Montana Department of
ENVIRONMENTAL QUALITY

Brian Schweitzer, Governor

P.O. Box 200901 • Helena, MT 59620-0901 • (406) 444-2544 • www.deq.mt.gov

February 16, 2006

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LEGISLATIVE ENVIRONMENTAL
POLICY OFFICE

Bruce Bender, P.E.
City Public Works Director
City of Missoula Department of Public Works
435 Ryman
Missoula, Montana 59802-4297

RE: Rattlesnake Neighborhood Sewer Project

Dear Mr. Bender:

Enclosed are a Notice of Findings of No Significant Impact (Notice) and a copy of the Finding of No Significant Impact (FONSI) and Environmental Assessment (EA) for the City of Missoula Rattlesnake Neighborhood Sewer Collection System Project. Please print the Notice in one publication of your local paper under legal advertising and return the proof of advertising. You do not have to print the FONSI or EA. We recommend that you advertise this as soon as possible and allow for a 30-day comment period. We have distributed these documents to the enclosed list of agencies.

If you have any questions, please call me at (406) 444-5322.

Sincerely,

Skye A. Hatten
Environmental Engineering Specialist
Technical & Financial Assistance Bureau

Encls: Notice of Findings of No Significant Impact (Notice)
Finding of No Significant Impact (FONSI)
Environmental Assessment (EA)
Agency List

cc: Logan McInnis P.E., Morrison Maierle, Inc., Missoula
Steve King P.E., City Engineer, City of Missoula Public Works
Joe Oliphant, Project Development Coordinator, City of Missoula Public Works
David Rise, USEPA, Helena
David Schachterle, USEPA, Denver
Mohammad Razzazian, USEPA, Denver
Jim Edgcomb, TSEP, DOC, Helena
Robert Fischer, RRGL, DNRC, Helena
Keith Christie, Dir/Legal, DEQ, Helena

Notice of Findings 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 Missoula Rattlesnake Neighborhood Sewer Collection System
Location:	Missoula, Montana
Project Number:	C302004-02 / XP-98884001
Total Cost:	$4,796,000
EPA (STAG) Share:	$382,305
SRF Share:	$2,593,000

The City of Missoula, through the Missoula Wastewater Facilities Plan Update, 1999, and the Preliminary Engineering Report for the Rattlesnake Neighborhood Sewer Collection System, Missoula, Montana, 2002, has identified the need to provide sewer collection systems to areas of the Rattlesnake Valley currently not served by municipal sewer. The ultimate goals are to eliminate failing and/or inadequate septic tanks and to protect Rattlesnake Valley groundwater, Rattlesnake Creek, Missoula Valley Sole Source Aquifer and the Clark Fork River. Through an extension of the existing sewage collection system all wastewater will be collected and routed to the recently upgraded biological nutrient removal wastewater treatment facility for treatment. The recommended alternative will serve some of the areas of the valley currently utilizing cesspools and septic systems for wastewater treatment, many of which are substandard or failing. Partial funding for this sewer extension project has been provided by a Environmental Protection Agency grant (STAG) and a State Revolving Fund loan. Additional funding will be from other State sources and local funds. Environmentally sensitive characteristics such as historic sites, wetlands, floodplains, prime agricultural land, and threatened or endangered species are not expected to be adversely impacted as a result of the proposed project. Minor short-term environmental impacts associated with the construction activities will occur. No significant long-term environmental impacts were identified.

The following agencies have prepared an Environmental Assessment (EA) and corresponding Finding of No Significant Impact (FONSI):

1. Montana Department of Environmental Quality, Planning, Prevention & Assistance Division, 1520 East Sixth Avenue, P.O. Box 200901, Helena, Montana 59620-0901;

2. U.S. Environmental Protection Agency, Region VIII, Montana Office, 10 W. 15 St., Suite 3200, Helena, MT 59626;

The environmental review record, including the EA and FONSI issued by each agency, is available for public examination on the Department of Environmental Quality website (http://www.deq.mt.gov/ea.asp) and during normal working hours at the following locations:

Dept. of Environmental Quality
1520 East Sixth Avenue
P.O. Box 200901
Helena, Montana 59620-0901

US EPA
Region 8, Montana Office
10 West 15th Street – Suite 3200
Helena, MT 59626

City of Missoula
Department of Public Works
435 Ryman
Missoula, Montana 59802-4297

Comments supporting or disagreeing with either FONSI or EA may be submitted for consideration by each agency. There will be a thirty (30) day comment period from the date of this notice for the public to submit written comments concerning the proposed facilities. After evaluating the comments received, the agencies will make a final decision. However, no administrative action will be taken on the project for at least 30 calendar days following the date of this notice.

Montana Department of
ENVIRONMENTAL QUALITY

Brian Schweitzer, Governor

P.O. Box 200901 • Helena, MT 59620-0901 • (406) 444-2544 • www.deq.mt.gov

February 13, 2006

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 Missoula Rattlesnake Neighborhood Sewer Collection System
Location:	Missoula, Montana
Project Number:	C302004-02
Total Cost:	$4,796,000
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The City of Missoula, through the Missoula Wastewater Facilities Plan Update, 1999, and the Preliminary Engineering Report for the Rattlesnake Neighborhood Sewer Collection System, Missoula, Montana, 2002, has identified the need to provide sewer collection systems to areas of the Rattlesnake Valley currently not served by municipal sewer. The ultimate goals are to eliminate failing and/or inadequate septic tanks and to protect Rattlesnake Valley groundwater, Rattlesnake Creek, Missoula Valley Sole Source Aquifer and the Clark Fork River. Through an extension of the existing sewage collection system all wastewater will be collected and routed to the recently upgraded biological nutrient removal wastewater treatment facility for treatment. The recommended alternative will serve some of the areas of the valley currently utilizing cesspools and septic systems for wastewater treatment, many of which are substandard or failing. Partial funding for this sewer extension project has been provided by a $393,430 Environmental Protection Agency grant (STAG) and a State Revolving Fund loan. Additional funding will be from other State sources and local funds. Environmentally sensitive characteristics such as historic sites, wetlands, floodplains, prime agricultural land, and threatened or endangered species are not expected to be adversely impacted as a result of the proposed project. Minor short-term environmental impacts associated with the construction activities will occur. No significant long-term environmental impacts were identified. An environmental assessment (EA), which describes the project and analyzes the impacts in more detail, is attached to this Finding of No Significant Impact (FONSI).

