

April 10, 2009

Joseph Menicucci, Manager  
City of Belgrade, Montana  
91 East Central Avenue  
Belgrade, MT 59714

RE: Belgrade - Yukon Tank Water Main Extension Project, Montana

Dear Joe:

Enclosed are copies of the State Finding of No Significant Impact (FONSI) and environmental assessment (EA) for the Belgrade Yukon tank water main extension project. Please print the Finding of No Significant Impact in at least one publication of your local newspaper, under legal advertising, and return a copy of the proof of advertisement to this office. You do not have to print this letter or the EA. We recommend that you advertise this as soon as possible and allow for a 30-day comment period. Please have the FONSI, EA and 2008 Water Master Plan available to the public at your office during the comment period. We have distributed the FONSI to the enclosed list of agencies. If you have any questions regarding this process or the project in general, you can call me at 444-5316.

Sincerely,

Robert Ashton  
State Revolving Fund Loan Program  
Technical and Financial Assistance Bureau  
[rashton@mt.gov](mailto:rashton@mt.gov)  
406.444.5316

Encl

cc: Keith Waring, TD&H, Bozeman, MT  
Anna Miller, DNRC (w/o EA)

**FINDING OF NO SIGNIFICANT IMPACT**  
**April 10, 2009**

**PROJECT:** Belgrade, Montana, Water Infrastructure Improvements

**TO:** All Interested Government Agencies and the Public

As required by state and federal rules for determining whether an Environmental Impact Statement (EIS) is necessary, an Environmental Assessment (EA) has been performed on the above project. The EA meets the requirements of the National Environmental Policy Act (NEPA) and the Montana Environmental Policy Act (MEPA) for the project described below:

<b><u>PROJECT NAME:</u></b>	Yukon Water Main Extension Project
<b><u>SRF LOANS:</u></b>	\$1,214,000
<b><u>WRDA GRANT:</u></b>	\$ 328,000
<b><u>LOCAL FUNDS:</u></b>	\$ 18,000
<b><u>TOTAL COST:</u></b>	\$1,560,000

**ABSTRACT:**

The city of Belgrade water system provides potable water to a population exceeding 8,000. In order to accommodate a growing population and an expanded service area, the city is undertaking improvements to its water supply, storage and delivery systems. The city's 2008 Water Master Plan, prepared by Thomas, Dean and Hoskins, Inc. (TD&H), recommends improvements to address current deficiencies and future growth issues. The city of Belgrade has prioritized these needs with improvements to the existing system generally given a higher priority than improvements needed for future development and expansion of the water system. The following environmental assessment (EA) discussed only the work proposed to be accomplished in 2009.

The city of Belgrade's top water system priority is the Yukon tank main extension. Currently, the Yukon water tank (located south of Interstate 90) is unable to fully support fire situations on the north side of Interstate 90 due to undersized water mains. Replacing the undersized, leaking six-inch main along Iowa Street with a 12-inch main will allow the two city water storage tanks to better balance themselves and therefore effectively fight fires and maintain system pressure throughout town.

The proposed project also addresses, in part, the high priority need to replace undersized and leaking mains in the south portion of the city. The existing 4-inch mains are insufficient for fire flows and are expected to contribute to the lost water within the Belgrade distribution system. Belgrade has documented water loss of 35-40% with old leaking mains expected for a substantial portion of the loss. The portion of the four-inch main replacement work scheduled is in the same area as the Yukon Tank main extension and coincidental construction and design of these projects is expected to save time and money. Likewise, the project will address minor improvements to the adjacent sewer and storm drain systems along Iowa Street.

The proposed project is needed to improve system pressure, reduce leakage and increase public safety through added fire flows. The proposed water system improvements will enable the city to maintain compliance with the Safe Drinking Water Act. Reducing the system leakage rate will also conserve water and reduce pumping costs.

The project will be funded through a combination of local funds, a U.S. Army Corps of Engineers Section 595 Grant and low interest loans from the Drinking Water State Revolving Fund (DWSRF) Loan Program.

The following references were used in completing the environmental review of this project:

- 2008 Belgrade Water Master Plan, November 2008, prepared for the city of Belgrade by Thomas, Dean & Hoskins, Inc., Bozeman, Montana.
- Water, Sewer and Street Improvements – Yukon Tank Water Main Extension Design Report and Plans and Specifications, March 2008, prepared for the city of Belgrade by Thomas, Dean and Hoskins, Inc., Bozeman, Montana.

