicular to the tracks at this location, thus shortening the crossing distance. There will be no significant differences in distribution system hydraulics compared to the original configuration of the new mains. Sheet piling will be installed between Stations 0+00 and 2+80 on Diamond Road to stabilize the slope next to the trench. The minimum separation distances between water and sewer mains required in DEQ-1 will be maintained.

Modeling demonstrates that distribution system pressures remain above 80 psi under maximum day demands and above 55 psi during a 1000 gpm fire on Iron Mountain Road at Site 1 on the maximum day. Iron Mountain Road at Site 1 could be regarded as the extremity of the distribution system since it is located across Interstate 90 and is at a higher elevation than most of Superior.

- **Site 2** is near the County Hospital and the Mountain View Living Assisted Living facility on Sixth Avenue and Sherlaw Street. There was also a significant change at Site 2. The original plan for Site 2 was to install a 12-inch main on 6th Avenue and Roosevelt Street. However, because of cost limitations, the main would dead-end on Roosevelt Street. It was determined that connecting the 12-inch main at Site 2 to a recently constructed 12-inch main on 4th Avenue via Sherlaw Street would provide looping and eliminate the dead-end for approximately the same cost. There is currently very limited fire protection in this area. The new 12-inch main would provide fire flows of approximately 1500 gpm in the area of the hospital. Two new fire hydrants will be provided. There are no sewer main conflicts at this site.

- **Site 3** is on Main Avenue between 4th Street and 6th Street. No significant changes from the PER were made at Site 3. The minimum separation distances between water and sewer mains required in DEQ-1 will be maintained.
- **Site 4** is primarily on Riverside Avenue. A short segment of new main is also proposed on 3rd Street. The minimum separation distances between water and sewer mains required in DEQ-1 will be maintained.
- **Site 5** is primarily on Mullan Road. A short segment of new main is also proposed on River Street. Four new fire hydrants are proposed. There were no significant changes from the PER at Site 5. However, there are numerous conflicts on Mullan Road, including multiple telecommunication cables, sewer mains, a fiber optic cable, water and sewer services, storm water culverts, a large culvert that carries Flat Creek, and soils that have apparently been contaminated with tailings from the Iron Mountain Mill. In addition, Mullan Road is a state highway, so permits from MDT are required. Consequently, the proposed main installation drifts considerably in alignment to minimize conflicts with existing facilities.

The total design engineering costs for this projects will be approximately \$99,930.

The total budgeted costs with the above projects including Administration, Construction Engineering and Contingencies is approximately \$1.236 million.

The water main replacements are to be constructed within the existing right-of-ways and are typically installed in the same locations as existing mains.

TABLE 2 WATER PROJECT AFFORDABILITY	
Existing Monthly water service rate	\$35.00
New monthly debt service and O&M increase	\$ 4.36
Total monthly user cost ¹	\$39.36
Monthly median household income (mMHI) ²	\$2,111
User rate as a percentage of mMHI	1.86 %

¹ Uniform Application for Montana Public Facility Projects

² Based on 2000 census data

IV. AFFECTED ENVIRONMENT

A. STUDY AREA

The Town of Superior is located in Western Central Montana along the Clark Fork River. The location of Superior can be seen on the enclosed map in Figure 1.

Water main replacement will occur within the existing rights-of-way or dedicated easements within the town limits (See Figure 2). Approximately 8,450 feet of water main will be installed. Construction is scheduled to begin in Spring of 2009 and continue for approximately 4 months.



FIGURE 1
LOCATION MAP

B. POPULATION AND FLOW PROJECTIONS

The population of Superior in the 2000 census was 893 people. As detailed above and shown on Figure 2, there are five locations spread out across Superior that will be affected by the main replacements. No significant growth is forecast as a result of the main replacement projects. The project simply replaces existing mains in existing developed areas. Due to leak detection and repair and installing water meters water use in the Town has declined by over 30% in average daily use.

The Standards for Water Works of MDEQ Circular DEQ 1 will be required to be met for both the design and construction of the replacement mains. The standards require that water mains be designed to maintain a minimum pressure of 20 pounds per square inch (psi) under all conditions of flow and 35 psi under normal conditions. The standards also govern pipe materials and bedding and sanitary protection of the water system and sanitary delivery of a temporary supply of water and disposal of wastewater during construction.