These documents are available for public scrutiny on the Department of Environmental Quality web site (http://www.deq.state.mt.us/ea.asp) and also at the following locations:

Department of Environmental Quality
PPA/TFA
1520 East Sixth Avenue
P.O. Box 200901
Helena, MT 59620-0901

City of Missoula
Department of Public Works
435 Ryman
Missoula, Montana 59802-4297

Comments supporting or disagreeing with this FONSI and EA may be submitted for consideration by the Department of Environmental Quality. There will be a thirty (30) day comment period from the date of this notice for the public to submit written comments to the Technical and Financial Assistance Bureau concerning the proposed facilities. Email comments may be sent to shatten@mt.gov. After evaluating the comments received, the agencies will make a final decision. However, no administrative action will be taken on the project for at least 30 calendar days after release of the FONSI.

Sincerely,

Todd Teegarden

Todd Teegarden, Bureau Chief
Technical and Financial Assistance Bureau
Planning, Prevention & Assistance Division

CITY OF MISSOULA
RATTLESNAKE NEIGHBORHOOD SEWER COLLECTION SYSTEM

ENVIRONMENTAL ASSESSMENT

I. COVER SHEET

A. PROJECT IDENTIFICATION

Name of Project:	City of Missoula Rattlesnake Neighborhood Collection System Project
Applicant:	City of Missoula
Address:	435 Ryman Street Missoula, MT 59802

B. CONTACT PERSON

Name:	Bruce Bender, Director of Public Works
Address:	435 Ryman Street Missoula, MT 59802
Telephone:	(406) 258-4621

C. ABSTRACT

1. BACKGROUND

The City of Missoula, through the Missoula Wastewater Facilities Plan Update, 1999, and the Preliminary Engineering Report for the Rattlesnake Neighborhood Sewer Collection System, Missoula, Montana, 2002, has identified the need to provide sewer collection systems to areas of the Rattlesnake Valley currently not served by municipal sewer.

Housing development within the Rattlesnake Valley has been ongoing since the 1960's, most of which have been developed in Missoula County, outside of city limits. Currently, this area contains a significant number of on-site wastewater treatment systems including septic tank/drainfields, seepage pits and cesspools. Many of the onsite wastewater treatment systems that serve the properties in the Rattlesnake Valley are outdated and are unable to provide the treatment necessary to meet standards and prevent contamination of surface water and groundwater. Cesspools and inadequately sized leach fields are not permitted because they do not meet the minimum treatment and design standards for onsite wastewater treatment.

A number of existing sewer facilities owned by the City of Missoula are located in the Rattlesnake Valley near the identified areas in need of sewer collection systems. The Rattlesnake Interceptor, which is located along the center of the valley beyond the north end of the proposed project area, was installed in 1986

along with collector sewers to serve the Upper Lincoln Hills neighborhood. Currently, a total of 1,120 properties are already connected to sanitary sewer in the Rattlesnake Valley. The proposed project would extend sanitary sewers to 477 of the remaining 570 properties inside the city limits in the Rattlesnake Valley. Through an extension of the existing sewage collection system all wastewater will be collected and routed to the recently upgraded biological nutrient removal wastewater treatment facility for treatment. The recommended alternative will serve some of the areas of the valley currently utilizing cesspools and septic systems for wastewater treatment, many of which are substandard or failing.

Mountain Water Company provides water services to many of the residents within the Rattlesnake Valley area through a local water utility. Some residents within the project area continue to receive water from individual wells.

The ultimate goals of this project are elimination of failing or inadequate septic tanks and the protection of public health by preventing contamination of the Rattlesnake Valley groundwater, Rattlesnake Creek, Missoula Valley Sole Source Aquifer and the Clark Fork River. Pollution of the aquifers and streams will be reduced by provision of sewer service and advanced wastewater treatment.

2. DESCRIPTION OF PROJECT

a. OVERALL RATTLESNAKE VALLEY PROJECT AREA

The proposed project would extend the Rattlesnake sewage collection system to areas with many failing or inadequate septic tanks. The wastewater will be conveyed through the existing Rattlesnake Interceptor sewer to the City of Missoula's wastewater treatment facility. The wastewater treatment facility was recently upgraded to increase capacity and to provide biological nutrient removal. Existing septic tanks and leach fields will be removed and/or decommissioned.

Following an alternative screening process, three alternatives were analyzed in detail using several factors including schematic layouts, operational requirements, regulatory compliance, land requirements, environmental considerations, construction problems and project costs. As determined by the engineer, based on the aforementioned criteria, the conventional gravity sewer was identified as the preferred alternative for this project. Implementation of this project would include installation of approximately 31,500 lineal feet of sanitary sewer gravity main, 147 sanitary sewer manholes, 467 sanitary sewer

gravity services, and surface restoration in all affected areas, including asphalt paving and landscaping.

Federal and State grant/loan programs will help fund the project. Environmentally sensitive characteristics such as wetlands, floodplains and threatened or endangered species are not expected to be adversely impacted as a result of the proposed project. No significant long-term environmental impacts were identified.

b. WORK COMPLETED WITHIN THE OVERALL RATTLESNAKE VALLEY PROJECT AREA

Through formation of individual Special Improvement Districts (SIDs) within the Rattlesnake Valley project area, some construction included in the overall scope of work is scheduled for completion in 2006. The Gilbert Street Sanitary Sewer Project was created through the formation of SID 533. This project includes installation of approximately 2,400 lineal feet of sanitary sewer gravity main, 12 sanitary sewer manholes, and 37 sanitary sewer gravity services. The total cost for this project is estimated at $559,000 partially funded through an SID bond of $244,000. The Lincolnwood Phase I Sanitary Sewer Project was created through the formation of SID 534. This project includes installation of approximately 3,050 lineal feet of sanitary sewer gravity main, 11 sanitary sewer manholes, and 45 sanitary sewer gravity services. The total cost for this project is estimated at $552,100 partially funded through an SID bond of $254,000.

