

May 14, 2009

Will Robbins, P.E.
City of Billings
Department of Public Works
2224 Montana Avenue
Billings, Montana 59101

RE: Drinking Water SRF Program - Finding of No Significant Impact (FONSI)
Billings Zone 4, Zone 5 West Storage and Pump Station Project
Billings, Montana

Will:

Enclosed is a copy of the Finding of No Significant Impact (FONSI) and Environmental Assessment (EA) for the city of Billings Zone 4, Zone 5 West storage and pump station project. Please print the FONSI letter in one publication of your local paper under legal advertising and return the proof of advertising to this office. You do not have to print this letter or the EA. We recommend that you advertise this as soon as possible to allow for a 30-day comment period. Please have the FONSI, EA and Preliminary Design Report (PDR) available to the public at your office during the comment period. We have distributed these documents to the enclosed list of agencies.

If you have any questions, please do not hesitate to contact me at (406) 444-5316.

Sincerely,

Robert Ashton
Technical and Financial Assistance Bureau
Drinking Water SRF Program
rashton@mt.gov

Encl.

cc: Mark Seip, P.E., HDR Inc. - Billings (w/o encl.)
Anna Miller, DNRC (w/o encl.)

May 14, 2009

FINDING OF NO SIGNIFICANT IMPACT

TO ALL INTERESTED GOVERNMENTAL AGENCIES AND PUBLIC GROUPS

As required by state and federal rules for determining whether an Environmental Impact Statement is necessary, an environmental review has been performed on the proposed action below:

Project	City of Billings – Zone 4, Zone 5 West Storage Pump Station Project
Location	Billings, Montana
Project Number	DWSRF number not assigned yet
Total Cost	\$8,992,000

The city's 2006 Water and Wastewater Master Plan identified deficiencies with the storage volume and water pressures within Zone 4 and Zone 5 West. This need was further studied and the alternatives were revised using a value engineering (VE) study, with additional refinement of the selected alternatives detailed in the 2009 City of Billings Zone 4, Zone 5 West Storage and Pump Station Design Report, prepared by HDR Engineering. The design report indicates that Zone 4 is deficient in operating and emergency storage, in addition to fire flow storage.

Based on the documented needs, the city has proposed the installation of a 2 million gallon elevated water storage reservoir and pump station east of the Ironwood subdivision. The system improvements are selected to improve the city of Billings drinking water storage and distribution system and provide system capacity for existing and future residents of the city.

Environmentally sensitive characteristics such as wetlands, floodplains, threatened or endangered species and historical sites will not be adversely impacted as a result of the proposed project. No significant long-term environmental impacts were identified. An environmental assessment (EA), which describes the project and analyzes the impacts in more detail, is available for public review on the Department of Environmental Quality website: www.deq.mt.gov or at the following locations:

Department of Environmental Quality
1520 East Sixth Avenue
P.O. Box 200901
Helena, MT 59620-09011
rashton@mt.gov

City of Billings
Public Works Department
2251 Belknap Avenue
Billings, MT 59101

Comments on the EA may be submitted to the Department of Environmental Quality at the above address. After evaluating substantive comments received, the department will revise the environmental assessment or determine if an environmental impact statement is necessary. 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, the agency will make a final decision. 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,

Todd Teegarden, Bureau Chief
Technical and Financial Assistance Bureau

CITY OF BILLINGS - WATER STORAGE AND PUMPING FOR
ZONE 4 AND ZONE 5 WEST

ENVIRONMENTAL ASSESSMENT

I. COVER SHEET

A. PROJECT IDENTIFICATION

Applicant: City of Billings
Address: Public Works Engineering Division
2251 Belknap Avenue
Billings, MT 59101
Project Number: SRF WATER not assigned yet

B. CONTACT PERSON

Name: Will Robbins, Project Manager
Address: Public Works Department
2224 Montana Avenue
Billings, MT 59101
Telephone: (406) 657-8237

C. ABSTRACT

The city's 2006 Water and Wastewater Master Plan identified deficiencies with the storage volume and water pressures within Zone 4 and Zone 5 West. This need was further studied and the alternatives were revised using a value engineering (VE) study, with additional refinement of the selected alternatives detailed in the 2009 City of Billings Zone 4, Zone 5 West Storage and Pump Station Design Report, prepared by HDR Engineering. The design report indicates that Zone 4 is deficient in operating and emergency storage, in addition to fire flow storage. The proposed improvements include:

- One 2 million gallon (MG) elevated water storage reservoir.
- Zone 5 West and booster pumps.
- Piping stubbed out for future Zone 5 West storage and Zone 6 system.
- One stand-by power generator.

