

April 30, 2008

Rick Johnson  
City of Great Falls  
P.O. Box 5021  
Great Falls, MT 59403

RE: Environmental Assessment

Dear Rick:

Enclosed is the environmental assessment (EA) for your three projects along with a Finding of No Significant Impact (FONSI). Please print a copy of the FONSI in your local paper. You do not need to print the EA. The written EA includes your letter of March 7 regarding the projects. But that letter is not included with the electronic version I sent earlier. Todd Teegarden signed the FONSI. I prepared the EA and it was reviewed and signed by Robert Ashton and Mark Smith.

Thank you, if you have any questions, please let me know.

Sincerely,

Marc Golz, P.E.  
Senior Engineer  
DWSRF Program

**FINDING OF NO SIGNIFICANT IMPACT  
FOR  
CITY OF GREAT FALLS WATER SYSTEM IMPROVEMENTS**

**TO: ALL INTERESTED PERSONS**

Date: April 25, 2008  
Action: Funding Water Main Replacemets  
Location of Project: Great Falls, Montana  
DEQ Funding: \$2,980,000.  
Total Project Cost: \$2,980,000.

An environmental review has been conducted by the Montana Department of Environmental Quality (DEQ) for proposed funding for improvements to the City of Great Falls Water System. The proposed project involves water main replacement projects. The purpose of the project is to make improvements to the City of Great Falls water system that are needed to protect public health and the integrity of the drinking water infrastructure.

The affected environment will primarily be the area of Great Falls, Montana and the immediate vicinity. The human environment affected will include residents and visitors of Great Falls. 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 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: a Uniform Environmental Checklist for Montana Public Facility Projects completed by City of Great Falls and a Water Master Plan dated 2006 Thomas, Dean and Hoskins, Inc and Black and Veatch Corporation consulting engineers for the City of Great Falls; and an environmental checklist and environmental assessment completed by the DEQ. In addition to these references, letters were sent to Montana Department of Fish, Wildlife & Parks (FWP), the Montana Department of Natural Resources & Conservation (DNRC), United States Army Corps of Engineers (USACE) and the Montana State Historic Preservation Office (SHPO) and the Department of Environmental Quality and the Great Falls-Cascade County Historic Preservation Office. Responses have been received from SHPO, DNRC and Great Falls-Cascade County Historic Preservation Office in addition to on-going DEQ review and approval processes. These references are available for review upon request by contacting:

Marc Golz  
Department of Environmental Quality  
P.O. Box 200901  
Helena, MT 59620-0901  
Phone: (406) 444-6770  
Email: mgolz@mt.gov

Or:

Rick Johnson  
City of Great Falls  
P.O. Box 5021  
Great Falls, MT 59403-5021  
Phone: (406) 771-1258  
Email: rjohnson@greatfallsmt.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,

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Todd Teegarden, Chief  
Technical & Financial Assistance Bureau

c: file

CITY OF GREAT FALLS  
WATER SYSTEM IMPROVEMENTS  
ENVIRONMENTAL ASSESSMENT

I. COVER SHEET

A. PROJECT IDENTIFICATION

Applicant: CITY of GREAT FALLS  
Address: P.O. Box 5021  
Great Falls, MT 59403-5021

B. CONTACT PERSON

Name: Rick Johnson  
Address: CITY of GREAT FALLS  
P.O. Box 5021  
Great Falls, MT 59403-5021

Telephone: (406) 771-1258

C. ABSTRACT

The City of Great Falls, through a 2006 Water Master Plan (WMP), prepared by Thomas, Dean and Hoskins, Inc and Black and Veatch Corporation, has investigated the needs of their public water system. The WMP examined all components of the system including supply, storage, and distribution. The WMP identified deficiencies in the existing water supply system including distribution system piping. The WMP identified criteria for replacing water mains that are either very old or have a history of breaks. This Environmental Assessment (EA) addresses water main replacement projects that fit within those criteria.

The WMP examined viable alternatives to water main replacements and established three priorities for water main replacements as follows:

- Priority 1: Pipe with history of breaks plus pipe projects that were previously included in the City's Capital Improvements Plan.
- Priority 2: Pipe installed prior to 1900 to 1909.
- Priority 3: Pipe installed between 1910 and 1929.

