

**FINDING OF NO SIGNIFICANT IMPACT
FOR
TOWN OF EUREKA
WATER SYSTEM IMPROVEMENTS PROJECT**

TO: ALL INTERESTED PERSONS

Date: January 6, 2011

Action: Water System Improvements Including:

1. Construct a new water transmission line from the existing Eureka water storage reservoir eastward to US Highway 93 and then northward along Highway 93 to provide service to Midvale Water and Sewer District, Mountain View Trailer Court, and properties along Highway 93 not currently served by the Eureka public water system;
2. Construct a new 400,000 gallon conventionally reinforced concrete water storage reservoir in the southeast part of Eureka to provide storage meeting regulatory requirements for the 2030 design population. The new reservoir will be connected to the existing water system via a new 12" connecting water main; and
3. Upgrade the existing water system chlorination facility to include new chlorination equipment; remote chlorine cylinder monitoring at the main water treatment plant; and structural improvements bringing the facility into regulatory compliance with the Montana Department of Environmental Quality.

Location of Project: Town of Eureka
Lincoln County, Montana

DEQ Funding: \$ 1,186,000 (Interim Financing)
Total Project Cost: \$ 2,655,000

An environmental review has been conducted by the Montana Department of Environmental Quality (DEQ) for proposed funding for improvements to the Town of Eureka's water system. The proposed project involves the construction of improvements as listed above. The purpose of the project is to make improvements to the drinking water system that are needed to protect public health.

The affected environment will be the area within the Town of Eureka and the immediate vicinity, primarily north along US Highway 93. The human environment affected will include the public water system and the residents of the community. 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 local reserves; a low interest interim loan through the Drinking Water State Revolving Fund Loan Program administered by DEQ and the Montana Department of Natural Resources and Conservation (DNRC); long-term financing through the US Department of Agriculture Rural Development Program (USDA-RD); and grants through USDA-RD; Section 595 of the Water Resources Development Act administered by the US Army Corps of Engineers (USCOE); the Treasure State Endowment Program administered by the Montana Department of Commerce (DOC) and the Renewable Resource Grant and Loan Program administered by DNRC.

DEQ utilized the following references in completing its environmental review of this project: a Uniform Environmental Checklist for Montana Public Facility Projects and a Preliminary Engineering Report dated April, 2008, both by Great West Engineering; correspondence from Winston R. Dyer, P.E., consulting engineer for the Town of Eureka; and plans and specifications prepared by Winston R. Dyer, P.E. In addition to these references, letters were sent to: the Montana Historical Society's Historic Preservation Office (SHPO); DEQ; the U.S. Fish and Wildlife Service (USFWS); USCOE; the Montana Department of Fish, Wildlife, and Parks (DFWP); and DNRC. Responses have been received from SHPO, DEQ, USFWS, USCOE, and DNRC. These references are available for review upon request by contacting:

Mark Smith, P.E.
Montana Department of Environmental Quality
P.O. Box 200901
Helena, MT 59620-0901
Phone (406) 444-5325
Email: marks@mt.gov

or

Tracy McIntyre, Program Administrator
Eureka Rural Development Partners
P.O. Box 1951
Eureka, MT 59917
Phone (406) 297-7374
Email: tracy@eurekardp.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 February 15, 2011. 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.

Todd Teegarden, P.E., Chief
Technical and Financial Assistance Bureau

TOWN OF EUREKA
DRINKING WATER FACILITIES

ENVIRONMENTAL ASSESSMENT

I. COVER SHEET

A. PROJECT IDENTIFICATION

Applicant: Town of Eureka

Address: P.O. Box 313
Eureka, MT 59917

Project Number: DWSRF Project Number: Not Yet Assigned
DNRC-RRGL Project Number: RRG-10-1457
DOC-TSEP Project Number: MT-TSEP-CG-10-484
USACE WRDA Project Number: W68MD993656225
USDA RD Project Number: Not Yet Assigned