These improvements will address the immediate and some of the future needs for this portion of the city's water system and will also provide the infrastructure for future growth and expansion of the system. The need for additional storage in Zone 5 and Zone 6 will be addressed in separate planning documents and is not examined in this environmental assessment (EA).

A total of \$9.5 million has been included in the current Capital Improvement Plan (CIP)

budget for this project. The total project cost is estimated at \$8,992,000. A loan of \$8,387,000 will be obtained from the State Revolving Fund Loan Program with the remaining \$605,000 paid by the city.

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 projects. 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.

Under the Montana Water Pollution Control State Revolving Fund Act and the Montana Drinking Water State Revolving Fund Act, the DEQ may loan money to municipalities for construction of public sewage and drinking water systems.

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. Plan and specification review and approval is required by 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

The City's Water and Wastewater Facility Master Plan 2006 and 2009 City of Billings Zone 4, Zone 5 West Storage and Pump Station Design Report have identified the need to add storage within Zone 4 and pumping capacity within Zone 5 West (see Figure 2).

The City of Billings is located in South Central Montana along the Yellowstone River. The location of Billings can be seen on the enclosed map (see Figure 1A). The 2006 Water and Wastewater Facility Master Plan defined a service/planning area (see Figure 1B) which includes approximately 28 square miles and serves approximately 97,053 people.

A. WATER FACILITIES

The existing Zone 4 and Zone 5W areas consist of residential, agricultural and open range lands with some light commercial areas dispersed within Zone 4. The city provide both water and wastewater utilities to the developed areas within these zones.

Zone 4 is a long thin zone with storage only at the east end. This storage is provided by the 250,000-gallon Waldo tank constructed in 1955. The 2008 Design Report estimates the current total storage needs for Zone 4 at 1.9 million gallons (MG). Zone 4 is being impacted by recent development pressures on the west end, and is

projected to increase in population and water demand.

Zone 5 West is an extension from Zone 4 in the vicinity of the Ironwood Subdivision. Currently only a few homes are located in this zone with water pressure provided through individual booster stations. Zone 5 West is a developing area within Billings, with the growth discussed and incorporated within the existing growth plan.

The proposed drinking water storage and pumping system improvements are necessary in order to address existing deficiencies and to continue to provide the City of Billings water users with a safe, reliable water supply. The proposed project will also provide some of the infrastructure needed for future growth within the city of Billings. The main health issue, associated with the current Zone 4 and Zone 5 West water system, is the potential loss of water pressure during a fire event or power outage. In addition to increased fire risk, this condition could cause contamination of the distribution system due to backflow.

A sound water storage and supply system is important for public health and safety. Providing additional storage to Zone 4 and a pumping facility for Zone 5 West will reduce the public health and safety risk to the residents and visitors of this part of the city.

III. ALTERNATIVES INCLUDING THE PROPOSED ACTION AND COSTS

A. ZONE 4 WATER STORAGE

1. NO ACTION

If no action is taken to provide additional storage to Zone 4, and improve pumping capacity to Zone 5 West, the potential for low system pressure, backflow and increased fire risk will remain. Zone 2 storage can be used to offset the deficiencies within Zone 4 but not without impacting the storage needs in Zone 3. Based on these concerns, the no-action alternative was not recommended.