3. AGENCY ACTION, APPLICABLE REGULATIONS AND PERMITTING AUTHORITIES

Under Montana law, (75-6-112, MCA), no person, including a municipality, may construct, extend, or use a public sewage system until the DEQ has reviewed and approved the plans and specifications for the project. Under the Montana Water Pollution Control State Revolving Fund Act, the DEQ may loan money to municipalities for construction of public sewage systems.

The new sewer will be constructed in accordance to State design standards. A Stormwater Discharge General Permit and a construction-dewatering permit from the DEQ may be required prior to construction. Missoula City/County adopted an Air Pollution Control Program in 1994, which will regulate air quality. No additional permits will be required from the State Revolving Fund (SRF) section of the DEQ for this project after the review and approval of the submitted plans and specifications.

The DEQ, Technical & Financial Assistance Bureau, has prepared

this Environmental Assessment (EA) because the DEQ received a Preliminary Engineering Report for its review and written approval in addition to an application for a State Revolving Fund (SRF) loan for the project. This EA has been prepared to satisfy the requirements of the National Environmental Policy Act (NEPA) and the Montana Environmental Policy Act (MEPA), supplementing the June 2000 EPA FONSI/EA for the City of Missoula Wastewater Facilities Plan Update. The DEQ, Technical and Financial Assistance Bureau, has also prepared this EA in accordance with their current responsibility for the administration of EPA STAG grants, by which the project is being partially funded.

D. COMMENT PERIOD

Thirty (30) calendar days

II. PURPOSE AND NEED FOR ACTION

The City of Missoula is located in south-central Missoula County in western Montana (Figure 1). The project area is in the Rattlesnake Valley located northeast of downtown Missoula (Figure 2). This area currently contains a significant number of on-site wastewater treatment systems including septic tank/drainfields, seepage pits and cesspools. The failure rate of on-site systems in the Rattlesnake Valley is documented in Evaluation of Unsewered Areas in Missoula, Montana, 1996. According to this document, 23 percent of the on-site wastewater systems permitted since 1967 have failed and been replaced. Nearly 46 percent of the lots included in this project are less than ¼ acre and do not have adequate space for a drainfield and replacement area as described in Administrative Rules of Montana (ARM) 17.36.340. Approximately 58 percent of the systems installed in the Rattlesnake Valley are either cesspools or seepage pit systems that provide minimal treatment of wastewater.

The ultimate goal of this project is protection of public health. The key factors driving this project are: elimination of failing or inadequate septic tanks, protection of the Missoula Valley Sole Source Aquifer, improvement and protection of current water quality and the City of Missoula's commitment to the Voluntary Nutrient Reduction Program. These factors are explained in more detail below.

A. VNRP REQUIREMENTS

Nutrient loading from on-site wastewater treatment systems has had significant impacts to groundwater and surface water quality in the Missoula Valley. Nutrient loading and the resulting algae blooms in the Clark Fork River have resulted in the City of Missoula participating in the Voluntary Nutrient Reduction Program (VNRP). One of the City's commitments is to connect at least 50 percent of the Missoula Valley's 6,780 existing on-site wastewater treatment systems to the central collection and treatment system by 2008.

B. WATER QUALITY

The Missoula Valley Water Quality District monitors water quality parameters in monitoring wells around the Missoula Valley. Two wells (Alvina Park and Lincolnwood) located near project areas in the Rattlesnake Valley have been monitored quarterly for nitrate and other parameters since 1995. Monitoring results have shown findings of nitrate in both of these wells. Although these levels have been less than the Maximum Contaminant Level (MCL) of 10 mg/l for nitrate, they indicate that the wells are impacted by septic systems and point to the potential of other impacts such as viruses and other pathogens from septic systems. There have been at least two cases of positive coliform tests in wells in the Rattlesnake Valley, which indicates the pathways clearly exist for pathogens in septic tank effluent to contaminate drinking water wells.

C. SOLE SOURCE AQUIFER

The Missoula Valley Aquifer is one of few aquifers designated nationwide by EPA as a Sole Source Aquifer. It is of critical importance to protect the water quality in the aquifer. On-site wastewater systems have been identified as one of the major sources of contamination to the Missoula Valley Aquifer.

D. FAILING OR INADEQUATE SEPTIC TANKS

Approximately 58 percent of the systems installed in the Rattlesnake Valley are either cesspools or seepage pit systems.

As documented in Evaluation of Unsewered Areas in Missoula, Montana, 1996, a cesspool is an excavated hole or pit in the ground used to dispose of raw sewage. These systems provide little treatment of wastewater because the raw sewage is discharged below the organic soil horizon, the contact area with the sediments around the cesspool is small, the environment inside the cesspool is anaerobic and the separation between the bottom of the cesspool and the water table is reduced by the depth of burial. Cesspools are not allowed under the current Missoula City-County Health Code, and have been prohibited since 1967.

A seepage pit system is basically a cesspool with a septic tank installed to provide pretreatment of the wastewater prior to discharge into the cesspool structure. Under the Missoula City-County Health Code, seepage pits may only be used for replacement systems in cases where inadequate room or other conditions prohibit a drainfield or absorption bed. Seepage pits shall require a 25-foot separation to groundwater from the bottom of the pit. Per State standards (Circular DEQ 4), seepage pits shall not be installed in soils that have percolation rates greater than 60 min/inch. Soils in the Rattlesnake Valley area are generally gravelly with some cobbles and boulders. These soils are not desirable for optimum wastewater treatment from a seepage pit systems. Per Circular DEQ 4, Table 8-2, gravelly sands have an estimated percolation rate of less than

3 min/inch.

As previously written, well contamination has been documented and attributed to failing on-site wastewater treatment systems.

The proposed Rattlesnake Valley sewer project is important for several reasons related to public health and environmental protection. The project will replace failing on-site wastewater treatment systems, help protect the Missoula aquifer and potentially reduce nutrient loading to Rattlesnake Creek and the Clark Fork River. Based on the concerns related to public health and environmental protection, the City of Missoula hired an engineer to prepare a Preliminary Engineering Report (PER) to address the wastewater treatment problems in the Rattlesnake Valley.