B. CONTACT PERSON

Name: Tracy McIntyre, Program Administrator
Eureka Rural Development Partners

Address: P.O. Box 1951
Eureka, MT 59917

Telephone: (406) 297-7374

C. ABSTRACT

The Town of Eureka is located in Lincoln County on U.S. Highway 93, approximately eight miles south of the US-Canadian border. The Town's water system provides service to approximately 1000 residents. The supply source for the system consists of one well and an infiltration gallery. Other components of the system include a 510,000-gallon on-grade steel storage reservoir which fails to meet DEQ storage capacity requirements for the community by approximately 250,000 gallons and a distribution system that, due to undersized piping in some locations, fails to meet system demands for most of the Town. A project overview map is included at the end of this environmental assessment.

Deficiencies currently associated with the system include the following:

1. Inadequate water storage capacity;
2. Inadequate fire protection, quantities, and pressures during high demands in most of the Town due to inadequate storage and undersized water mains; and
3. Lack of a public water supply for the area north of Eureka along Highway 93; this area includes the Midvale Water and Sewer District and the Mountain View Trailer

Court. It is proposed that the Town of Eureka will provide water to these locations under the terms of written agreements, with future annexation being considered.

The Preliminary Engineering Report (PER) recommends a three-phase approach to solving the community's water system problems. The first phase will address distribution system deficiencies and improvements. Included are the replacement of two blocks of the existing distribution system on 5th Street with 14" pipe with a connection to the existing 510,000 gallon steel water storage reservoir; the replacement and extension of the existing transmission main north along Highway 93 approximately 4,300 lineal feet with new 14" and 12" diameter pipe; and the extension of transmission piping west from Highway 93 through Mountain View Trailer Court to Osloski Road. A master meter will be installed at Mountain View Trailer Court and public water will be connected to the existing distribution system within the trailer court and sold under the terms of a written agreement. Future distribution system improvements including water mains, service lines, and water meters within the trailer court will be constructed by others in the future and are not part of this project.

Also included in Phase I are improvements to the Town's existing chlorination facility. These improvements consist generally of the replacement of existing equipment and minor modifications to bring the facility into compliance with current state and federal regulations enforced by the Montana Department of Environmental Quality (DEQ).

The second phase of improvements, which is included within the scope of work for this project, consists of the construction of a new 400,000-gallon cast-in-place conventionally reinforced concrete storage reservoir to be installed southeast of the Town and tied into the existing distribution system with a new 12" transmission main.

The third phase of improvements, not included within the scope of work for this project, includes the replacement of portions of the existing distribution system within the school and downtown areas of Eureka to meet high-system demands including fire flows within those areas. Included will be the replacement of 11 blocks of the existing distribution system on 6th Street, 7th Street, 8th Street, 9th Street, 2nd Avenue, 3rd Avenue, and two alleys in the vicinity of the school. Improvements will also include the replacement of one block of 6" watermain on 1st and 2nd Streets.

The project will be funded with grants through the Montana Department of Natural Resources and Conservation (DNRC) Renewable Resource Grant and Loan Program (\$100,000); the Montana Department of Commerce (DOC) Treasure State Endowment Program (\$625,000); United States Army Corps of Engineers (USCOE) Section 595 of the Water Resources Development Act (WRDA) Program (\$212,000); United States Department of Agriculture Rural Development (USDA-RD) Program (\$515,000); cash reserves (\$16,500); and a loan through the USDA-RD Program (\$1,186,000). Interim (construction) financing is being provided through the Montana Drinking Water State Revolving Fund (DWSRF) Loan Program (\$1,186,000).

Environmentally sensitive issues and features 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.

This Environmental Assessment (EA) has been prepared in response to a loan application

by the Town of Eureka to the DWSRF Loan Program, co-administered by DNRC and the Montana Department of Environmental Quality (DEQ). This EA has been prepared to satisfy the requirements of the Montana Environmental Policy Act (MEPA) and the National Environmental Policy Act (NEPA). It has been reviewed by the DOC Treasure State Endowment Program for purposes of MEPA compliance.