This project will consist of water main replacements that will be funded by a low interest loan from the Drinking Water State Revolving Fund Loan (DWSRF) Program. This EA examines three proposed main replacement projects described in a letter from the City of Great Falls dated March 7, 2008 (attached, projects 2, 3 and 4). Based on this review, 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 projects. No significant long-term environmental impacts were identified.

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

Thirty (30) calendar days.

II. PURPOSE AND NEED FOR ACTION

The distribution system improvements are necessary in order to address deficiencies and to continue to provide City of Great Falls water users with a safe, reliable water supply.

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 City of Great Falls.

III. ALTERNATIVES INCLUDING THE PROPOSED ACTION AND COSTS

Supply alternatives analyzed include the “do nothing” option or approaching the priorities in a different order or implementing the priorities as discussed above.

The “do nothing” alternative was not considered beyond the initial screening stage. 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. The City of Great Falls selected the alternative that replaces water mains utilizing the three priorities above and the City’s capital improvements plan.

The three water main replacement projects are estimated to cost \$2,980,000 which will be funded using a low interest loan from the State Revolving Fund Loan Program.

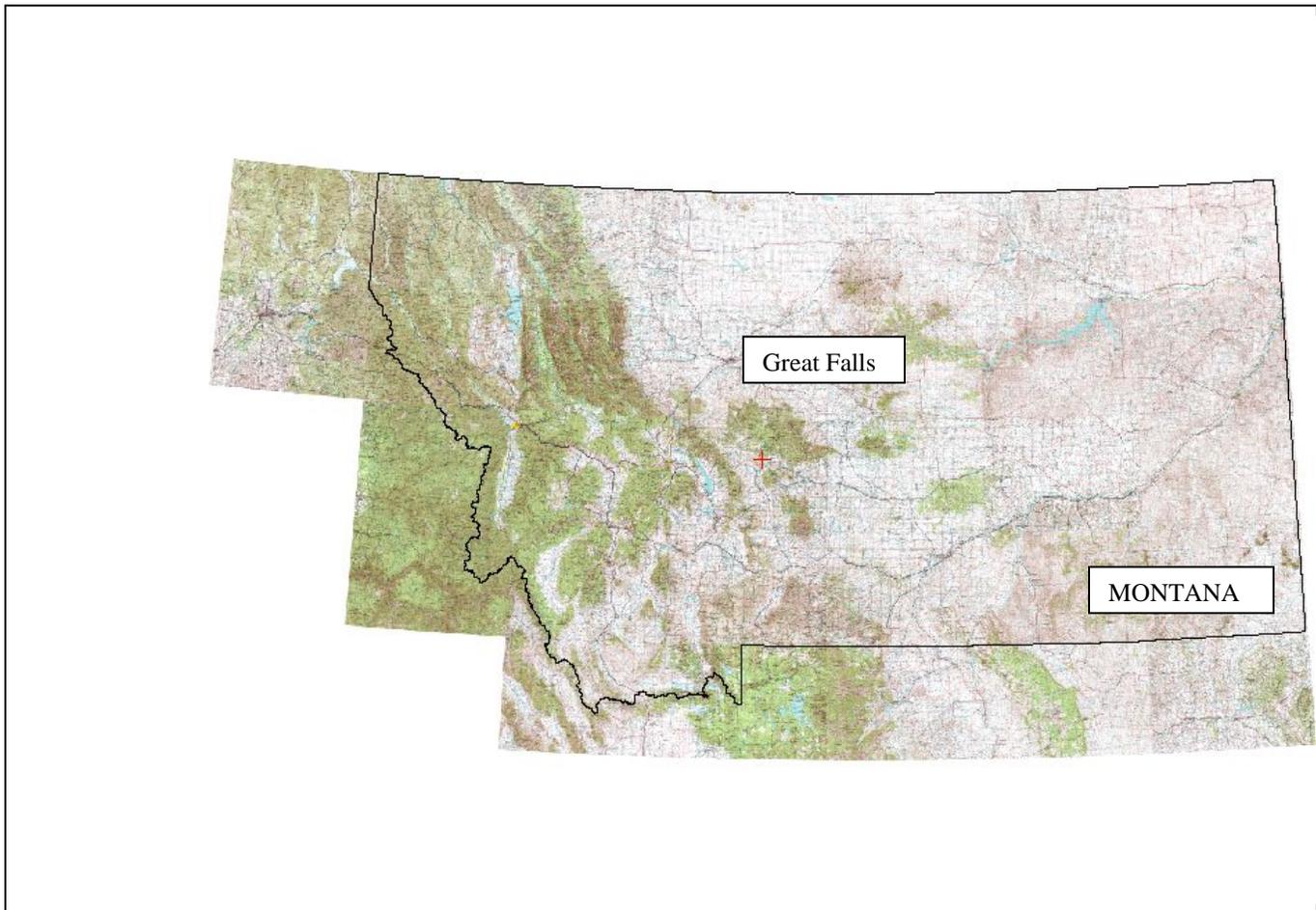
The water main replacements are to be constructed within the existing right-of-ways and are typically installed in the same locations as existing mains.