The specific areas to be sewered in this project include three separate neighborhoods in the Rattlesnake Valley that were annexed into the city limits of the City of Missoula in the 1980's. The specific areas to be sewered in this project include the following:

1. Subdistrict No. 1 (Lincolnwood)
2. Subdistrict No. 3 (Lincoln School)
3. Subdistrict No. 4 (Duncan Drive)

A protest of 75% or greater is needed by law to compel removal of a subdistrict within an SID. Due to a protest greater than 75% of the residents within Subdistrict No. 2 (Upper Rattlesnake), this subdistrict was removed from the project area. The boundaries of Subdistrict Nos. 1, 3 and 4 are shown in Figures 3, 4 and 5, respectively.

III. ALTERNATIVES INCLUDING THE PROPOSED ACTION

A. WASTEWATER MANAGEMENT ALTERNATIVES FOR THE MISSOULA AREA

An environmental assessment was completed in June 2000 in reference to alternatives evaluated in the City of Missoula Wastewater Facilities Plan Update. The wastewater management alternatives evaluated in the City of Missoula Wastewater Facilities Plan Update are listed below. Alternative 2 – Central Treatment was the preferred and chosen alternative. This alternative was determined to have no significant environmental impacts.

1. No Action
2. Central Treatment
3. Satellite Treatment
4. Dispersed Treatment
5. Relocated Treatment

A summary of the alternatives and their impacts follows:

1. ALTERNATIVE 1: NO ACTION

The no-action alternative was evaluated in the City of Missoula Wastewater Facilities Plan Update, Wastewater Management Plan Alternatives. It was determined that continuation of the current development pattern and resultant wastewater service results in a collection of dissimilar systems for collection, treatment, and effluent disposal. These systems are not expected to perform as well, in terms of protecting ground water and surface water quality as alternatives planned for consistent and systematic implementation. Continued use of septic tank soil adsorption systems may be detrimental to ground water quality and may contribute to surface water nutrient loads.

2. ALTERNATIVE 2: CENTRAL TREATMENT

This alternative would extend the existing sewer system and provide treatment capacity for the Wastewater Facilities Service area and is responsive to growth management, environmental and regulatory objectives. It is expected to perform well in terms of protecting ground water and surface water quality. High standards of accountability and monitoring will be required for assured performance to meet surface water (MPDES) discharge permit requirements. This is the most economical alternative evaluated except for the no-action alternative, which does not meet growth management, environmental and regulatory objectives. This is the chosen alternative as it is technically feasible, relatively easy to manage and the most economical alternative.

3. ALTERNATIVE 3: SATELLITE TREATMENT

This alternative would involve expanding the Central facility, as well as new facilities at the Bitterroot River, O'Keefe Creek, and East Missoula. This alternative is more expensive than Central Treatment due to the loss of economies of scale and new capitalization of collection systems, treatment plants, effluent outfalls, and biosolids systems in multiple locations. Surface water discharge permits for three new outfalls on water quality limited stream segments may be difficult to obtain from the regulatory agency. This alternative may discourage growth around a single urban core and run counter to growth management objectives.

4. ALTERNATIVE 4: DISPERSED TREATMENT

The Dispersed Treatment alternative would involve expanding the Central facility, as well as construction of twelve new aerated lagoon/land application systems. This alternative is more expensive than Central and Satellite Treatment. Operation and

maintenance efficiency may be more difficult with this system.

5. ALTERNATIVE 5: RELOCATED TREATMENT

This alternative would involve construction of a new treatment plant and the existing treatment plant would be abandoned. This is the most expensive option due to the need to construct a completely new treatment plant and to construct a large diameter pipeline to convey wastewater flow to the new facility. A surface water discharge permit for the outfall on a water quality limited stream segment may be difficult to obtain from the regulatory agency.

B. RATTLESNAKE VALLEY SEWER ALTERNATIVES CONSIDERED

Five alternatives for addressing the City's need to extend sewer services to the Rattlesnake Valley area were evaluated in the Preliminary Engineering Report for the Rattlesnake Neighborhood Sewer Collection System, Missoula, Montana, 2002. These included:

1. No Action
2. Advanced On-Site Wastewater Treatment
3. Small Diameter Variable Grade Sewer
4. Septic Tank Effluent Pump (STEP) System
5. Conventional Gravity Sewer

1. ALTERNATIVE 1: NO ACTION

The no-action alternative would perpetuate the continued use of individual on-site septic systems in the Rattlesnake Valley area. Minimum treatment standards will not be met and septic tank effluent will continue to impact water quality and potentially public health with possible exposures to viruses and other pathogens from septic systems. Septic users could be faced with extraordinary costs involved with maintenance and/or replacement of failing and out of compliance systems. To date, approximately 23 percent of the on-site wastewater systems permitted since 1967 have failed and been replaced. Existing septic systems are expected to continue to fail at an increasing rate.

This alternative is considered unacceptable due to the following factors:

- The on-site systems in the Rattlesnake Valley area are failing at a high rate and therefore increasing the likelihood of public health concerns.
- Inadequate space for a primary drainfield system in 46 percent of lots due to having areas less than ¼ acre.
- Fifty-eight percent of the wastewater treatment systems are cesspools or seepage pits, which provide minimal treatment.
- Water quality problems attributed to septic effluent.

- Would not help with the City's VNRP obligations.

2. ALTERNATIVE 2: ADVANCED ON-SITE WASTEWATER TREATMENT

Alternative 2: Advanced On-Site Wastewater Treatment would allow the Rattlesnake Valley area to continue on-site wastewater treatment but would require a greater level of on-site wastewater treatment such as with sand filters in combination with a conventional drainfield. This alternative was eliminated from further consideration because it would not help with the City's VNRP obligations, nitrogen loading to groundwater and surface water would continue, construction and operation and maintenance costs would be greater than costs associated with connecting to the City's collection and treatment system, and the on-site systems would be infeasible for a large portion of the neighborhood. Forty-six percent of the lots included for this project have been identified as having lot sizes that are too small for primary drainfield systems. These lots have areas less than ¼ acre. Although advanced on-site wastewater treatment systems provide more treatment than conventional septic tanks, a properly sized and designed drainfield is still needed to complete treatment and disposal of the effluent. In addition, a 100 percent replacement site must be provided per State standards (Circular DEQ 4).

