FINDING OF NO SIGNIFICANT IMPACT
FOR
TOWN OF ST. IGNATIUS
PHASE 1 WATER SYSTEM IMPROVEMENTS PROJECT

TO: ALL INTERESTED PERSONS

Date: April 1, 2010

Action: Water System Improvements Including:

1. Drill one (1) additional water supply well;
2. Construct a new pumphouse and associated equipment and controls;
3. Install an emergency standby generator;
4. Install a second water line across Mission Creek;
5. Replace undersized and leaking water distribution lines in critical areas to provide adequate pressure and flows during high demands and reduce system water losses due to leakage; and
6. Conduct a leak detection survey to accurately determine the full extent of water losses occurring throughout the community's entire water distribution system.

Location of Project: Town of St. Ignatius
Lake County, Montana

DEQ Funding: $ 103,000
Total Project Cost: $ 506,000

An environmental review has been conducted by the Montana Department of Environmental Quality (DEQ) for proposed funding for improvements to the Town of St. Ignatius'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 St. Ignatius and the immediate vicinity. The human environment affected will include the public water system and the 788 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 loan through the Drinking Water State Revolving Fund Loan Program administered by the Montana Departments of

Environmental Quality (DEQ) and Natural Resources and Conservation (DNRC); and grants through the Treasure State Endowment Program administered by the Montana Department of Commerce (DOC) and the Renewable Resource Grant and Loan Program administered by the DNRC.

The 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, consulting engineer for the Town of St. Ignatius. In addition to these references, letters were sent to: the Montana Historical Society's Historic Preservation Office (SHPO); the Montana Natural Heritage Program (MNHP); the Montana DEQ Water Protection Bureau (DEQ-WQPB); the Montana DEQ Hazardous Waste Site Cleanup Bureau (DEQ-HWSCB); the U.S. Fish and Wildlife Service (USFWS); the U.S. Army Corp of Engineers (USCOE); the Montana Department of Fish, Wildlife, and Parks (DFWP); the Montana DNRC; the U.S. Department of Agriculture Natural Resource Conservation Service (NRCS); and the Confederated Salish and Kootenai Tribal Preservation Department. Responses have been received from SHPO, MNHP, DEQ-WQPB, DEQ-HWSCB, USFWS, and USCOE. 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
Charles Gariepy, Mayor
Town of St. Ignatius
P.O. Box 103
St. Ignatius, MT 59865
Phone (406) 745-3791

Comments on this finding or on the EA may be submitted to DEQ at the above address. Comments must be postmarked no later than May 15, 2010. 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.

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

TOWN OF ST. IGNATIUS
DRINKING WATER FACILITIES

ENVIRONMENTAL ASSESSMENT

I. COVER SHEET

A. PROJECT IDENTIFICATION

Applicant: Town of St. Ignatius

Address: P.O. Box 103
St. Ignatius, MT 59865

Project Number: DWSRF Project Number: Not Yet Assigned
DNRC-RRGL Project Number: RRG-10-1434
DOC-TSEP Project Number: MT-TSEP-CG-10-519

B. CONTACT PERSON

Name: Charles Gariepy, Mayor

Address: P.O. Box 103
St. Ignatius, MT 59865
Telephone: (406) 745-3791

C. ABSTRACT

The Town of St. Ignatius is located in Lake County approximately twenty-five (25) miles south of Polson. The Town's water system provides service to approximately 788 residents. The supply source for the system consists of two (2) wells which do not have adequate capacity to meet Montana Department of Environmental Quality (DEQ) requirements. Other components of the system include a 300,000-gallon elevated storage reservoir which also fails to meet DEQ storage capacity requirements and an aging distribution system that is deficient in the following areas: The lines are deteriorated, leak, require excessive maintenance, and, because they are undersized, fail to provide adequate fire flows to commercial properties on Mountain View Drive; a 4" line in Home Addition is deteriorated and is a maintenance liability; and only a single line connects the supply wells to the storage reservoir across Mission Creek, thus exposing the system to a potential shutdown should the single line happen to fail.

Deficiencies currently associated with the system include the following:

1. Inadequate water supply;
2. Inadequate water storage capacity;
3. Excessive leakage in service lines and in the distribution system;
4. Inadequate fire protection in some areas due to undersized distribution lines; and
5. Lack of a second line crossing across Mission Creek, between the supply wells and the storage reservoir.

The Preliminary Engineering Report (PER) recommends a 2-phase approach to solving the community's water system problems. The first phase will include the drilling of a new well to provide a third supply source; the construction of a new pumphouse building; the installation of a standby generator; the installation of a second line crossing at Mission Creek; replacement of deteriorated lines to eliminate leakage and to provide adequate fire flows to businesses on Mountain View Drive; replacement of the deteriorated 4" line on Home Addition; and a leak detection survey to determine the full extent of leakage throughout the distribution system.