In addition, letters were sent to the Montana Department of Fish, Wildlife and Parks, the Montana Department of Natural Resources and Conservation, the Montana Department of Environmental Quality, the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service and the Montana State Historic Preservation Office. Responses were received from the U.S. Fish and Wildlife Service and the Montana State Historic Preservation Office.

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. No significant long-term environmental impacts were identified. Public participation during the planning process demonstrated support for the selected alternative. An environmental assessment (EA), which describes the project and analyzes the impacts in more detail, is attached to this Finding of No Significant Impact. This EA indicates that there will be no significant environmental impacts from the project. Based on the EA and the supporting 2008 Water Master Plan, a preliminary decision not to prepare an Environmental Impact Statement (EIS) has been made. Public review of the EA is available at the following locations:

Department of Environmental Quality  
State Revolving Fund Loan Program  
1520 East Sixth Avenue  
Helena, MT 59601

Belgrade City Hall  
91 East Central Avenue  
Belgrade, MT 59714

Comments regarding this proposed project or its associated EA may be submitted to the Montana Department of Environmental Quality (MDEQ) at the following address:

Montana DEQ  
Technical & Financial Assistance Bureau  
State Revolving Fund Loan Program  
P.O. Box 200901  
Helena, MT 59620-0901

The Montana DEQ will review all comments received. After evaluating the comments, the agencies will make a final decision whether or not to prepare an EIS or recommend project changes. No administrative action will be taken on the project for at least 30 calendar days after release of the Finding of No Significant Impact.

Sincerely yours,

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Todd Teegarden, Bureau Chief  
Technical & Financial Assistance Bureau  
Planning Prevention & Assistance Division  
Montana Department of Environmental Quality

CITY OF BELGRADE  
2009 WATER SYSTEM IMPROVEMENTS  
YUKON TANK WATER MAIN EXTENSION

ENVIRONMENTAL ASSESSMENT

I. COVER SHEET

A. PROJECT IDENTIFICATION

Applicant: City of Belgrade  
Address: 91 East Central Avenue  
Belgrade, MT 59714  
Project Number: To be determined

B. CONTACT PERSON

Name: Joseph Menicucci, City Manager  
City of Belgrade  
Address: 91 East Central Avenue  
Belgrade, MT 59714  
Telephone: (406) 388-3760

C. ABSTRACT

The city of Belgrade water system provides potable water to a population exceeding 8,000. In order to accommodate a growing population and an expanded service area, the city is undertaking improvements to its water supply, storage and delivery systems. The city's 2008 Water Master Plan, prepared by Thomas, Dean and Hoskins, Inc. (TD&H), recommends improvements with estimated capital costs of \$28.45 million for water system improvements over the next 20 years. The city of Belgrade has prioritized these needs with improvements to the existing system generally given a higher priority than improvements needed for future development and expansion of the water system. Based on these priorities, the city will be completing the work in phases to ensure affordability to the residents of Belgrade. The following environmental assessment (EA) discusses only the work proposed to be accomplished in 2009.

The city of Belgrade's top water system priority is the Yukon tank main extension. Currently, the Yukon water tank (located south of Interstate 90) is unable to fully support fire situations on the north side of Interstate 90 due to undersized water mains. This portion of the proposed project is necessary to improve the flow of water from the new Yukon water storage tank to the north side of Interstate 90. This will allow the two city water storage tanks to better balance themselves and therefore effectively fight fires throughout town. This project also replaces mains expected of leakage and therefore conserves water and reduces pumping costs.

The proposed 2009 water project also includes the high priority need to replace undersized and leaking mains in the south portion of the city. The existing 4-inch mains are insufficient for fire flows and are expected to contribute to the lost water within the Belgrade distribution system. Belgrade has documented water loss of 35-40% with old leaking mains expected for a substantial portion of the loss. The portion of the four-inch main replacement work scheduled for the 2009 project is in the same area as the Yukon Tank main extension and coincidental construction and design of these projects is expected to save time and money. Likewise, the project will address minor improvements to the adjacent sewer and storm drain systems along Iowa Street.