D. COMMENT PERIOD

Thirty (30) calendar days.

II. PURPOSE AND NEED FOR ACTION

A. DRINKING WATER SUPPLY, STORAGE, AND DISTRIBUTION SYSTEMS

Deficiencies in the Eureka water system have been identified in a PER dated April, 2008 prepared by Great West Engineering of Helena, Montana.

The Town of Eureka is an incorporated town located in Lincoln County in Northwestern Montana. The community lies about eight miles south of the Canadian border and provides both sewer and water service to its approximately 1000 residents. The public water system consists of one (1) supply well and an infiltration gallery; a 510,000-gallon steel storage reservoir; and a partially metered distribution system.

The primary deficiencies associated with the system relate to health and safety issues caused by inadequate water storage necessary to meet peak demands and an undersized distribution system that fails to provide adequate quantities and pressures to all locations within the incorporated limits of the community. Additionally, areas of the community located north along Highway 93 but outside of the incorporated limits of the Town have inadequate water systems. Included are the Midvale Water and Sewer District; Mountain View Trailer Court (privately owned); and some commercial development along the Highway 93 corridor. Although not being done in coordination with this project, the proposed plan is to eventually annex these portions of the community. In the meantime, public water will be metered and sold to these entities in accordance with written agreements.

Minor deficiencies with the system's chlorination facility are also included within the scope of this project. Included are new chlorination equipment and structural improvements meeting health and safety requirements of DEQ.

B. PROPOSED PROJECT

Improvements to correct deficiencies associated with the drinking water system are being proposed for construction in three (3) phases. This project is for the design and construction of Phase 1 and Phase 2 Improvements consisting of the following:

1. Construct a new water transmission line from the existing Eureka reservoir on the 5th Street hillside west of town eastward to US Highway 93 and then northward along the west side of Highway 93 to the private road going to the Mountain View Trailer Court (approximate equivalent of what would be 17th Street in the Midvale area).

2. Connect to the existing distribution system for Mountain View Trailer Court. A meter will be installed at the tie-in location and metered water will be provided to the privately-owned trailer court in accordance with the terms of a written agreement.
3. Connect to the existing Midvale Water and Sewer District distribution system at 10th Street and 1st Avenue East, and also at 9th Street and 6th Avenue East. These connections will allow for the abandonment of Midvale's current water supply and storage facilities and will provide adequate quantities and pressures to the district under the terms of a written agreement.
4. Construct a new 400,000 gallon conventionally reinforced concrete storage reservoir in the southeast part of Eureka just north of the Mountain View Manor nursing home on Mountain View Drive. Construction will include a concrete vault to house the control valves necessary for the new reservoir to properly function with the existing system.
5. Construct a 12" connecting transmission main from the existing distribution system to the new storage reservoir. The connection to the existing system will be made at the intersection of Central Avenue and Mountain View Drive.
6. Upgrade the existing chlorination facility to include new chlorination equipment; remote chlorine cylinder monitoring at the main water treatment plant; and structural improvements bringing the facility into regulatory compliance with DEQ.

Phase 3 Improvements, to be designed and constructed in the future, will replace undersized segments of the existing distribution system in downtown Eureka and near the schools to provide uniform and adequate quantities, pressures, and fire flow capacities throughout the community.

Adequate water supply, storage, and distribution are important to the public health and safety of the residents of Eureka. Without these, water quality and public health and safety are at risk.

III. ALTERNATIVES INCLUDING THE PROPOSED ACTION

A. WATER SUPPLY ALTERNATIVES

The Town of Eureka's existing water supply is obtained from one supply well and an infiltration gallery. Two pumps are associated with the infiltration gallery, each capable of pumping 940 gallons per minute (gpm). The well pump is capable of pumping 300 gpm.