The second phase of improvements, which are not part of this project and will not be discussed further in this report, include expanded storage and additional distribution system upgrades.

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 ($253,000); cash reserves ($50,000); and a loan through the Drinking Water State Revolving Fund (DWSRF) Loan Program ($103,000).

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. It may be necessary to determine the impacts of the new well on existing wells as part of the water rights acquisition process on tribal lands, since the project is located on the Flathead Reservation.

This Environmental Assesement (EA) has been prepared in response to a loan application by the Town of St. Ignatius 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 St. Ignatius water system have been identified in a PER dated April, 2008 prepared by Great West Engineering of Helena, Montana.

The Town of St. Ignatius is an incorporated town located in Lake County in Western Montana. The community lies within the Flathead Reservation and provides both sewer and water service to its approximately 788 residents. The public water system consists of two (2) supply wells; a 300,000-gallon elevated storage reservoir; and a metered distribution system.

The primary deficiencies associated with the system relate to health and safety issues

caused by inadequate water supply to meet current regulatory criteria and a deteriorated, leaking, and undersized distribution system that fails to provide adequate quantities and pressures and is a maintenance liability. Additionally, a single water line crosses Mission Creek between the supply wells and the storage and distribution systems, creating the potential for a system shutdown if the single line were to fail.

B. PROPOSED PROJECT

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

1. Drill one (1) additional water supply well (for a total of three) to bring the supply source into compliance with Circular DEQ-1 Section 3.2.1; this section requires a groundwater supply be adequate to equal or exceed the design maximum day demand for a system with the largest producing well out of service;
2. Construct a new pumphouse and related pumping facilities;
3. Install a generator plant to provide backup electrical power during an electrical failure;
4. Install a second water line across Mission Creek to provide continued system operation should one of the lines fail;
5. Replace undersized and leaking distribution lines Mountain View Drive;
6. Replace deteriorated and leaking 4" distribution lines to alleviate excessive leakage on Home Addition; and
7. Conduct a leak detection survey to determine the full extent of leakage occurring throughout the entire distribution system.

Phase 2 Improvements, to be designed and constructed in the future, will increase storage to meet fire flow requirements within the community and replace other leaking sections of the distribution system as identified in the leak detection survey that is part of Phase 1. The environmental impacts of Phase 2 Improvements are not considered in this EA since the details of the project are not known.

Adequate water supply, storage, and distribution are important to the public health and safety of the residents of St. Ignatius. 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 St. Ignatius's existing water supply is obtained from two supply wells designated Well No. 1 and Well No. 2. Well No. 1 has a water right of 334 gallons per minute (gpm) and produces 250 gpm. Well No. 2 has a water right for 350 gpm and produces 205 gpm. Together, the wells produce a cumulative 455 gpm. Neither of the wells are chlorinated.

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 270 gpm and is not met by Well

No. 2 when Well No. 1, the largest producing well, is 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.

To bring the system into compliance with Circular DEQ-1, three (3) alternatives are initially considered in the PER including:

1. No action;
2. Reactivate an existing surface water right and construct a new water treatment plant; and
3. Develop a new groundwater source.

Alternative 1. was eliminated in the alternatives screening process since it will not accomplish the purpose of bringing the system into compliance with regulatory criteria; additionally, Alternative 2 was ruled out due to the excessive and unaffordable costs associated with the construction and operation of a new treatment plant as required for a surface water system. Resultingly, the PER seriously considers only the development of a new groundwater source as a reasonable alternative.

B. WATER STORAGE ALTERNATIVES

Water storage alternatives are not part of Phase 1 Improvements and are not considered in this environmental assessment.

C. WATER DISTRIBUTION SYSTEM ALTERNATIVES

The St. Ignatius water distribution system consists of a series of mains and laterals that convey water to individual service lines. Water is piped to the distribution system from the elevated storage reservoir through a 10" transmission line. The system is a single-zone system comprised of polyvinylchloride (PVC) and steel lines ranging in diameter from 4" to 10". Service lines are typically ¾" or 1" in diameter and are the responsibility of each property owner to maintain beyond the property line. The condition of privately-owned service lines is not considered in the PER or in this project.

Deficiencies associated with the water distribution system include inadequate sizing to carry adequate flows and maintain stable pressures during peak demands and leakage due to pipe deterioration. Additionally, a single line crosses Mission Creek between the supply wells and the storage reservoir, creating the potential for a system failure should that single line break.

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 install a second line across Mission Creek.