The proposed project is needed to improve system pressure, reduce leakage and increase public safety through added fire flows. The proposed water system improvements will enable the city to maintain compliance with the Safe Drinking Water Act. Reducing the system leakage rate will also conserve water and reduce pumping costs.

The project will be funded through a combination of local funds, a U.S. Army Corps of Engineers Section 595 Grant and low interest loans from the Drinking Water State Revolving Fund (DWSRF) Loan Program. 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.

Under Montana law (75-6-112, MCA), no person, including a municipality or county, may construct, extend, or use a public sewage 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

### A. Purpose

#### Yukon Water Main Extension

In 2008 the city completed construction of a new 500,000-gallon elevated water storage tank to supplement the 500,000-gallon elevated City Shop tank constructed in 1976. The new tank on Yukon Lane, south of Interstate 90 provides significant additional storage but the benefits of that storage are not fully realized because of restrictions in the delivery system north of the interstate. The 10-inch main that extends under the interstate from the Yukon tank end on Stiles Avenue where the water is then transmitted through a network of aging six to eight-inch pipe. These smaller pipes restrict the flow and under maximum day demands with a 3,000 gallon per minute (gpm) fire flow, the City Shop tanks will fall to 17% full while the Yukon tank remains about 68% full if all of the city well pumps are operating. If the City Shop well is not in service, the City Shop tank will empty. This potential condition would increase the likelihood for backflow into the system as well as

increase the fire risk. Replacing the 6-inch main will also reduce pumping costs as leakage is suspected.

#### Four-inch Main Replacement

Belgrade's existing distribution system has approximately 204,400 lineal feet of mains consisting of two-inch to 16-inch ductile iron, cast iron, steel, and PVC pipe. The four-inch mains are some of the oldest mains in town and were likely installed in the early 1900s. They are cast iron with lead joints and are believed to be a major source of the system leakage along with their related service lines. They are also inadequate in size to support recommended fire flows. Replacement of these four-inch mains is a high priority in order to reduce leakage and improve fire protection and system pressures.

#### B. Need

Public health and safety issues, as well as future growth issues, are the driving factors in choosing the action alternatives for City of Belgrade water system improvements. The 2008 Water Master Plan identified 21 major improvements needed for Belgrade's system over the next 20 years. The Yukon Water Main Extension project was priority number 1 and replacing old four-inch water mains was priority number 3 and 4.

Proper water pressure and fire flows are essential for the protection of public health and safety. The proposed project will help improve Belgrade's system by reducing leakage, improving water pressure and increasing fire flows.

## II. PROPOSED PROJECT LOCATION AND DESCRIPTION

#### A. Location

The planning area is located in the Gallatin Valley in southwestern Montana. The area includes lands on all sides of the city of Belgrade, with the majority of area located north of Interstate 90. The proposed location of the water distribution system improvements project is in the south central portion of the city just north of Interstate 90 and east of Jackrabbit Lane.

#### B. Description

The proposed project includes the following improvements:

1. Yukon Tank Water Main Extension - This project includes the installation of approximately 2,000 lineal feet of new 12-inch PVC water main on Iowa Street between Stiles Avenue and Madison Avenue (see Figure 2). The 12-inch pipe mainly replaces aging 6-inch pipe except for 315 feet of new 12-inch water main between Jefferson Avenue and Madison Avenue that will connect two existing mains.

This portion of the work will also include connecting four 4-inch existing sewer services into a new Iowa Street sewer main constructed in 2008 and

abandoning the old sewer main. Iowa Street will be repaved between Stiles Avenue and Rosebud Avenue to match existing grade and two new storm drain inlets will be installed. The storm drain inlets will benefit the surface drainage on Iowa Street.

2. Four-Inch Water Main Replacement – The proposed project will replace approximately 1,900 lineal feet of four-inch main with new eight-inch PVC water main. This portion of the work will occur on: Nevada Street between Rosebud Avenue and Jefferson Avenue; Jefferson Avenue between Iowa Street and Nevada Street; and Colorado Street between Rosebud Avenue and Cascade Avenue (see Figure 2).