Montana's Standards for Water Works, Circular DEQ 1, Section 3.2.1.1, refers to source capacity and states "The total developed groundwater source capacity for systems utilizing gravity storage or pumped storage, unless otherwise specified by MDEQ, must equal or exceed the design maximum day demand with the largest producing well out of service". The maximum day demand for the system is 1,100,842 gallons per day (gpd) and is exceeded by the current supply system with one of the gallery pumps out of service. Circular DEQ-1, Section 3.2.1.2, further states that "A minimum of two sources of groundwater must be provided". This requirement is currently being met by the system.

Based on this evaluation, Eureka's existing water supply system meets state and federal guidelines including the Safe Drinking Water Act, and no improvements are proposed.

B. WATER STORAGE ALTERNATIVES

Water storage must meet average, peak, and fire flow requirements in order to provide the level of service required for a public water system. DEQ-1 requires the adequate storage be provided to meet domestic demand and, where fire protection is provided, fire flow demands. According to the April, 2008 Preliminary Engineering Report, this quantity is 717,412 gallons. The current storage capacity for Eureka is 510,000 gallons, provided by a single on-grade steel storage reservoir constructed in 1972. Alternatives to correct this deficiency include:

1. No action;
2. Construct an elevated steel tank to increase storage;
3. Construct an on-grade steel tank to increase storage; and
4. Construct an on-grade conventionally reinforced cast-in-place concrete tank to increase storage.

C. WATER DISTRIBUTION SYSTEM ALTERNATIVES

Eureka's water distribution system consists of a series of mains and laterals that transport water to individual service lines. Water is piped to the distribution system from the single existing storage reservoir via a 10" asbestos cement transmission main. The mains within the system total approximately 55,000 lineal feet in length; of these, slightly over 40% are less than 6" in diameter, thus not meeting DEQ-1 requirements for a distribution system that includes fire hydrants. In addition, areas of the community lying outside the limits of incorporation have public systems in place that are deficient in quantity, water quality, and storage capacity.

To address problems associated with the distribution system, two alternatives were considered including:

1. No action; and
2. Replace the undersized and/or deteriorated pipes in critical areas to alleviate leakage and provide adequate pressure and flows; and extend service from Eureka's system to Midvale Water and Sewer District, Mountain View Trailer Court, and several businesses located along Highway 93 north of town.

D. COST COMPARISON - PRESENT WORTH ANALYSES

The present worth analysis is a method of comparing alternatives in present day dollars and is used to determine the most cost-effective alternative. Capital cost is first adjusted by subtracting the present worth of the salvage value at the end of 20 years. The present worth value of the annual operating and maintenance costs is calculated assuming a 6.0% interest rate over the 20-year planning period. The present worth of the annual operation and maintenance costs is then added to the adjusted capital cost to provide the total

present worth cost of each alternative. These values are compared to determine the most cost-effective alternative.

1. Table 1. provides a summary of the present worth analysis of the water supply improvements that were considered following the alternative screening process.

Table 1. Present Worth Analysis for Water Supply Improvements

Cost Component	On-Grade Steel 400,000 Gallon	On-Grade Concrete 400,000 Gallon
Capital Cost (2010)	\$1,468,000	\$1,647,000
20-Year Salvage Value	518,220	603,060
Present Worth of 20-Year Salvage Value 20 Years @ 6%	161,600	188,000
Annual O&M Costs	12,700	8,400
Present Worth of Annual O&M Costs 20 Years @ 6%	145,700	96,300
Total Present Worth (2010)	\$1,452,100	\$1,555,300

Because, other than the unacceptable no action alternative, optional alternatives for distribution system improvements were not considered, a present worth analysis was not presented. The capital cost (2010) estimate for distribution system improvements, including minor upgrades to the chlorination facility, is \$523,500.