C. NATURAL FEATURES

Topography and Soils

Superior lies in a river valley on a river terrace with most of the town on the south side of the Clark Fork River. A small part of town is located north of the river. The soils in the immediate project area consist of McCaffery complex, derived from sandy sediments with some silts and clays and some gravelly and cobble sand deposits as well as fine sandy loams. Most of the exposed rocks in the valley are Precambrian sedimentary. The area has had numerous mines in the area producing lead, silver and gold. Elevation at town hall in Superior is 2,701 feet above sea level.

Land Use - The land use in the study area is primarily residential and commercial. The Mineral County Hospital will be served by this project.

Groundwater and Surface Water -

The depth to groundwater in the study area varies both with location and season. Average well depth in the area is 100 feet. If groundwater is present during construction, dewatering of trenches may require a construction dewatering permit. Also, if groundwater is encountered construction methods will be adjusted. No adverse impacts to groundwater are expected.

The Town of Superior public water supply uses 3 wells that are all located within the Town limits. These wells are completed in deep alluvium or glacial Lake Missoula sediments.

The Clark Fork River flows along and forms the border of most of the north edge of Superior.

D. MAPS

Figure 1 shows the general location of the Town of Superior within the state of Montana. Figure 2 shows the location of the proposed improvements within the Town.

V. ENVIRONMENTAL IMPACTS OF PROPOSED PROJECT

A. DIRECT AND INDIRECT IMPACTS OF PROPOSED PROJECT

No adverse impacts to the environment are anticipated by implementation of the proposed main replacements. All of the system improvements will be located within the existing town rights-of-way (streets or alleys) or easements owned and/or maintained by the Town.

Land Use-The land use in the study area is residential and commercial. No adverse affects to any of these uses is expected.

Soils Suitability, Topographic and Geologic Constraints- As mentioned in the abstract (Section I C above) there are some constraints related to soils in the project area. The Town has conducted some special soil sampling due to the potential of encountering contaminants during excavation for the installation of pipes. The special sampling was done to identify mill tailings and associated arsenic and lead contamination in areas where main replacements are planned and to provide information for assessment of human health risks that the contaminants could pose. The Town is working with the Montana Department of Environmental Quality to finalize plans for contaminant identification, containment and disposal. The specifications contain special provisions requiring the contractor to follow the directions of the project engineer or the Town in transporting and storing any contaminants that exceed the established action levels. Those action levels are 40 milligrams (mg) of arsenic per kilogram (kg) of soil and 400 mg of lead per kg of soil.

No topographical or geological constraints are present for the proposed water project. Based on the existing conditions and soils types, and except as noted above for contaminated soils, the impacts of the proposed water project will have no significant effect on the soils or topography.

Fish and Wildlife and Biological Resources - The construction of the recommended improvements is not expected to impact endangered or threatened species. Since the work will be accomplished on public rights-of-way or negotiated easements. No construction related impacts are anticipated to wildlife habitats, fisheries or other animals.

Fauna - Fauna in the area consists of typical mammalian species found in the intermountain west, including mule deer, whitetail deer, coyote, rabbit, skunk, rodents and others. Common bird species include the black-billed magpie, American robin, Canadian goose, osprey, bald eagle, blackbird, sparrow, warbler, common waterfowl, other raptors, game birds and others.

Vegetation - Vegetation types in the Superior area consists of introduced and native species of landscaping trees, shrubs and grasses. There are some areas of natural vegetation in the river corridors that consist of native riparian flora.

The main replacements are taking place in developed roads and streets and should have no impact on sensitive plant species.

Water Resource Issues - No significant adverse impacts to surface or groundwater will result from the proposed project.

Floodplains and Wetlands – No adverse impacts to the floodplain are expected. The Town of Superior corporate limits encompass the Clark Fork River’s 100-year flood plain in the area.

Cultural Resources & Historical Sites – Since the proposed construction sites occur within previous disturbed areas, the State Historic Preservation Office indicated that there is a low likelihood that cultural properties in the area will be impacted by the type of work contemplated in this report.

Socio-Economic Issues - The population served by this water system is not considered to be disadvantaged either by minority or income status. No adverse human health or socio-economic impacts are expected as a result of these main replacement projects.

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 must be specified during construction to control dust, thus minimizing this problem. No long-term air quality problems will result from this project.

Energy - During construction of the proposed project, additional energy will be consumed, resulting in a direct short-term increased demand on this resource. The project will eliminate one lift station and eliminate leaking water mains, which will reduce pumping costs and save energy in the long-term operation of the utility systems.