As part of this work, the water service lines will be replaced including new saddles, corporation valves, copper pipe and curb stops inside of the right-of-way. The existing fire hydrants will also be replaced and the location standardized to the northwest corner of the intersection. All construction will take place within existing city streets and right-of-ways. Construction of the Yukon Water Main Extension is expected to take 2-3 months to complete. Construction of the four-inch main replacement is expected to take approximately one month to complete.

### III. ALTERNATIVES INCLUDING THE PROPOSED ACTION

#### A. WATER DISTRIBUTION SYSTEM ALTERNATIVES

Two alternatives were considered for addressing undersized leaking mains and the city's inability to effectively move water from the Yukon storage tank, south side of I-90, to the North side of I-90:

##### **Alternative No. 1: Continued Use of Existing Facilities (No Action)**

This alternative relies on the existing water transmission and distribution system to meet current and future requirement for system pressure, domestic flows, and fire flows. As discussed, the current system is unable to meet the current or future demands of the system and high amounts of water loss from leaking pipes have been documented. Based on these issues the "do nothing" alternative will not be considered further.

##### **Alternative 2: Yukon Main Extension and replacement of surrounding four-inch Water Mains (Preferred Alternative)**

This alternative replaces a portion of the undersized four-inch mains and increases the size of the main connecting the Yukon storage tank to the distribution system. The 2008 Water Master Plan includes the results of a computer analysis to determine the flow and available pressure at various locations in the system under different load conditions. A digital model of the Belgrade water system was developed and the system analyzed using Water Cad, an analytical hydraulic modeling software program by Bentley Systems Inc. Based on the results of this analysis the water main replacement projects have been designed to ensure compliance with the standards identified in DEQ Circular 1. The water main



replacement description is provided in the previous section of this document. This alternative is the initial step in correcting the deficiencies identified in Belgrade's 2008 Water Mater Plan. This alternative will improve system pressure and fire flows and reduce leakage.

**B. TOTAL ESTIMATED COSTS and FUNDING COMMITMENTS**

The total estimated cost for this water system improvements project, including engineering, administration and reserves is \$1,560,000. The city of Belgrade's proposed funding for the project includes:

Drinking Water SRF Loan	\$1,214,000
US Army Corp Section 595 Grant	\$ 328,000
City of Belgrade Funds	\$ 18,000

The city will use a revenue bond for the loan portion of the proposed funding. The city will hold a debt election with rates expected to increase by approximately \$2 per month per household.

**IV. AFFECTED ENVIRONMENT**

The community of Belgrade is located approximately seven miles west of Bozeman Montana in a mostly rural farming area but also includes an airport to the east and several surrounding gravel pit operations (see vicinity map Figure 1). The town was legally incorporated in 1906. The city provides both water and sewer service. The present water system has approximately 2300 connections including schools, commercial and industrial users. The service area for water system improvements for the 20-year planning period includes the incorporated town and adjacent areas likely to be developed during the project planning period.

Topography and Area Features – The terrain is generally flat within the planning area with the overall slope to the north-northwest of about 1.5 percent. Significant features include gravel pits west and southwest of the city, Gallatin Field Airport near the eastern edge of the planning boundary, and Interstate 90 through the south half of the planning area.

Soils/Prime Farmland – Soils in the area are Beaverell, which is a highly permeable soil consisting of stratified, very gravelly loamy sand and extremely gravelly coarse sand, and Beavway, which is also highly permeable and consists of extremely cobbly loamy sand and very gravelly coarse sand.

Prime farmlands exist within much of the area surrounding Belgrade, provided that adequate irrigation is available eight out of ten years. Some residential development also exists in the immediate vicinity of Belgrade. A majority of the lands in the locale have been disturbed by cultivation. Some lands have been placed into cultivation, others permanent pasture, while some have been converted into gravel pits and commercial/industrial operations. These soils are described as Amesha Cobbly Loam, 2 to 8 percent slopes, Amesha Loam, 4 to 8 percent slopes, and Amesha Loam, 0 to 4 percent slopes.

Climate – Climate in the planning area is typical of southwestern Montana. Average annual precipitation is 13.83 inches. The wettest months are typically May and June. The driest months are usually November through February. Annual average lake evaporation rate is 34.69 inches.

Due to the small scale of the project, the climate of the area will not be affected and therefore climate will not be discussed further.