2. PROPOSED ACTION

The 2006 Value Engineering (VE) Study examined the Zone 4 storage and pumping needs and detailed several alternatives with varying tank size, location, access, system hydraulics and land ownership. The VE study also examined the cost and the social and environmental impacts of each alternative during the ranking procedure. Based on this analysis the proposed project includes the following items:

- One 2.0 million gallon (MG) composite elevated water storage reservoir (overflow at 3617 feet). The selected tank site will be located below the Rims in a draw to reduce the visual impact.
- Access Road will be from below the Rimrocks and routed along a utility corridor with future access from developed roads (see Figure 3).
- Zone 5 West pumping station located in the stem area under the composite tank. This pump room will have a 50-foot diameter and a 30-foot ceiling height and will include the Zone 5 West pumps initially, jib crane, chemical feed room, controls area, and other features.

- Standby generator in an exterior enclosure. The generator will be sized to handle the future Zone 5 West and Zone 6 fire flows.
- Piping stubbed out for future Zone 5 West storage and Zone 6 system.

The proposed project would also require the installation of an on-site holding tank that will be pumped and hauled to the Wastewater Treatment Plant. The site location for the Zone 4 storage reservoir is located east of the Ironwood subdivision along a natural drainage draw just beneath the Rimrocks. The steep terrain and numerous trees onsite will present some construction challenges. The construction location is in an isolated area away from homes and out of view of the public, but was selected with minimal tree removal required. Site access will be through a development that will occur after completion of this project.

The construction of an access road into the tower location will be moderately difficult due to the steep terrain, rock outcroppings, and surrounding trees. The road will be a “bench” cut-in adjacent to the drainage way along the utility easement with a gravel surface and subgrade.

The steep terrain above the site will present challenges regarding handling storm water flow. The drainage area above the water tower is approximately 32 acres. This area during a 5-year storm is capable of producing 30 cubic feet per second (CFS) of flow near the tower location. The project will include a storm water channel to divert storm water away from the tank foundation and dissipate energy.

An existing 20-inch water main will be extended from the Ironwood Subdivision to the new Zone 4 tank as a fill line. The pump discharge will be a 12-inch water line parallel to the fill line which is connected to the Zone 5 West area for pressure and fire flow capability.

Because of long lead times for the composite tower construction, the project is proposed to be broken into two phases namely:

- Phase 1 – Composite Elevated Water Tank
- Phase 2 – Pump Station and Pipe Extensions

Phase 1 consists of the tower and related structural elements by the tank contractor. Phase 2 will be the pumps, piping, electrical, mechanical, finish grading, road, and related work by a second contractor. The estimated total cost of these improvements is estimated at \$8.992 million. This project has been adopted a part of the Billings Capital Improvement Plan. The water user rates have been increased in anticipation of this project along with other planned improvements.

The addition of water storage capacity and stable water pressure for Zones 4 and 5 West along with utilities extended to these areas should enhance further development of this area and adjacent development.

IV. AFFECTED ENVIRONMENT

A. STUDY AREA

The City of Billings is located in South Central Montana along the Yellowstone River. The location of Billings can be seen on the enclosed map (see Figure 1A).

The new Zone 4 water storage reservoir, Zone 5 West pump station and water transmission mains and will occur within dedicated easements within the Billings city limits. The new tank and pump station will be located east of the Ironwood subdivision within Zone 5 West (See Figure 3). Approximately 2,600 feet of new 20-inch and 2,600 feet of new 12-inch water transmission main will be installed from the new 2 million gallon composite tank to the existing water system within the Ironwood Estates. Phase 1 is expected to take 20 months and Phase 2 24 months (concurrent with Phase 1 construction). Construction is scheduled to begin in the summer of 2009 and end in the spring of 2010.

B. POPULATION AND FLOW PROJECTIONS

The population of the entire Billings service area is 97,053 people (2005-2007 American Community Survey 3-year estimate). Only a portion of that entire population will be affected by the new Zone 4 water storage tank and Zone 5 West pump station. In addition to correcting current pressure issues, the Zone 4 storage reservoir and the Zone 5 West pumping station will support future growth within these areas and may also support future improvements to Zone 6 and Zone 7. The anticipated growth is consistent with the Yellowstone County and the city of Billings' 2008 Growth Policy. The overall growth rate of the city is estimated at 1.5% with a design year (2025) population of approximately 139,196.