Several residents requested that the on-site wastewater treatment alternative be researched further and more information provided for treatment systems capable of operating on smaller lots. Therefore, for comparison purposes, information on on-site treatment alternatives is provided below in order to clarify why this alternative was removed as a feasible alternative.

There are several types of advanced on-site wastewater treatment systems for residential lots with minimal space. Some of these treatment systems are intermittent and recirculating sand filters or packaged systems such as the Orenco Advantex filtration system, the Eliminite system, the Waterloo Biofilter System, or the Nitrex System.

Intermittent sand filter systems allow for a fifty percent (50%) reduction in the size of the drainfield for final disposal of wastewater. This is a positive aspect of these systems because of the smaller lot size in the project area. The drawback to this type of system is that the sand and drain gravel that are specified for these systems have very strict gradation requirements and can be costly to obtain. Residential-sized intermittent sand filter systems can cost between $10,000 and $12,000 to design and install, which is greater than the costs involved with connecting to the City of Missoula wastewater treatment system. Intermittent sand filters provide minimal additional nutrient removal from the

wastewater from what a conventional septic tank and drainfield system would normally remove. The MDEQ has approved intermittent sand filters as "Level 1b" systems, indicating that they remove at least 34% of total nitrogen.

The Montana Department of Environmental Quality (MDEQ) has approved three types of advanced on-site wastewater treatment systems as "Level 2" systems, which are used in situations where nondegradation rules apply (ARM 17.30.701) or where reduction of drainfield size is necessary. A Level 2 system is one that removes at least 60% of the total influent nitrogen load or discharges a total nitrogen concentration of 24 mg/l or less. It should be pointed out that these effluent nitrogen concentrations are much higher than the Missoula Wastewater Treatment Plant effluent quality.

The three Level 2 systems approved by MDEQ are recirculating sand filters, Orenco's Advantex filters and Fluidyne's Eliminite system.

a. *Recirculating sand filters are an inherently more complicated system and are very infrequently used for single-family residential wastewater systems due to the prohibitive costs.*

b. *The Orenco Advantex system does provide added nutrient removal from the wastewater. The textile treatment system is installed on top of or next to the septic tank. The treated water is re-circulated several times and then is discharged to a drainfield. This system has been approved as a Level 2 system by the MDEQ. The advanced treatment would give a reduction in the size of the drainfield, but the cost of the system and the drainfield installation ranges between $10,000 and $12,000, which is more than the cost of the connection to the Missoula wastewater system. In addition the homeowner must enter into a long-term O&M Agreement with an authorized Orenco distributor.*

c. *Based on information from the Eliminite website, the system is an on-site system that utilizes a trickling filter in an underground tank in conjunction with a septic tank and drainfield system. The manufacturer has provided an estimated equipment cost of $4,500 for the Eliminite tank. That cost does not include installation, contractor markups, or apparently septic tank and drainfield equipment. Thus, it is estimated that a complete system installation cost would be in the $10,000 to $12,000 range. In addition, the manufacturer requires a $1,500 fee for a 2-year maintenance agreement.*

The Waterloo Biofilter treatment system has also produced data to show additional nutrient removal. The wastewater is pumped from a conventional septic tank into the Waterloo treatment tank. The wastewater is treated through the biofilter and then pumped up to a disposal area. The disposal area is essentially a shallow pressure-dosed drainfield. The drainfield is smaller than a conventional drainfield. Additional costs are incurred to purchase the treatment system and the homeowner must enter into an O&M agreement for the life of the system. The initial capital cost and the operational cost make the system more costly than hooking up to the municipal system. This system is not approved as Level 2 by the MDEQ.

The Nitrex System produces denitrification of the wastewater through nitrate-reactive media located in a prefabricated tank which is approximately the size of a 1,500 gallon septic tank. The wastewater flows from the residence to a septic tank, then through a sand filter, through the Nitrix filter and then to a tile bed for disposal. A large area is required for this installation. This system has also shown to reduce nitrate in the effluent. The cost of the Nitrex chamber is about $2,900 plus shipping and installation. The homeowner must have the septic tank, sand filter and tile bed installed as well. The approximate cost of this system is around $13,000 to $14,000, which is more costly than hooking up to the municipal system. This system is not approved as Level 2 by the MDEQ.

The Aerob-A-Jet is a fine bubble aeration device that is designed for installation in a conventional septic tank. This unit has been shown to reduce the concentration of BOD in the wastewater, but it is not effective in nitrogen removal because the unit eliminates the anaerobic process that typically occurs in the septic tank. There is also concern that total solids present in the wastewater are not reduced with this unit and the failure rate of the drainfield would be accelerated. This unit is not accepted by the MDEQ as advanced treatment (Level 2) because of the lack of nitrogen removal that occurs with its use.

3. ALTERNATIVE 3: SMALL DIAMETER VARIABLE GRADE SEWER

This alternative would involve the construction of a small diameter variable grade sewer (SDVGS) system. This type of system utilizes septic tanks to provide primary treatment and, therefore, the settling of solids followed by effluent filters to eliminate any solids from entering the sewer main. Because the sewer mains will collect only effluent, they can be smaller in diameter than conventional sewers. The SDVGS main is laid at variable grades creating low spots at various points in the system. The effluent backs up at these low spots and is pushed through once enough pressure is created. These SDVGS mains

would transport the wastewater to the existing Rattlesnake Interceptor. The economic evaluation of this alternative is included in Table 1.

4. ALTERNATIVE 4: SEPTIC TANK EFFLUENT PUMP (STEP) SYSTEM

This alternative would involve construction of a septic tank effluent pump (STEP) system. Similar to the SDVGS system, the STEP system also begins with the use of septic tanks to provide primary treatment and therefore the settling of solids followed by effluent filters to eliminate any solids from entering the sewer main. Through the use of sump pumps installed in the septic tank, effluent would be pumped into a series of small diameter mains that would move the wastewater to the existing Rattlesnake Interceptor. The economic evaluation of this alternative is included in Table 1.