Land Use – The majority of the land use within the planning area, as defined by a zoning plan, are agricultural/suburban and public lands/institutional. Existing and planned commercial/industrial development includes approximately 25% of the land area. Residential development, both planned and existing, covers the remaining 17% of the land area.

Fish and Wildlife – A variety of wildlife is present in and around the Belgrade area. Species present include, in part, the whitetail deer, cottontail rabbit, jack rabbit, shrew, deer mouse, meadow mouse, raccoon, skunk, red fox, and coyote. Common reptile species include the western terrestrial garter snake and boreal toad.

Bird species are also abundant in the area. Canadian geese are abundant year-round, both as migrants and residents. The bald eagle is present year-round, but no breeding pairs are known to reside in the vicinity. The peregrine falcon is a spring and fall migrant, as are a variety of waterfowl. Great Horned owls and osprey nest in the surrounding area also.

The project site is located in an existing residential/commercial area that is considered poor habitat for wildlife. There are mature trees within the area that provide nesting habitat for birds but no tree removal is included in the proposed project. The project work will occur within city streets and right-of-ways. Given these conditions, the project is not expected to adversely impact fish or wildlife and therefore, fish and wildlife is not discussed further in this document.

Threatened and Endangered Species – The U.S. Fish & Wildlife Service identifies seven species in Montana as endangered and eight species as threatened. The endangered animal species include the whooping crane, Eskimo curlew, black-footed ferret, pallid sturgeon, white sturgeon, least tern and gray wolf. Threatened animal species in the state include the grizzly bear, bald eagle, Canada lynx, piping plover and bull trout. Threatened plant species are the Spalding's catch-fly, water howellia and Ute Ladies'-tresses. Additionally, three animal species, the warm springs beetle, yellow-billed cuckoo and arctic grayling, and one plant species, the slender moonwort, are listed as candidate species for a threatened or endangered designation. In a letter dated March 19, 2009, R. Mark Wilson of the U.S. Fish and Wildlife Service wrote that the proposed project is unlikely to affect federally-listed species or designated critical habitat.

There are no known threatened or endangered species that exist in or frequent the project work site. Based on this knowledge, no adverse impacts to any federally-listed threatened, endangered, candidate or proposed species are expected. Therefore, listed threatened and endangered species are not discussed further in this document.

Vegetation – The project site is contained within existing Belgrade streets and right-of-ways and therefore no substantial vegetation is present. Native vegetation within the

larger Belgrade area has generally been altered for agricultural purposes. Lands used for crop production have been primarily cultivated for wheat, barley and alfalfa hay. Permanent pasturelands have been seeded with smooth brome, wheatgrasses, foxtail and introduced grasses and forbs. Vegetation has been severely impacted in areas occupied by gravel pit operations and by the airport located east of the city.

Floodplains and Wetlands – None of the project area lies within the 100-year or 500-year floodplains, as defined by the Federal Emergency Management Agency maps. There are no natural or manmade wetlands in the immediate vicinity of the project work site. Therefore, floodplains and wetlands are not discussed further in this document.

Surface Water / Water Quality - The Montana Pollutant Discharge Elimination System (MPDES) is managed by the Montana Department of Environmental Quality, Water Protection Bureau. The DEQ issues MPDES permits to point sources that discharge into state waters. These permits contain effluent limitations and requirements for sampling and reporting of discharges. The effluent limitations incorporate both technology-based and water-quality based limitations. The water quality-based limitations are designed to protect the water quality of the receiving streams. These standards are designed to support specific designated uses such as coldwater fisheries, drinking water sources, and/or recreational activities.

The closest major water body to the city of Belgrade is the Gallatin River, located approximately five miles south southwest of the city. However, the majority of the surface water in the Belgrade area flows generally north to the East Gallatin River. There are no surface water features in the immediate vicinity of the proposed water main replacement project. The nearest surface waters would be the Mammoth Ditch and the Spain Ferris Fork Ditch. These ditches convey water from the Gallatin River for agricultural use in the Belgrade and surrounding area. These ditches have been classified by the Montana Department of Environmental Quality as B-1 water bodies. Waters classified B-1 are to be maintained suitable for drinking, culinary and food processing purposes, after conventional treatment; bathing, swimming and recreation; growth and propagation of salmonid fishes and associated aquatic life, waterfowl and furbearers; and agricultural and industrial water supply.