E. TOTAL ESTIMATED COSTS

The total estimated construction cost for the project, including contingency, is \$2,170,500. The total estimated project cost is \$2,655,000, broken down as follows:

Administrative and Financial Costs:	\$ 117,500
Engineering Costs (Design/Construction Management)	\$ 317,000
Land Acquisition (New Tank Site)	\$ 50,000
Construction Costs	\$1,951,000
Construction Contingency	\$ 219,500
Total Estimated Cost	\$2,655,000

F. USER COSTS AND AFFORDABILITY

Existing and future rates (as affected by this project) for the residents of Eureka and the Midvale Water and Sewer District are:

<u>Community</u>	<u>Existing Rate</u>	<u>Future Rate</u>
Town of Eureka	\$37.30/Mo.	\$37.78/Mo.
Midvale WSD	\$41.93/Mo.	\$49.54/Mo.

IV. AFFECTED ENVIRONMENT

A. PLANNING AREA DESCRIPTION

The Town of Eureka is located in Lincoln County along US Highway 93 approximately eight miles south of the Canadian border. The Town's water system provides service to approximately 1000 residents. Of the 608 total service connections being served by the system, 537 are residential and 71 are commercial or institutional.

B. PROPOSED PROJECT SUMMARY

The proposed project is for improvements to an existing municipal drinking water system owned and operated by the Town of Eureka. The supply source for the system consists of one well and an infiltration gallery; these two sources have adequate capacity to meet Montana Department of Environmental Quality (DEQ) requirements; other system components include a 510,000-gallon on-grade steel storage reservoir which fails to meet DEQ storage capacity requirements and an undersized distribution system that fails to provide adequate pressure and flows during high demands or during a fire.

The Preliminary Engineering Report (PER) recommends a three-phase approach to solving the community's water system problems. The first and second phases will include the construction of additional storage; the extension of water service to the neighborhood north of Eureka along Highway 93, and minor improvements to the existing chlorination facility.

Phase 3, consisting of distribution system upgrades near the school and in downtown Eureka, will be done in the future and is not a part of the project considered in this environmental assessment.

C. POPULATION PROJECTIONS AND PROJECT DESIGN CRITERIA

The projected population for the design year 2030 is 1,800 including the residents of Midvale Water and Sewer District, an increase of 19% over the current population. The PER establishes 1,800 as the 2030 water system design population to allow for unanticipated demands and growth.

Design Year:	2030
Number of Hookups	671
Projected Population	1,800
Average Demand Per Capita	170 gallons per capita per day
Design Average Daily Demand	304,912 gallons per day
Daily Peaking Factor	3.6
Design Peak Daily Demand	1,100,912 gallons per day
Hourly Peaking Factor	2.0
Peak Hourly Demand	1,529 gallons per minute

D. NATURAL FEATURES AND LAND USE WITHIN THE PLANNING AREA

Eureka is located in the Tobacco River Valley six miles east of Lake Koocanusa and about eight miles south of the Canadian border, in northwestern Montana. The community is bordered to the east by the Whitefish Range and to the west by Kootenai River Valley and Lake Koocanusa. The average elevation is slightly less than 2,700 feet above sea level; land use in the area is primarily agricultural and timber, logging, ranching, and tourism being the mainstays.