IV. AFFECTED ENVIRONMENT

A. STUDY AREA

The City of Great Falls is located in North Central Montana at the confluence of the Sun and Missouri Rivers. Great Falls can be seen on the enclosed map in Figure 1.

Figure 1. Great Falls Location



## B. POPULATION AND FLOW PROJECTIONS

The population of the entire Great Falls service area is 58,836 people. Only a small portion of that entire population will be affected by the main replacements which are essentially taking place on a neighborhood level. No significant growth is forecast as a result of the main replacement projects. The projects simply replace existing mains in existing developed areas.

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 water 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 during construction.

## C. NATURAL FEATURES

### Topography and Soils

The Missouri River flows from the southwest to the northeast through Great Falls. Topography in Great Falls consists primarily of very gentle slopes with some relief in local areas. Elevation ranges from approximately 3,500 feet above sea level to 3,300 feet above sea level at the Missouri River.

Soils are predominantly silty clay loams with some areas of sandy loams and silty clays. Many of the areas in Great Falls contain soils that are corrosive to iron and steel, which is a documented problem for the City's water pipes and fittings. Mains are generally replaced with Poly Vinyl Chloride pipe (PVC) where possible. PVC is resistant to the corrosive soils. In some cases iron or steel may be used but must be properly coated and protected from corrosion by other means.

### Groundwater and Surface Water

The surface waters within the Study Area are primarily the Missouri River and the Sun River. No river crossings are involved and no work is proposed in close proximity to either river or their banks.

The depth to groundwater in the study area varies both with location and season. 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.

### Floodplains

A portion of project number three along 5<sup>th</sup> Avenue Southwest from 14<sup>th</sup> Street 20<sup>th</sup> Street falls within a floodplain.

### Land Use

The land use in the study area is residential, commercial, industrial and military. No adverse affects to any of these uses is expected.

### Biological Resources

#### Fauna

Fauna of the general 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, blackbird, sparrow, warbler, common waterfowl, other raptors, game birds and others.

#### Vegetation

Vegetation types in the Great Falls 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 water main replacements are taking place in developed roads and streets and should have little to no impact on Flora or Fauna.

## V. DIRECT AND INDIRECT ENVIRONMENTAL IMPACTS OF PROPOSED PROJECT

No adverse impacts to the environment are anticipated by implementation of the proposed water main replacements. All of the distribution system improvements will be located within the existing limits of the District, either in existing streets or in platted street right-of-ways.

### Soils Suitability, Topographic and Geologic Constraints

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

### Biological Resources

The construction of the recommended improvements is not expected to impact endangered or threatened species. The work will be accomplished on public rights-of-way or negotiated easements. Only minor construction related impacts are anticipated.

### Water Resource Issues

No significant adverse impacts to surface or groundwater will result from the proposed project.

### Floodplains and Wetlands

No long-term adverse impacts, due to the project location in the 100 year floodplain along 5<sup>th</sup> Avenue, to either the floodplain or the water main are anticipated. It is possible that, during construction, soils excavated from the trenches could cause localized changes to flood flow, or trenches could fill with water and collapse, if a flood happened. By definition the probability of a 100-year flood in any one year is 1 in 100. Therefore, the probability of a flood is remote and the impacts as a result of the project and a flood, if one did occur, would not be significant.