Public Health – Public health impacts will be improved due to improved water pressures and less leaks in the water distribution system.

Noise - Short-term impacts from excessive noise levels may occur during the 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.

Growth - No significant growth is forecast as a result of the main replacement projects. The project replaces existing mains in existing developed areas.

B. UNAVOIDABLE ADVERSE IMPACTS

All of the lines will be constructed within the street right-of-way or alley ways; therefore street surface restoration will be required. Also, access to and from homes during construction will take special consideration. Short-term water outages and temporary above ground water supply will likely be necessary during construction. DEQ 1 design standards require that the specifications cover temporary supply of water to residents in a safe and sanitary manner. 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 system needs and will have no negative cumulative effects on resources, ecosystems or human communities. The projected growth due to this project is little to none and is not expected to cause cumulative effects.

VI. AGENCY ACTION, APPLICABLE REGULATIONS, AND PERMITTING AUTHORITIES

All water system 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 storm water discharge permit and a construction-dewatering permit if needed.

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

VII. PUBLIC PARTICIPATION

A public hearing regarding this project was held Monday April 10th, 2006. Discussion at the meeting focused on emergency power generation, fire flows, the possible addition of a fourth well and other minor water system issues. No opposition to the project was evident in the minutes of the hearing.

VIII. REFERENCE DOCUMENTS

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

1. Water System Preliminary Engineering Report, For the Town of Superior, May 2006 prepared for the Town of Superior by Anderson-Montgomery Consulting Engineers, Helena, Montana.
2. Design Report for Town of Superior Phase 1 Water System Improvements, prepared by Anderson-Montgomery Consulting Engineers, Helena, Montana, undated.
3. Contract Documents and Specifications, prepared for the Town of Superior, by Anderson-Montgomery Consulting Engineers, Helena, Montana, August 2008.
4. Uniform Application Form for Montana Public Facility Projects for the Town of Superior Water Facility Improvement, Water Replacement, May 22, 2007.
5. Construction Drawings for the Town of Superior. Montana Town of Superior Water System Improvements Project, received August 2008.
6. SOIL INVESTIGATION Water System Improvements – Phase 1 For the Town of Superior, prepared by Anderson-Montgomery Consulting Engineers, Helena, Montana, October 2008.

IX. AGENCIES CONSULTED

The following agencies have been contacted by letter of inquiry in regard to the PER, which determined the basis for the proposed water main replacement project:

1. The Montana Department of Fish Wildlife and Parks (FWP). Did not have specific comments on the project and no concerns about impacts to fisheries habitat or wildlife.
2. The U. S. Fish and Wildlife Service (FWS) was contacted about the proposed project and determined that “no effects to federally protected species will occur”.
3. The Montana State Historic Preservation Office (SHPO) considered the impacts of the proposed project on historical sites and determined there is a low likelihood cultural

properties will be impacted. The Montana State Historic Preservation Office asks to be contacted and the site investigated should cultural materials be inadvertently discovered during construction.

4. The U.S. Army Corps of Engineers was asked in a letter by the project consultant for comments on the proposed project. The U.S. Army Corps of Engineers has not responded, however the project will not include work within wetlands or waters of the U.S. and no USACE Section 404 permit will be needed.
5. Department of Natural Resources and Conservation (DNRC) was asked in a letter by the project consultant for comments on the proposed project. The DNRC has not responded.
6. The Montana Department of Environmental Quality – Drinking Water SRF Program reviewed the proposed project and concluded the project was eligible for funding. The DEQ will also review plans and specifications and ensure compliance with State design standards.

Recommendation for Further Environmental Analysis:

EIS More Detailed EA No Further Analysis

Rationale for Recommendation: Through the Preliminary Engineering Report (PER), prepared by Anderson-Montgomery Consulting Engineers and the other reference documents listed above in Section VIII and the input from the agencies that responded to the letters of inquiry (Section IX) and comments from the public process involved, no significant adverse impacts should occur from the proposed action; 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 there will be no significant adverse impacts. A Finding of No Significant Impact (FONSI) will be issued and legally advertised in the local newspaper and distributed to a list of interested entities. Comments regarding the project will be received for 30 days before final approval is granted.

EA Prepared By:

Marc Golz, P.E.

Date

Approved By:

Mark Smith, P.E.

Date