5. ALTERNATIVE 5: CONVENTIONAL GRAVITY SEWER

This alternative would involve abandonment of the existing on-site wastewater treatment systems followed by construction of a conventional gravity sewer system to transport wastewater to the existing Rattlesnake Interceptor. The economic evaluation of this alternative is included in Table 1.

C. COST COMPARISON FOR ACCEPTABLE ALTERNATIVES USING PRESENT WORTH ANALYSIS

The present worth analysis is a method of comparing acceptable alternatives in present day dollars and can be used to determine the most cost-effective alternative. An interest rate of 6.0% over the 20-year planning period was used in the analysis. Table 1 provides a summary of the present worth analysis of the acceptable alternatives as documented in the Preliminary Engineering Report for the Rattlesnake Neighborhood Sewer Collection System, Missoula, Montana, 2002. The costs for the "public" contract to install the sewer mains and stubs are differentiated from the costs for "private" contracts to install the sewer services. The total capital cost is the sum of the public and private contract amounts.

Table 1. ECONOMIC EVALUATION OF ACCEPTABLE COLLECTION ALTERNATIVES[a]

	ALT 3 SDVGS	ALT 4 STEP	ALT 5 Conventional
Total Capital Costs	$7,584,600	$8,996,600	$7,193,800
Public	*$4,877,371*	*$4,410,906*	*$5,825,268*
Private	*$2,707,250*	*$4,585,665*	*$1,368,500*
PW O&M Cost	$239,000	$394,000	$86,000
PW Salvage Value	$0	$0	$0
Total Present Worth	**$7,823,600**	**$9,390,600**	**$7,279,800**

[a]Cost information for this Table was obtained from the Preliminary Engineering Report for the Rattlesnake Neighborhood Sewer Collection System, Missoula, Montana, 2002. These values were used for comparison purposes and may not reflect the current projected project costs as modifications to the proposed project area have occurred since these costs were initially figured.

D. ALTERNATIVE ANALYSIS

As documented in the Preliminary Engineering Report for the Rattlesnake Neighborhood Sewer Collection System, Missoula, Montana, 2002, each alternative was evaluated in an alternative comparison analysis considering the following factors:

- project costs
- operational requirements
- regulatory compliance and permits
- land requirements,
- construction problems
- environmental impacts
- technical feasibility
- public health and safety
- operational ease and reliability
- public acceptance

Based on these evaluating factors, Alternative 5 – Conventional Gravity Sewer was chosen as the preferred alternative.

E. FINANCIAL IMPACT OF PROJECT

A summary of the funding strategy for this project is shown in Table 3. Approximately half of the cost of the project would be paid for by grants from local, State and Federal government agencies. The other half would be financed through the creation of Special Improvement District (SID) #528 with the bond financing coming from a 20-year low interest loan from the State Revolving Fund (SRF). The loan would be paid off through an assessment cost of approximately $36.00 to $42.00 per month to each landowner. Each user would also have to pay approximately $15.50 per month to the City for operation and maintenance of the wastewater system.

Table 2. PROJECT FINANCING SUMMARY[a]

Funding Sources	Contribution
TSEP Grant	$500,000
City of Missoula Sewer Fund Reserve or City Revenue Bond	$1,041,000
DNRC Grant	$100,000
Missoula Water Quality District	$179,000
EPA STAG Grant	$382,305[b]
State Revolving Fund (SRF) loan	$2,593,000
Total Estimated Cost of Project (including service stubs)	**$4,796,000[c]**

[a]Total project costs are based on 2002 estimates. The total costs include construction, engineering, and administration costs of SID 533 Gilbert Street and SID 534 Lincolnwood, which have been partially complete to date.
[b]Total STAG grant allocated to Missoula is $482,100. The amount $382,305 is for Subdistricts 1, 3, and 4. This amount is calculated and based on an across the board individual assessment reduction of approximately 14-15% for each parcel in each subdistrict.
[c]Rounded up to the nearest thousand.

Grants are available to cover costs to low-income owners. Low-income, owner-occupied properties may qualify for connection cost assistance. City Program Income Funds are available for homeowners with a household income under 80% of the area median income. The Missoula Valley Water Quality District also commits several thousand dollars for connection assistance. Grants for individual property owners who connect to the new sewer within two years are also available.

IV. AFFECTED ENVIRONMENT

A. PLANNING AREA

The City of Missoula is located in south-central Missoula County in western Montana (Figure 1). The project area is in the Rattlesnake Valley located northeast of downtown Missoula (Figure 2). This project will incorporate pieces of Sections 2, 10, 11, 14 and 15 in Township 13 North, Range 19 West, P.M.M. An aerial photograph of the planning area is included in Figure 3.

B. EXISTING FACILITIES

The City of Missoula is served primarily by a gravity sewer system with a number of lift stations and force mains serving low-lying areas with the City. The wastewater treatment plant recently received a Biological Nutrient Removal (BNR) upgrade in addition to a capacity expansion. The plant now has the capacity to treat 12 million gallons per day (MGD).

The homes in the project area within the Rattlesnake Valley project area are currently served by a mix of conventional gravity sewer and on-site wastewater treatment systems including conventional septic

tank/drainfields, seepage pits and cesspools. An interceptor was installed in 1986. The Rattlesnake Interceptor runs up the center of the valley extending beyond the north end of the proposed improvements of this project. Ranging from 21 inches at the Broadway Interceptor to an 8-inch main near its upper extent in the Valley, the portions applicable to this project are 10 inches or greater. A significant number of homes not located in the project area are served by conventional gravity sewer collection systems, which are connected to the Rattlesnake Interceptor.

C. FLOW PROJECTIONS

Based on a conservative per capita flow estimate of 106 gallons/capita/day (gpcd) and estimated design populations for each of the eight areas within the Rattlesnake Valley, flow projections for the entire area were calculated to be approximately 1.2 MGD.