Groundwater / Groundwater Quality – Groundwater in the Belgrade area is generally found at a depth greater than 50 feet. The aquifer is located in the extensive alluvial plain between the Gallatin and East Gallatin Rivers. The aquifer is unconfined and has a hydraulic gradient of between 0.0023 and 0.0034 ft/ft and a groundwater flow direction of north-northwest. The aquifer water quality meets all state and federal drinking water standards and the production yield of the aquifer is generally high. Groundwater is recharged in the upland areas by percolation of snowmelt, rainfall and irrigation waters into the valley till. It is also recharged near the side of the valley by water lost from streams where they flow onto valley till from the surrounding mountains and some water enters the bottom of the valley till deposits by upward movement of groundwater along fractures in the older rocks below. Sources of groundwater also include seepage from irrigation canals and associated irrigation from the Gallatin River and other surface streams.

Air Quality/Noise - The air quality program in Montana is managed by the Montana Department of Environmental Quality, Air Resource Management Bureau. Their goal is

to achieve and maintain reasonable levels of air quality to protect human health, safety, and welfare and to meet the National Ambient Air Quality Standards (NAAQS) through the Clean Air Act. Monitoring is done in areas of potentially high levels of particulate matter, ozone, sulfur dioxide, nitrogen dioxide, lead, and carbon monoxide, as listed in the NAAQS. Air pollution that exceeds the standards causes public health hazards, nuisance, annoyance damage to buildings, property, animals, plants, forests and crops.

There is a state certified air quality monitoring station located in downtown Belgrade. Recordings at Belgrade are below the standards of concern for particulate matter. Historical monitoring data from this station show air quality to be in compliance with federal and state ambient air quality standards.

Noise in the area surrounding the project site is typical of low density, light residential/commercial activities.

Energy – Energy consumption is a measure of the rate of energy use such as fuels or electricity. Increased energy consumption can be associated with construction projects and the growth of communities.

Cultural Resources – The Montana State Historic Preservation Office (SHPO) is responsible for inventorying historical and archeological sites in Montana. SHPO conducted a cultural resource file search for this project (Section 1, T1S, R4S) and concluded “...we feel that there is a low likelihood cultural properties will be impacted.”

## V. ENVIRONMENTAL IMPACTS OF PROPOSED PROJECT

The proposed project contains activities that would disturb the existing condition of the area. These activities have been analyzed for potential impacts to the following resources.

Topography and Area Features – The proposed work occurs within existing street with the final surface restored to the original condition. Based on the type and scope of work the project will not affect the general terrain.

Soils/Prime Farmlands – The proposed project area is highly disturbed and is within city owned streets and right-of-way. No direct adverse impact on soils is expected.

Land Use – This area is currently developed with residential and light commercial areas therefore historical land use will not change. Land use around Belgrade would continue to be agricultural, light industry/commerce and residential in nature.

Vegetation – No native vegetation is expected to be significantly impacted by the construction. Any vegetated area disturbed during construction will be reseeded with an approved seed mix.

Surface Water and Quality – The proposed site is located away from any year round surface water sources and no impacts to surface water are anticipated during construction, as erosion control measures will be utilized. Most of the work will occur within existing streets that will be resurfaced with pavement or gravel. Any vegetated area disturbed will be reseeded following the work.

Groundwater and Quality – The proposed main replacement project will have no direct effect on groundwater or its quality. The pumping rate of Belgrade city wells will remain the same and no additional discharge to the aquifer is expected. The groundwater is not listed as chronically or periodically dewatered by the Montana Department of Fish Wildlife and Parks (DFWP). The groundwater source is not listed on the DEQ 303(d) list.

Future growth in the Belgrade community is expected to increase the demand on groundwater as it will remain the principle water source. However, the extension of city water and sewer services will eliminate the current use of on-site septic systems and reduce the need for private wells within the project area. This should reduce the potential contamination of the aquifer and help protect public health.

Air Quality / Noise – Short-term negative impacts on air quality may 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.

Noise from the use of heavy equipment is expected during construction. This short-term impact is anticipated to last no more than three months and will occur only during daylight hours. There are no residential areas adjacent to the project work site. There are no long-term noise impacts associated with this project.