The city of Billings water treatment plant is a conventional surface water plant that is capable of treating 65 million gallons per day (MGD) with a delivered capacity of 60 MGD to the distribution system. The current average day demand for the city is approximately 22 MGD with a design year average day demand of 31 MGD.

The Standards for Water Works of MDEQ Circular DEQ 1 will be required to be met for both the design and construction of the water system improvements. 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, storage tank sizing and design.

C. NATURAL FEATURES

The project site slopes generally downward to the southwest along the drainage and away from the Rimrocks. The proposed pipe lines will generally follow the drainage bottom below the tank site west. Within the project area, the Eagle Sandstone formation forms a prominent cliff band 10-30 feet high. Shale of the Telegraph Creek Formation underlies the Eagle Sandstone and forms the bedrock. The tank and pump station will be located on a bench above the drainage bottom on the Telegraph Creek Formation. The elevation of project areas range from 3,400 to 3,700 feet above sea level, with steep slopes located adjacent to the proposed construction site.

The depth to groundwater in the study area is approximately 80 feet with no adverse impacts to groundwater expected. The average precipitation for the city of Billings is 14.6 inches per year.

D. MAPS

Figure 1A shows the general location of the City of Billings within the state of Montana. Figure 1B shows the City of Billings Planning area. Figures 2 show the city of Billings water pressure zones. Figure 3 shows the proposed Zone 4 tank and Zone 5 West pumping station project location.

V. ENVIRONMENTAL IMPACTS OF PROPOSED PROJECT

A. DIRECT AND INDIRECT IMPACTS OF PROPOSED PROJECT

Land Use - All of the system improvements will be located within easements owned and/or maintained by the City. The land use in the study area is residential and agricultural in nature. The proposed tank and pump station site is in a timbered draw located below the Rimrocks east of the Ironwood Subdivision. The installation of additional storage and pumping capacity within the northwest portion of Billings is expected to increase development in the area with the conversion of open lands to residential lands possible. This potential growth is consistent with the current Billings Growth Policy and no significant impact to land use is expected.

Soils Suitability, Topographic and Geologic Constraints – The proposed Zone 4 storage tank and Zone 5 West pumping station site is located below the Rims in a draw and will be constructed on bed rock. No soil, topography or geological constraints are present for the proposed project. Based on the existing conditions and soils types, the impacts of the proposed water project will have no significant effect on the soils or topography.

Fish and Wildlife and Biological Resources – Three threatened or endangered species are found in Yellowstone County: The Bald Eagle, Black-footed Ferret and the Whooping Crane. Considering the habitats of these species, only the Bald Eagle would potentially reside within the project area. Nesting Bald Eagles have been viewed along the Rimrocks within the project area; however the majority of construction activity will not occur during the spring nesting period. Considering the scale and scope of the project, no significant long term impact on this species is expected. The U.S. Fish and Wildlife Service has reviewed the Zone 4 tank project and in a letter dated May 1, 2009, stated "...this project is unlikely to have any significant adverse effects upon fish, wildlife, or habitat resources..."

Water Resource Issues - No significant adverse impacts to surface or groundwater will result from the proposed project. Storm water runoff will be directed around the new water storage reservoir.

Floodplain – The proposed projects are not located within a delineated floodplain and therefore this project does not require a floodplain development permit.

Wetlands – There are no wetlands within the project area and therefore no impact will result from this project.

Cultural Resources & Historical Sites – The State Historic Preservation Office (SHPO) reviewed the proposed project and conducted a cultural resource file search for the proposed

project area. Based on this review, SHPO recommended that a cultural resource inventory be conducted on the project site in order to determine whether or not cultural sites existed and if they would be impacted. This inventory will be completed prior to any construction activity.

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 the new storage tank or pumping facility.