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	Drill New Well (Only Alternative Considered)
Capital Cost (2008)	**$264,925**
20-Year Salvage Value	**$ 78,965**
Present Worth of 20-Year Salvage Value 20 Years @ 6%	**$ 24,622**
Annual O&M Costs	**$ 5,000**
Present Worth of Annual O&M Costs 20 Years @ 6%	**$ 57,350**
Total Present Worth (2008)	**$ 297,653**

2. Table 2. provides a summary of the present worth analysis for water distribution system improvements that were considered following the alternative screening process.

Table 2. Present Worth Analysis for Water Distribution System Improvements

Cost Component	Replace Critical Distribution Lines and Install Second Line Across Mission Creek
Capital Cost (2008)	**$201,800**
20-Year Salvage Value	**$100,000**
Present Worth of 20-Year Salvage Value 20 Years @ 6%	**$ 31,180**
Annual O&M Costs	**$ 5,000**
Present Worth of O&M Costs 20 Years @ 6%	**$ 57,350**
Total Present Worth (2008)	**$227,970**

E.. TOTAL ESTIMATED COSTS

The total estimated cost of the project is $506,000, broken down as follows:

Administrative and Financial Costs:	$ 33,000
Engineering Costs (Design/Construction Management)	$ 111,000
Leak Survey	$ 15,000
Construction Costs	$ 327,000
Construction Contingency	$ 20,000
Total Estimated Cost	$ 506,000

F. USER COSTS AND AFFORDABILITY

The current average monthly residential water rate for St. Ignatius residential customers is $19.47. This project will require a loan in the approximate amount of $103,000, resulting in a projected average rate of $20.67 per month.

IV. AFFECTED ENVIRONMENT

A. PLANNING AREA DESCRIPTION

The Town of St. Ignatius is located in Lake County approximately twenty-five (25) miles south of Polson. The Town's water system provides service to approximately 788 residents. Of the 324 total service connections being served by the system, 276 are residential and 48 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 St. Ignatius. The supply source for the system consists of two (2) wells which do not have adequate capacity to meet Montana Department of Environmental Quality (DEQ) requirements; other system components include a 300,000-gallon elevated storage reservoir which also fails to meet DEQ storage capacity requirements and an aging distribution system that leaks, fails to provide adequate pressure and flows during high demands, and requires excessive maintenance to keep in operation.

The Preliminary Engineering Report (PER) recommends a 2-phase approach to solving the community's water system problems. The first phase will include the drilling of a new well to provide a third supply source; the construction of a new pumphouse building; the installation of a standby generator; the installation of a second line crossing at Mission Creek; replacement undersized and deteriorated lines on Mountain View Drive; replacement of the deteriorated 4" line on Home Addition; and a leak detection survey to determine the extent of leakage throughout the distribution system. Phase 2, consisting of storage and additional distribution system upgrades, 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 1,024, an increase of 30% over the current population. The PER establishes 1,203 as the 2030 water system design population to allow for unanticipated demands and growth.

Design Year:	2030
Number of Hookups	462
Projected Population	1,203
Average Demand Per Capita	201 gallons per capita per day
Design Average Daily Demand	241,803 gallons per day
Daily Peaking Factor	2.1
Design Peak Daily Demand	506,463 gallons per day
Hourly Peaking Factor	2.0
Peak Hourly Demand	703 gallons per minute

D. NATURAL FEATURES AND LAND USE WITHIN THE PLANNING AREA

St. Ignatius is located in the Mission Valley south of Flathead Lake and north of the National Bison Range. The community is bordered to the east by the Mission Range and to the west by Highway 93 and the Flathead Valley. The average elevation is slightly less than 3,000 feet above sea level; land use in the area is primarily agricultural, cattle and hay operations being the mainstay.

V. ENVIRONMENTAL IMPACTS OF PROPOSED PROJECT

A. DIRECT AND INDIRECT ENVIRONMENTAL IMPACTS

1. Housing and Commercial Development – No new development is projected as a result of this project. Adequate service will be provided to existing commercial

properties. 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 residential 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 –The installation of a second water line across Mission Creek will occur within the floodplain. Mitigative measures during construction will be specified during the permitting process, and may include the installation of silt fencing, straw bales to to collect sediment as required during dewatering, and revegetation after construction is complete. There will be no impacts to wetlands.

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 – The Montana Department of Fish, Wildlife, and Parks was contacted to identify any unique resources within the project area. No long-term 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 – Because of improvements in the efficiency of new pumps, controls, and telemetry associated with the project, long-term energy savings 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.

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 St. Ignatius has ensured public participation during the development of this project. A public hearing was held on February 6, 2008 at the office of the Lake County commissioners. A public work session was held on March 4, 2008; and a third public meeting to discuss the project and inform the public was held on April 22, 2008. 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. Uniform Application for Montana Public Facility Projects; August 6, 2009; prepared by Great West Engineering, Helena, Montana; and the Town of St. Ignatius.