V. ENVIRONMENTAL IMPACTS OF PROPOSED PROJECT

A. DIRECT AND INDIRECT ENVIRONMENTAL IMPACTS

1. Housing and Commercial Development – No new development is projected as the direct result of this project. Adequate service will be provided to existing commercial properties, and distribution and storage have been designed to service growth for the 20-year planning period. There will be no long-term adverse impacts. Short-term impacts will include traffic interruptions, dust, and noise during construction. Mitigative measures will be enforced during construction.
2. Future Land Use – Land use within the project area is both residential and commercial and is not expected to change significantly in the future. No adverse impacts to land use are expected from the proposed project.
3. Floodplains and Wetlands – There will be no impacts to wetlands. Mitigative measures including silt fencing, straw bale filters, and groundwater pumping may be required during construction.
4. Cultural Resources – No significant impacts are anticipated. In the event that cultural artifacts are encountered during construction, the Montana State Historic Preservation Office will be notified.
5. Fish and Wildlife – No adverse impacts are anticipated..
6. Water Quality – No long-term adverse impacts are anticipated.
7. 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 will be implemented during construction to control dust, thus minimizing this problem.
8. Public Health – The proposed project is not expected to have adverse impacts on public health and should, instead, enhance public health by providing a safe and reliable water supply for the community.
9. Energy – No negative impacts are anticipated.
10. Noise - Short-term impacts from increased noise levels may occur during construction of the proposed project improvements. No long-term adverse impacts are anticipated.
11. Traffic - There may be temporary disruptions to the normal flow of traffic on Town streets as well as U.S. Highway 93. However, detours or long-term delays to the normal flow of traffic on Highway 93 will not be necessary. Public safety will be provided with traffic control approved by the engineer.

B. UNAVOIDABLE ADVERSE IMPACTS

Short-term construction impacts including noise, dust, and traffic disruption will occur but should be minimized through proper construction management. Energy consumption during construction cannot be avoided. Measures to control sedimentation and to ensure fish passage in Mission Creek must be specified and enforced during construction.

VI. PUBLIC PARTICIPATION

The Town of Eureka has ensured public participation during the development of this project. There is documented support for the project within the community.

VII. 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. Water System Preliminary Engineering Report; April 2008; prepared by Great West Engineering, Helena, Montana.
- B. Correspondence by Winston R. Dyer, P.E., engineer for the project, dated April 30, 2010.
- C. Uniform Application for Montana Public Facility Projects; December 23, 2010; prepared by The Dyer Group, LLC and the Town of Eureka.

VIII. AGENCIES CONSULTED

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

- A. The Montana Historical Society's Historic Preservation Office
- B. The Montana DEQ
- E. The U.S. Fish and Wildlife Service
- F. The U.S. Army Corp of Engineers
- G. The Montana Department of Fish, Wildlife, and Parks
- H. The Montana DNRC

No adverse comments were received.

IX. APPLICABLE REGULATIONS AND PERMITTING AUTHORITIES

No additional permits will be required from the Drinking Water State Revolving Fund Program of the Department of Environmental Quality for this project after review and approval of the submitted plans and specifications. However, a stormwater general discharge permit for construction activities may be required from the department's Water Protection Bureau prior to the beginning of construction if a land disturbance of one acre or more is planned closer than 100 feet from a surface water body or if any disturbance of five acres or more is anticipated. A construction dewatering permit from the department's Water Protection Bureau may also be required if groundwater is encountered during construction of the new facilities and dewatering activities are necessary.

X. RECOMMENDATION FOR FURTHER ENVIRONMENTAL ANALYSIS

EIS More Detailed EA No Further Analysis

Rationale for Recommendation: Through this environmental assessment, the department has made a preliminary determination that none of the adverse impacts of the proposed Town of Eureka Water System Improvements Project-2010 are significant. Therefore, an environmental impact statement is not required. Richard Knatterud, P.E., representing the Department of Commerce Treasure State Endowment Program, has reviewed the EA and concurs with this determination. 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.

The environmental assessment is the appropriate level of analysis because none of the adverse effects of the impacts are expected to be significant.

EA prepared by:

Bob Fischer, P.E.