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 city completed a Water System Energy Management Plan in 2007. Recommendations of the plan include utilizing high efficiency pumps; variable frequency drives (VFDs) and premium efficiency pump motors, as well as adding storage to the system in order to reduce energy consumption. Sufficient storage is needed for adequate fire protection, ability to meet peak diurnal demands and emergency situations. Additional energy savings will be realized through light fixtures, thermostat settings, and an instantaneous water heater at the new storage/pumping facility.

Public Health – Public health will be protected and improved due to this project. The new Zone 4 tank and Zone 5 West pumping station will improve the fire protection and system pressures within these zones.

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 – This project helps address the needs for growth within the city of Billings. The expected growth within Zone 4 and Zone 5 West is planned for and included in the city's growth policy. The overall population growth rate of Billings is estimated at 1.5%.

Cumulative Effects – This project involves the construction of additional water storage and pumping capacity and will support growth within this part of Billings. The growth of residential and commercial areas within Zone 4, Zone 5 West and Zone 6 will include the construction of new roads and utilities, increased traffic, and air pollution. However, the projected growth is within the established growth policy and will not exceed the capacity of the area and will have no significant cumulative adverse effects on resources, ecosystems or human communities.

B. UNAVOIDABLE ADVERSE IMPACTS

Short-term construction related impacts, such as noise, dust and traffic disruption, will occur but should be minimized through proper construction management. Energy consumption during construction cannot be avoided. The city of Billings is experiencing growth within the project area; with the improvement of city services it is likely that development in the area would increase. The associated impacts of development are unavoidable but are not expected to cause significant impact to area resources.

VI. AGENCY ACTION, APPLICABLE REGULATIONS, AND PERMITTING AUTHORITIES

All water storage and conveyance 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 improvements.

VII. PUBLIC PARTICIPATION

The Zone 4 water reservoir project is included in the FY09 – FY13 capital improvement program list (number PUD 104). A public hearing was provided for the CIP with no comments received. The city council approved the CIP February 25, 2008, during a regularly scheduled meeting.

VIII. REFERENCE DOCUMENTS

The following document has been utilized in the environmental review of this project and is considered to be part of the project file:

1. 2009 City of Billings Zone 4, Zone 5 West Storage and Pump Station Design Report, prepared for the City of Billings, by HDR Engineering, Billings, Montana, January 30, 2009.
2. Uniform Application Form for Montana Public Facility Projects for the City of Billings Sewer and Water Replacement Projects, April 2009.

IX. AGENCIES CONSULTED

As part of this Environmental Assessment process, the following agencies have been contacted in regard to the proposed water project:

1. The Montana Department of Fish Wildlife and Parks (FWP) was asked in a letter by the project consultant for comments on the proposed project. No comments regarding the project have been received.
2. The U. S. Fish and Wildlife Service (FWS) was asked in a letter by the project consultant for comments on the proposed project. The FWS responded with a letter dated May 1, 2009 stating "...this project is unlikely to have any significant adverse effects upon fish, wildlife, or habitat resources..."
3. The Montana State Historic Preservation Office (SHPO) considered the impacts of the proposed project on historical sites and recommended that that a cultural inventory be conducted in order to determine whether or not cultural sites existed and if they would be impacted.

4. The U.S. Army Corps of Engineers (COE) was asked in a letter by the project consultant for comments on the proposed project. No comments regarding the project have been received. However, the Zone 4 tank project will not require a Section 404 permit from the Corps as no waters of the U.S. will be impacted.
5. Department of Natural Resources and Conservation (DNRC) was asked in a letter by the project consultant for comments on the proposed project. No comments have been received. However, the DNRC regulates work within designated flood plains and the Zone 4 tank project doesn't include work within these areas.

Recommendation for Further Environmental Analysis:

EIS More Detailed EA No Further Analysis

Rationale for Recommendation: Through the Preliminary Design Report, prepared by Morrison Maierle, Inc., the Water and Wastewater Facilities Master Plan 2006, and the public process involved, the City of Billings determined that the replacement of certain deteriorated water distribution and wastewater conveyance systems will improve the operation and maintenance capabilities of their systems. Through this EA, the MDEQ has verified none of the adverse impacts of the proposed 2009 Sewer and Water Replacement 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:

Robert Ashton

Date

Approved By:

Gary Wiens P.E.