D. NATURAL FEATURES

As written in the Preliminary Engineering Report, 2002, "As described in Geldon (1979) the geology of the Rattlesnake Valley generally consists of sedimentary Precambrian Belt Supergroup rocks in the mountains surrounding the valley and Pleistocene-Holocene alluvial sands and gravels filling the valley. On the west side of the lower Rattlesnake valley are Pleistocene deposits consisting of clay, sand and gravel derived from Tertiary and Pleistocene sediments. In the Lincoln Hills area on the east side of the valley, are outcrops of Oligocene-Miocene rocks consisting of claystone, gravelly clay and clayey bressia with interbedded lignite and thin seams of water-bearing gravel. Geldon (1979) reported an aquifer thickness of 200 feet for a well completed in the Rattlesnake Valley alluvial gravels (Well MP-13)." Soils are generally gravelly with some cobbles and boulders with some sand and clay lenses found throughout the Valley.

The valley floor generally slopes to the south at an overall grade of approximately 1.8 percent. Surface elevations within the project area range from 3,270 feet to 3,480 feet above mean sea level. Annual precipitation values range from 8.57 inches to 21.81 inches with an average annual precipitation recorded at the Missoula Airport of 13.55 inches. In the planning area, the average temperature is 45°F with highest and lowest recorded temperatures of 105°F and –33°F, respectively.

Water resources include surface water from Rattlesnake Creek and groundwater in the valley's alluvial gravels. As indicated in the Preliminary Engineering Report, 2002, Geldon (1979) developed an estimate of 170,000 ft^3/day of groundwater flux through the Rattlesnake Valley. Most wells completed in Sections 11, 14 and 15 within the Rattlesnake Valley alluvium are drilled to a total depth less than 100 feet and have yields ranging from 20 to 59 gallons per minute.

During a monitoring period from 1958 through 1967, average monthly flows in Rattlesnake Creek ranged from 15 cubic feet per second (cfs) in January to 516 cfs in June. Mountain Water Company maintains water rights in Rattlesnake Creek as a potential alternate water supply.

E. MAPS

Figure 1 shows the location of the City of Missoula. The project area within the Rattlesnake Valley is included in Figure 2. An aerial photograph of the planning area is included in Figure 3. Detailed schematics displaying the preferred alternative are included in the Preliminary Engineering Report for the Rattlesnake Neighborhood Sewer Collection System, Missoula, Montana, 2002.

V. ENVIRONMENTAL IMPACTS OF PROPOSED PROJECT

A. DIRECT AND INDIRECT ENVIRONMENTAL IMPACTS

1. Land Use – The proposed improvements will have minimal impact on the land use in the project area as the improvements are compatible with land use in this primarily residential area. The sewer collection system will be buried in public rights-of-way (most of which are paved). Within the SID 528 project area, 459 of the 477 properties have been developed with homes that discharge effluent into the aquifer. The three sub-districts of SID 528 have 19 undeveloped parcels. The City planning staff members have conservatively determined that there is the potential for approximately 136 additional units to be developed adjacent to the area proposed to be sewered.

   Some minor negative impacts on grazing lands are anticipated. There may be an indirect beneficial impact to the extent that the project influences development patterns towards less rural sprawl and more concentrated urban development. However, increased population within the study area, requiring development of some grazing lands to residential and urban uses, may offset this trend. None of the developable grazing land is considered prime or important farm ground. Development will conform to the City/County planning process. Although grazing lands will likely be developed as a result of the project, no unique forest or agricultural lands are known to exist within, or adjacent to, the project area. Some vegetative cover will be disturbed during sewer construction but will be mitigated by a construction contract requirement to reseed disturbed areas. Grazing lands could also be developed without this project.

2. Floodplain and Wetlands – According to the Missoula County Floodplain Administrator the project does not entail work within the delineated floodplain of Rattlesnake Creek. The project will not promote development within the floodplain and development is

already prohibited within the floodway.

No wetlands have been identified within the project vicinity.

3. Cultural Resources – As determined by the Montana Historical Society, this project has a low likelihood of impacting cultural properties. The Historical Society will be contacted and the site investigated should cultural materials be inadvertently discovered during the project.

   As determined by the Missoula Historic Preservation Officer, the project area is not located within or near any historic district boundaries and no historic structures will be disturbed. Because the project will occur on existing right-of-way, which have been previously disturbed, it is not expected to have adverse effects on historical or archaeological resources.

4. Fish and Wildlife – The project will not adversely impact any unique, endangered, fragile or limited environmental resources, including endangered species. Rattlesnake Creek is a key spawning tributary for several trout species, as well as a core area for bull trout spawning and rearing. Bull trout are classified as threatened in Montana under the federal Endangered Species Act. The proposed projects would have a potentially beneficial impact to the extent that degradation of surface water and groundwater is reduced. The Rattlesnake sewer system would complement watershed improvement efforts, as well as help protect the creek's fishery by reducing the nutrient inputs to groundwater that are usually associated with drainfields.

   The sewer collection system will be buried in public rights-of-way (most of which are paved) and will have no impact on wildlife. The proposed projects would have a potentially beneficial impact to the extent that degradation of surface water and groundwater is reduced.

5. Water Quality – The proposed projects will result in the redirection of wastewater from on-site disposal to a central sewer system. This wastewater will be treated in the upgraded Missoula Wastewater Treatment Plant (WWTP) and discharged to the Clark Fork River. Since the WWTP has been upgraded to increase capacity and remove nitrogen and phosphorus, loadings of these nutrients to the Clark Fork River have been reduced. Nitrate concentrations have been measured as high as 2.5 mg/l in the Rattlesnake aquifer. The collection system project will benefit the aquifer and will result in improved quality of the Missoula Valley Aquifer (sole source aquifer), as discharges of nutrients and pathogens from partially treated wastewater to groundwater will be reduced.

6. Air Quality - The direct effects of the proposed wastewater management facilities on Missoula air quality will be minimal as there will be no significant atmospheric emissions from the expanded facilities. Dust control will be conducted by the contractor during construction to mitigate temporary impacts.