Energy – During construction of the proposed project, additional energy will be consumed, causing a direct short-term impact on this resource. Energy consumption during construction cannot be avoided. Once completed, the project could reduce the energy needed to pump water to the community due to reduced leakage and reduced pressure head in the affected area. The current proposed project only replaces a small portion of the leaking mains and would therefore not be expected to dramatically reduce system leakage.

Cultural Resources – Since the construction site is previously-disturbed land, there is a low probability that cultural properties will be impacted. The state Historic Preservation Office will be immediately contacted in the event any cultural resources are identified during construction.

#### VI. Cumulative Impacts

Cumulative effects are caused by the aggregate of past, present, and reasonably foreseeable future actions. The geographic extent of this analysis is limited to those actions, both federal and non-federal, occurring within an approximate three-mile radius of this project. This geographic region includes all of Belgrade and potentially impacted area surrounding it. In terms of direct incremental cumulative effects, the implementation of the proposed water main replacement project is not considered significant.

The water main replacement project would require the excavation of city streets and the removal of some vegetation and may increase the potential for soil erosion and runoff near the construction site. However, due to the short duration, small scale and distance to local surface water bodies, it is unlikely that the work would contribute to cumulative

impacts within this region. This slight increase in potential for soil erosion in disturbed areas during main replacement would be addressed by road surface restoration and re-vegetation of all disturbed areas and by applying proper erosion control measures during construction.

#### Reasonably Foreseeable Future Actions

The city of Belgrade has growth areas that are scheduled for future development. The further development of these areas is part of the planned growth as documented in the city's growth policy. The majority of future water and sewer line installation will be done in existing roadways and is not expected to significantly degrade environmental resources or ecosystems. However, the further development of these areas and land surrounding it may include construction of additional roadways, residential areas, light industrial and commercial facilities. This growth would increase traffic, thus increasing air pollution and noise. The potential for soil erosion and runoff from paved areas could potentially impact surface water quality in the area.

Future growth may also require the construction of additional municipal water wells. This may lower the water table, and ultimately be balanced by increased seepage from surface water south of Belgrade and decreased discharge to surface water north of Belgrade.

#### Present

The proposed water main replacement project work site is within existing city streets and right-of-way. No water main extensions are included in this phase of work. The residential nature of the area will not change.

#### Past Actions

The city of Belgrade was founded in the early nineteen hundreds with a rural community dating back to the late eighteen hundreds. The area south of Interstate 90 was zoned as industrial in 1976 and included several businesses and some isolated residential areas. The "Affected Environment" reflects any past impacts associated with the city of Belgrade.

#### Cumulative Conclusion

The current project area is experiencing moderate to high population growth rates. The proposed Belgrade water distribution system improvements project will have little to no affect on this overall growth rate and its associated cumulative impacts to resources, ecosystems, and human communities. Likewise, considering the potential project cumulative impacts over a 20-year period for the greater Belgrade area there is no indication that resources, ecosystems or human communities will be significantly impacted or harmed. Future NEPA analysis would be required for any discussion of cumulative impacts beyond this scope and time frame.

## VI. PUBLIC PARTICIPATION

The proposed project was discussed at public meetings held by the city on July 21, 2008, and March 17, 2009. No substantive negative public comments regarding the proposed project were received.

VII. REFERENCE DOCUMENTS

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

- A. 2008 Belgrade Water Master Plan, November 2008, prepared for the city of Belgrade by Thomas, Dean & Hoskins, Inc., Bozeman, Montana.
- B. Water, Sewer and Street Improvements – Yukon Tank Water Main Extension Design Report and Plans and Specifications, March 2008, prepared for the city of Belgrade by Thomas, Dean and Hoskins, Inc., Bozeman, Montana.

VIII. RECOMMENDATION FOR FUTURE ENVIRONMENTAL ANALYSIS

EIS                       More Detailed EA                       No Further Analysis

Rationale for Recommendation: Through this EA, The Montana DEQ has verified that none of the adverse impacts of the city of Belgrade elevated water storage 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 through 17.4.610.

EA Prepared By:

\_\_\_\_\_  
Robert Ashton

\_\_\_\_\_  
Date

EA Reviewed By:

\_\_\_\_\_  
Gary Wiens, P.E.