Date



FIGURE 1A
LOCATION MAP

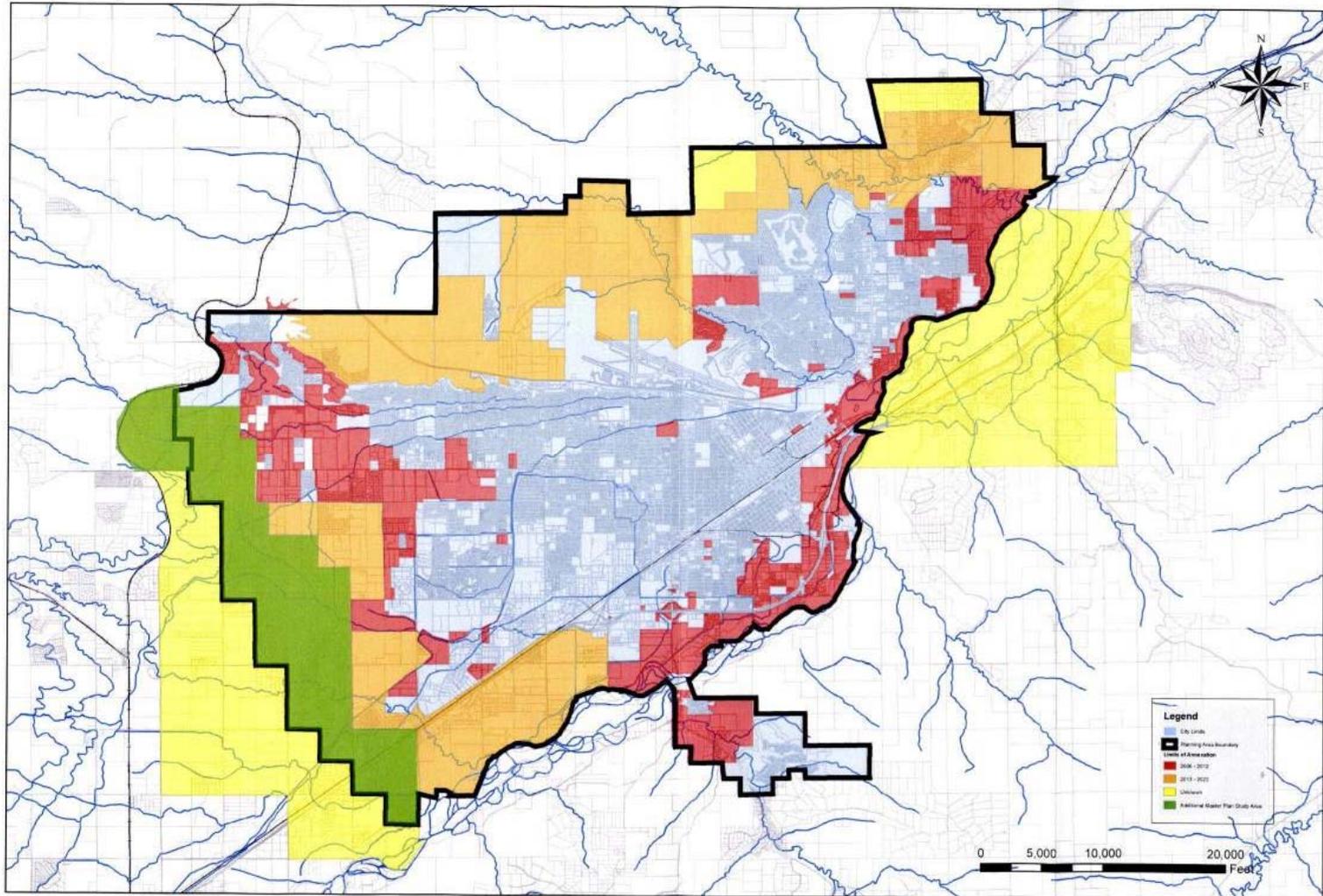


FIGURE 1B
PLANNING AREA

Figure 3. Zone 4 Tank and Zone 5 Pumping Station Project Location.