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 Natural Heritage Program
C. The Montana DEQ Water Protection Bureau
D. The Montana DEQ Hazardous Waste Site Cleanup Bureau
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 (DFWP)
H. The Montana DNRC
I. The U.S.Department of Agriculture Natural Resource Conservation Service
J. The Confederated Salish and Kootenai Tribal Preservation Department

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 [X] 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 St. Ignatius Phase 1 Water System Improvements Project 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.

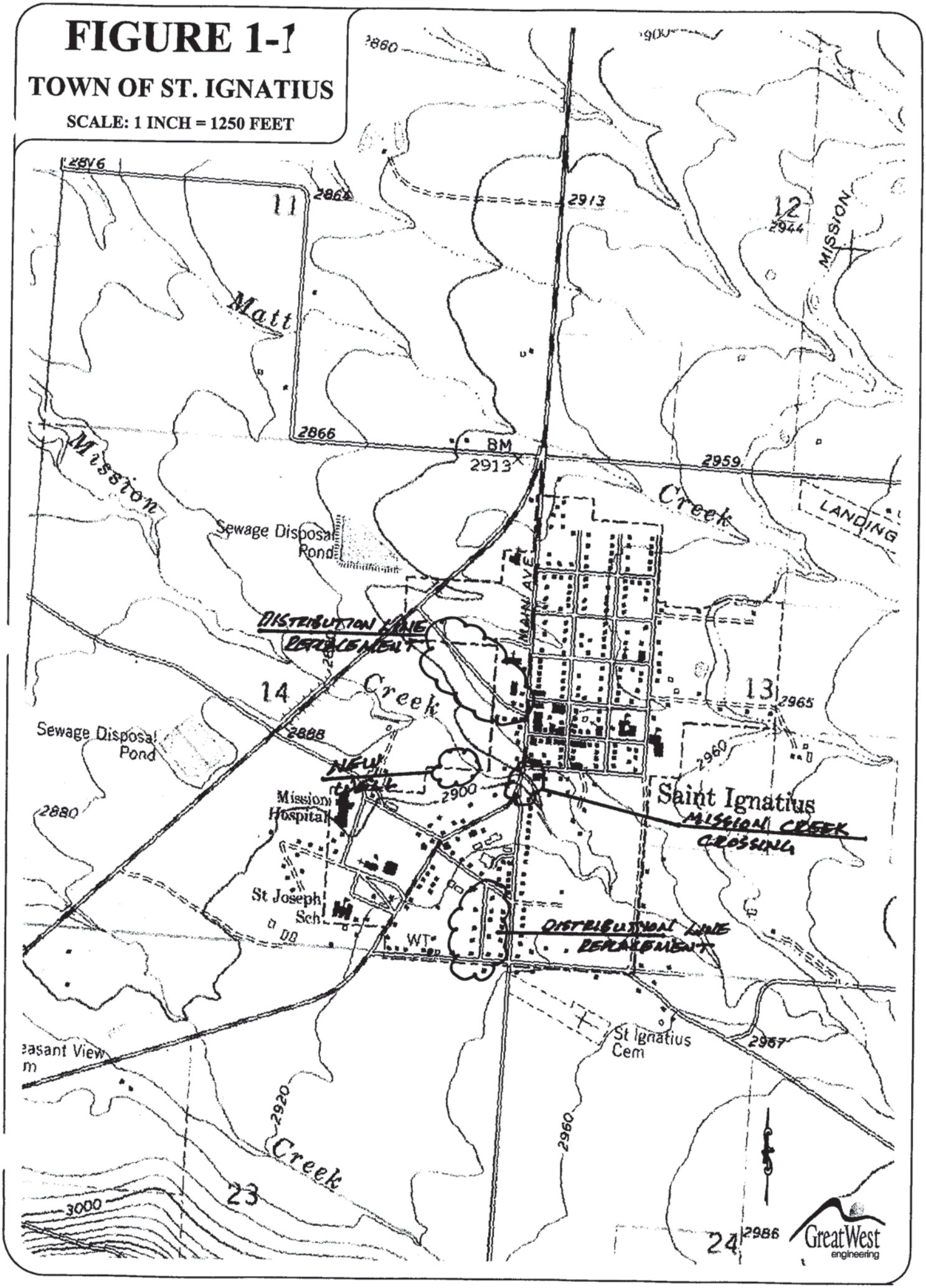
EA prepared by:

Bob Fischer, P.E.	Date

EA reviewed by:

Mark Smith, P.E.	Date

FIGURE 1-1

TOWN OF ST. IGNATIUS

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