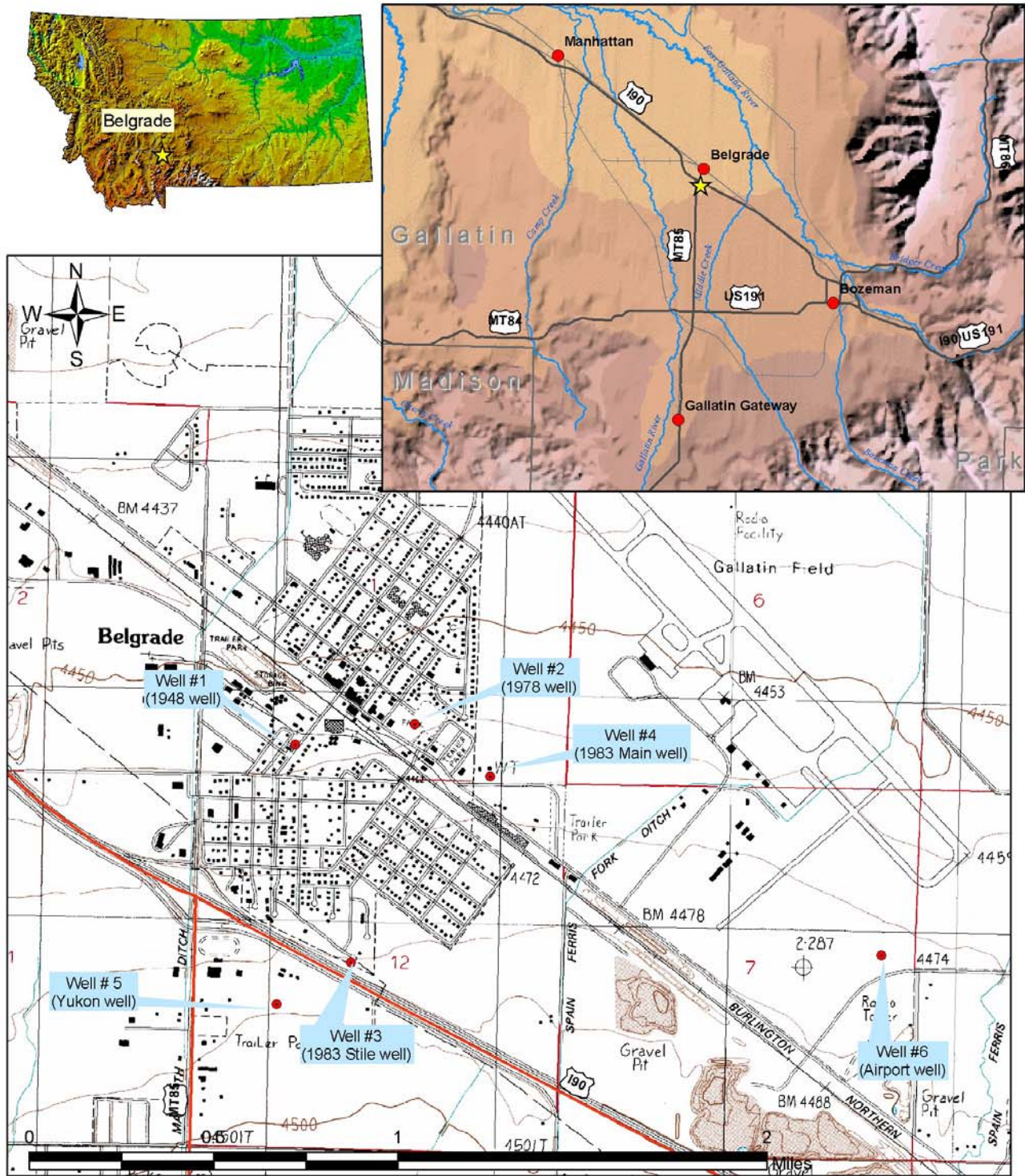
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Date

# **Appendix A**

## **Figures**



Figure 1. Vicinity Map and Well Location



**Legend**

- PWS Well
- Highway


  
 Jan 2006 - bjh  
 PWS # MT0000136

Figure 2. Project location – Yukon Water Main Extension and 4-inch main Replacement