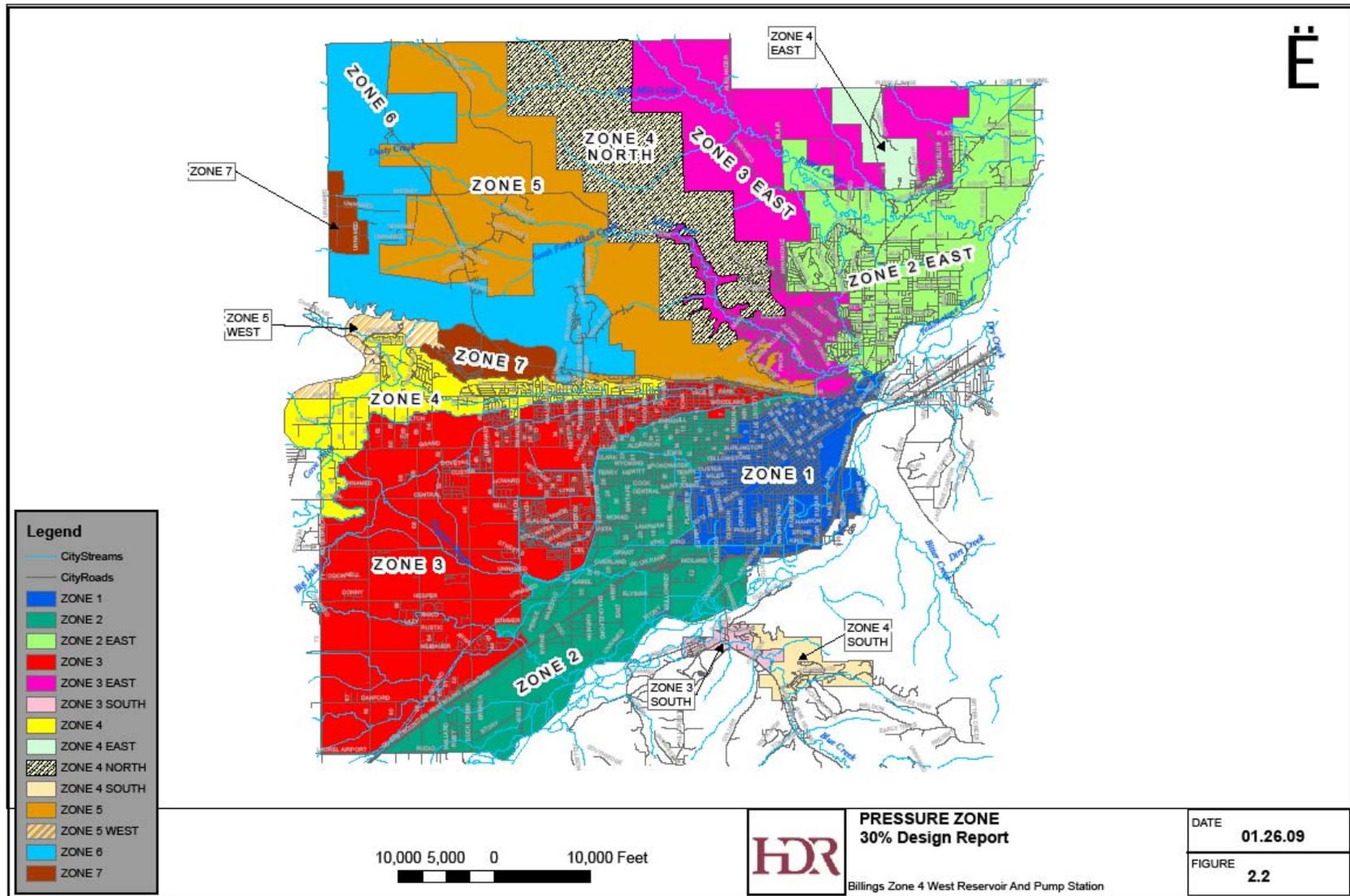
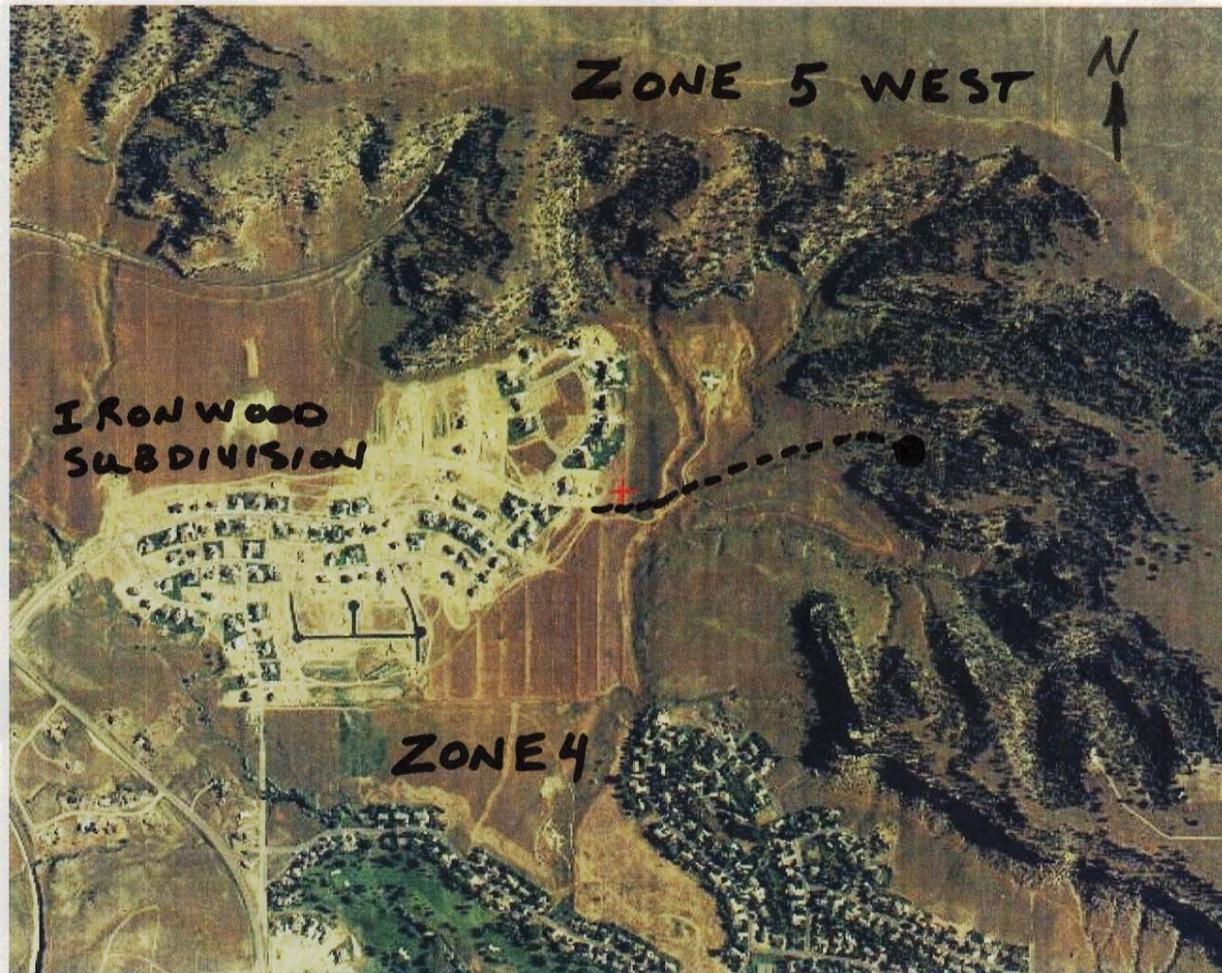


FIGURE 3. ZONE 4 TANK PROJECT LOCATION



- Approximate Tank & pump Station Location.
- Approximate Transmission Main Location.