### Cultural Resources & Historical Sites

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.

### Energy

During construction of the proposed project, additional energy will be consumed, resulting in a direct short-term increased demand on this resource.

### Noise

Short-term impacts from increased noise levels will occur during construction of the proposed project improvements. Construction activities on each project will last between 100 and 128 days. These three projects will span a total elapsed time of approximately twelve to fourteen months. Construction will be limited to normal daylight hours.

A. UNAVOIDABLE ADVERSE IMPACTS

All of the water lines will be constructed within the street right-of-way; 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.

B. CUMMULATIVE IMPACTS

This project addresses the existing water utility 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. PUBLIC PARTICIPATION

Public participation regarding this project consists of normal city commission meetings at which the Water Master Plan was discussed. Public notice will be given by way of the Finding associated with this environmental assessment.

VII. 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 stormwater discharge permit and a construction-dewatering permit if needed.

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

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:

- A. The 2006 Water Master Plan, for the City of Great Falls, prepared by Thomas, Dean and Hoskins Inc, Black and Veatch, Corp.
- B. Uniform Environmental Checklist for Montana Public Facility Projects, March 12, 2008, prepared by Jason Handl, P.E., City of Great Falls.
- C. City of Great Falls Letter of March 7, 2008, seeking comment regarding the environmental impact of proposed water main replacement projects, prepared by Rick Johnson, Civil Engineer, City of Great Falls.

IX. AGENCIES CONSULTED

The following agencies were contacted regarding the proposed construction of this project:

- A. The U.S. Fish and Wildlife Service was asked in a letter by the project consultant for comments on the proposed project. The Service has not responded.
- B. 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.
- C. The Montana Historical Society's Historic Preservation Office reviewed the project and sent a comment letter dated March 11 2008. The letter states, "We feel that there is a low likelihood cultural properties will be impacted. However we would ask that you contact Ellen Sievert at the Great Falls Historic Preservation Program for any concerns that she may have regarding the above-cited projects." City of Great Falls contacted Ellen Sievert and her letter of March 26, 2008 concurs with the Montana Historical Society's comments.
- D. The Montana Department of Natural Resource and Conservation Service was asked in a letter by the project consultant for comments on the proposed project. The DNRC responded that a portion of the project (project #3) lies within a 100-year floodplain. A floodplain permit may be required, but as of the time of this writing no permit is required. The City of Great Falls and the flood district are in contact with the US Army Corps of Engineers, who want to see a flood control dike in the area recertified.
- E. 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 standards.

X. RECOMMENDATION FOR FUTURE ENVIRONMENTAL ANALYSIS

EIS

More Detailed EA

No Further Analysis

Rationale for Recommendation: Through this EA, The Montana DEQ has determined that none of the adverse impacts of the City of Great Falls Water Main Replacement Projects reviewed in this EA 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 thru 17.4.610.

EA Prepared By:

\_\_\_\_\_  
Marc Golz, P.E.

\_\_\_\_\_  
Date

EA Reviewed By:

\_\_\_\_\_  
Date

RECEIVED

MAR 10 2008

DEQ  
PPA-TFA



P.O. Box 5021, 59403-5021

March 7, 2008

Marc Golz, Senior Engineer  
Department of Environmental Quality  
DWSRF Program  
P.O. Box 200901  
Helena, Montana 59620-0901

To Whom It May Concern:

The City of Great Falls is seeking comments regarding the environmental impact of a number of proposed water main replacement projects.