Date

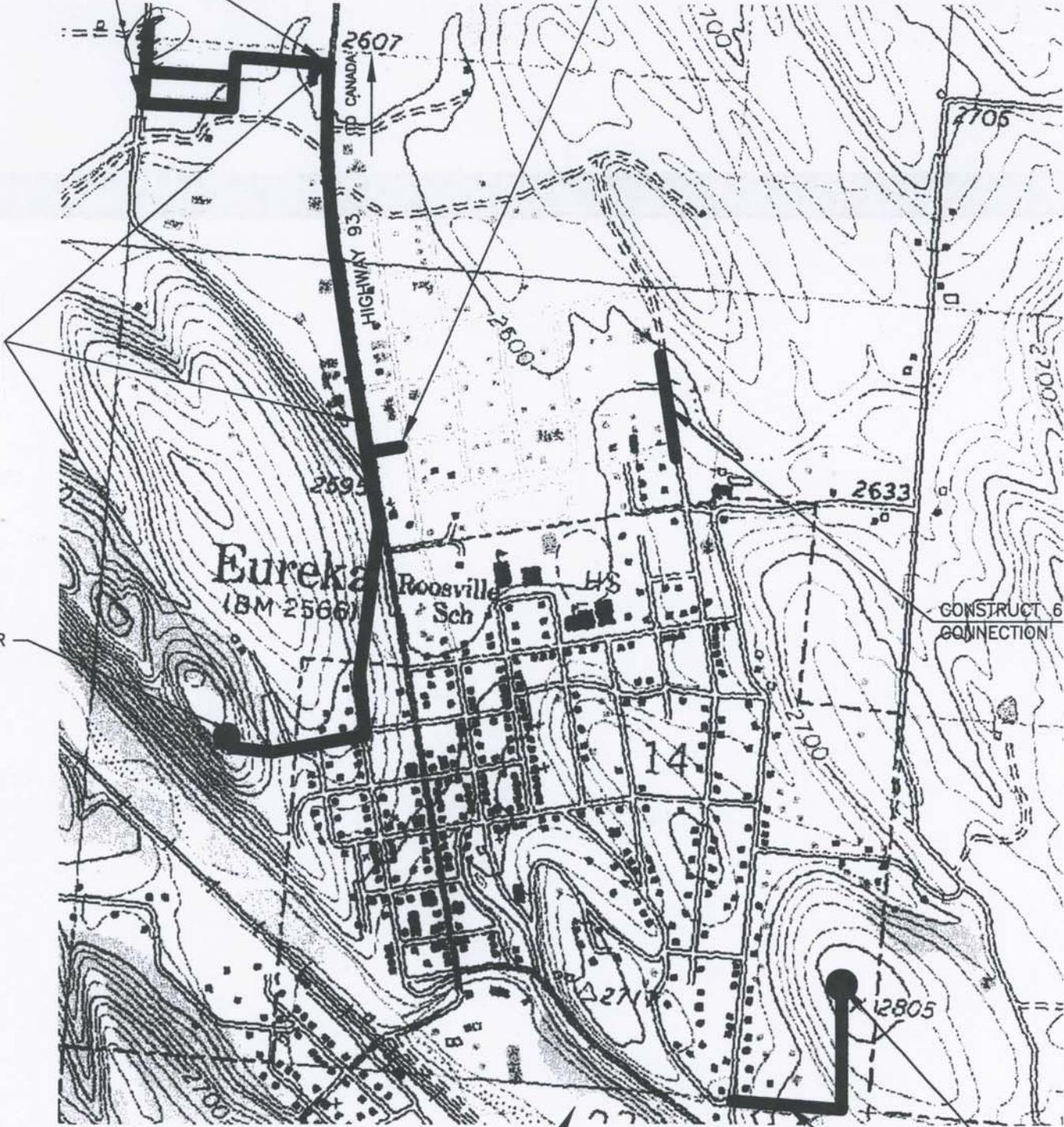
EA reviewed by:

Mark Smith, P.E.

Date

CONSTRUCT MTN VIEW
DISTRIBUTION PIPING

CONSTRUCT 10TH STREET
CONNECTION



CONSTRUCT 6
CONNECTION

EXISTING RESERVOIR

INSTALL CHLORINATION
IMPROVEMENTS

CONSTRUCT
400,000 GAL
RESERVOIR
CONSTRUCT
TRANSMISSION MAIN

PROJECT OVERVIEW