The City of Great Falls is planning on three to four water main replacement projects over the next eighteen to twenty-four months. The cost of each project is estimated to be between \$760,000.00 and \$1,100,000.00. These projects involve replacing existing cast iron, and cases ductile iron water mains, fire hydrants, valves, any non-copper service lines, asphalt pavement and concrete curb & gutter. In general, all water main replacements will be in the same location within the existing street right-of-way and inside the City of Great Falls. The projects being considered are shown on the attached vicinity map and further described as follows:

1. Sunnyside Water Main Replacement Project. This project will replace approximately 1,230 lineal feet of existing 12-inch cast iron water main in 15<sup>th</sup> Street from 10<sup>th</sup> Avenue South to Sunnyside Avenue with 12-inch PVC pipe. We will also be replacing approximately 3,800 lineal feet of existing 6-inch cast iron pipe with 8-inch PVC pipe in 19<sup>th</sup> Avenue South from 14<sup>th</sup> Street to 17<sup>th</sup> Street; 20<sup>th</sup> Avenue South from 14<sup>th</sup> Street to 18<sup>th</sup> Street; and 14<sup>th</sup> Street from 20<sup>th</sup> Avenue South to 19<sup>th</sup> Avenue South. We will be replacing ten fire hydrants, any non-copper or shallow water services, and asphalt and gravel surfacing. The estimated cost of this project is \$760,000.00.
2. Longfellow Water Main Replacement Project. This project will replace approximately 1,700 lineal feet of 8-inch ductile iron water main with 8-inch PVC pipe in 6<sup>th</sup> Avenue South from 10<sup>th</sup> Street to 14<sup>th</sup> Street. We will replace approximately 3,400 lineal feet of 6-inch cast iron water main with 8-inch PVC pipe in 7<sup>th</sup> Avenue South from 10<sup>th</sup> Street to 14<sup>th</sup> Street; 5<sup>th</sup> Avenue South from 11<sup>th</sup> Street to 14<sup>th</sup> Street; and 8<sup>th</sup> Avenue South from 13<sup>th</sup> Street to 14<sup>th</sup> Street. We will be replacing approximately eleven fire hydrants, any non-copper or shallow water services, and asphalt and gravel surfacing. The estimated cost of this project is \$930,000.00.
3. 14<sup>th</sup> Street Southwest and 5<sup>th</sup> Avenue Southwest Water Main Replacement. This project

will replace approximately 3,275 lineal feet of 12-inch and 6-inch cast iron water main with 12-inch PVC pipe in 14<sup>th</sup> Street from American Avenue to 5<sup>th</sup> Avenue Southwest and on 5<sup>th</sup> Avenue Southwest from 14<sup>th</sup> Street to 20<sup>th</sup> Street. We will replace approximately 2,000 lineal feet of 6-inch cast iron water main with 8-inch PVC pipe in 16<sup>th</sup> Street from 5<sup>th</sup> Avenue Southwest to a point approximately 600 feet north; and 14<sup>th</sup> Street from American Avenue to 2<sup>nd</sup> Avenue Southwest. We will be replacing approximately eleven fire hydrants, any non-copper or shallow water services, and asphalt and gravel surfacing. The estimated cost of this project is \$950,000.00.

4. Phase II 7<sup>th</sup> & 8<sup>th</sup> Avenue South Water Main Replacement. This project will replace approximately 5,900 lineal feet of 6-inch cast iron and 8-inch ductile iron water main with 8-inch PVC pipe in 8<sup>th</sup> Avenue South from 4<sup>th</sup> Street to 9<sup>th</sup> Street; 7<sup>th</sup> Avenue South from 4<sup>th</sup> Street to 9<sup>th</sup> Street; 2<sup>nd</sup> Avenue South from 5<sup>th</sup> Street to 7<sup>th</sup> Street; and 6<sup>th</sup> Avenue South from 4<sup>th</sup> Street to 6<sup>th</sup> Street. We will be replacing approximately thirteen fire hydrants, any non-copper or shallow water services, and asphalt and gravel surfacing. The estimated cost of this project is \$1,100,000.00.

There is a portion of project number three, 5<sup>th</sup> Avenue Southwest from 14<sup>th</sup> Street to 20<sup>th</sup> Street, which falls in the flood plane zone. There are no known historic/archeological resources within the project areas listed above and there have been no known historic/archeological surveys that have been conducted for the project areas.

Please provide your comments by March 21, 2008, if possible. Please mail your comments to.

Richard Johnson, Civil Engineer  
City of Great Falls  
P.O. Box 5021  
Great Falls, Montana 59403

If you have any questions or comments, please feel free to contact me at 771-1258.

Sincerely,



Richard Johnson, Civil Engineer  
City of Great Falls / Engineering Department