The indirect effects of the proposed facilities will be related to the projected changes in residential growth. These changes may affect the distribution and values of particulate concentrations, due to changes in vehicle miles traveled over paved and unpaved roads. As a result of the installation of the sewer, changes in land use patterns will tend to concentrate land use patterns as opposed to sprawl development. The State Board of Health approved Missoula's Air Pollution Control Program in 1969, which is part of the Montana State Implementation Plan (SIP). Within this plan, the Missoula Air Pollution Control Board established a Missoula Air Stagnation Zone for air quality management. The Rattlesnake project service area falls entirely within this Missoula Air Stagnation Zone. Within this zone, no new solid fuel devices (wood stoves) are allowed and all new roadways and parts of driveways are to be paved facilities. It is expected that population growth will occur in areas adjacent to the sewer infrastructure closer to the urban area. Based upon this expectation, and the above restrictions within the Missoula Air Stagnation Zone for development, air emissions as a result of development will be mitigated.

As previously stated, 454 of the 477 properties within SID 528 have been developed with homes that discharge effluent into the aquifer. The three sub-districts of SID 528 have 22 undeveloped parcels. The City planning staff members have conservatively determined that there is the potential for approximately 136 additional units to be developed adjacent to the area proposed to be sewered. Long-term impacts to air quality should be insignificant considering the potentially relatively small increase in development of the valley related to this project.

7. Public Health - The proposed projects would help eliminate failing on-site wastewater disposal systems resulting in decreased loadings of nutrients and pathogens to groundwater, which will improve aquifer quality. Potentially adverse health impacts would be reduced. The potential for well contamination by wastewater discharge should be eliminated. Mountain Water Company provides water services to many of the residents within the Rattlesnake Valley area through a local water utility. Some residents within the project area continue to receive water from individual wells. According to the Preliminary Engineering Report for the Rattlesnake Neighborhood Sewer Collection System, Missoula, Montana, 2002, there have been at least two cases of positive coliform tests in wells in the Rattlesnake Valley. A public

water supply well owned by Mountain Water Company consistently tested positive for total coliform and has been taken off-line. This well is located in Pineview Park just south of Area 5. A project area map is included as Figure 3. A private well in the Rattlesnake Valley also tested positive for fecal coliform.

8. Energy - Additional energy would be required to operate expanded wastewater treatment facilities. The impact of this additional energy consumption is anticipated to be minimal. A direct short-term impact of energy resources will be the energy consumed during the construction phase.

9. Noise - Short-term impacts from excessive noise levels may occur during the construction activities. The construction period will be limited to normal daytime hours to avoid early morning or late evening construction. No significant long-term impacts from noise are expected to occur.

10. Growth - Improvements of the wastewater collection system may result in minor secondary impacts that are associated with the growth of the community. The proposed wastewater management facilities will allow denser, urban type development, which is a Missoula area growth management objective. In this respect, the impact of the wastewater facilities improvements is beneficial. The presence of sewer in this area will allow more development of vacant lots. However, the proposed plan will also allow the overall Missoula Valley population to increase, which is considered by some as an adverse impact. The Missoula City/County governments adopted a Themes document under the 1998 urban Comprehensive Plan. This Themes document has established growth objectives for the urban and rural areas of Missoula County. The Themes document adopted a theme for controlling growth within the Missoula area to within the urban growth boundary. The Rattlesnake sewer project adheres to this urban growth boundary. The growth management objective of controlling growth within the boundary is enhanced through the provision of sewer service from this project. The objective of the Themes document results in more dense population within the urban growth boundary as intended, which will lessen urban sprawl outside the boundary and mitigate the negative impacts from population growth.

B. UNAVOIDABLE ADVERSE IMPACTS

Short-term construction related impacts (i.e., noise, dust, traffic disruption, etc.) will occur but should be minimized through proper construction management. Energy consumption during construction cannot be avoided.

VI. LISTING AND EVALUATION OF MITIGATION, STIPULATIONS AND OTHER CONTROLS ENFORCEABLE BY THE AGENCIES

A. Air Quality – Dust control will be required, through the contract documents during construction, to mitigate the temporary impact of construction. Watering during construction is a common and effective measure to control dust. The City and County have established a Missoula Air Stagnation Zone for air quality management. The project service area falls entirely within this Missoula Air Stagnation Zone. Within this zone, no new solid fuel devices (wood stoves) are allowed and all new roadways and parts of driveways are to be paved facilities. Air emissions, as a result of growth, will be mitigated by these restrictions.

B. Vegetative Cover – Some vegetative cover will be disturbed during construction but will be mitigated by reseeding of disturbed areas. Reseeding should be effective as it will be part of the construction contract.

C. Historical and Archaeological Sites – The proposed wastewater projects will occur on previously disturbed sites where no impacts to cultural or historical resources are expected. If any archaeological resources are discovered during construction, the Montana State Historic Preservation Organization (SHPO) must be notified.

D. Aesthetics – Sewer construction will be located underground and will have no visual impacts.

E. Demand for Government Services – Temporary impacts on automobile traffic may exist during construction of the sewers. Traffic control (part of the construction contract) will be required to mitigate impacts. Increased automobile traffic may be evident as a result of development. Denser development would be encouraged, discouraging sprawl development.

F. Locally Adopted Environmental Plans and Goals – The City of Missoula Wastewater Facilities plan update and PER were subject to continuous review by the City/County staff and elected officials to ensure compatibility with land use plans and regulations. The project is also consistent with the objectives and goals of the Growth Management Task Force. The project is consistent with the 1999 Missoula City/County Consolidated Plan, 2002 Missoula City/County Growth Policy and 1998 Urban Comprehensive Plan.

G. Density and Distribution of Population and Housing – The project will allow denser, urban type development, which is a Missoula area growth management objective. The plan will also allow overall Missoula Valley population to increase, which is considered by some as an adverse impact. However, more dense population within the urban growth boundary, as intended, will lessen urban sprawl outside the boundary and mitigate the negative impacts of overall population growth. Growth analysis and management are local government functions. Growth

resulting from this project is consistent with local government planning and zoning.

H. Private Property Impacts – Private property may be impacted during construction only. Occasionally, an optimal collector route can be established if an easement can be obtained from a private landowner. In the event that an easement cannot be obtained, alternative routes within City right-of-way are available. Once construction is complete, all maintenance on the conventional gravity system can be conducted within the public right-of-way.

I. Controls Enforceable by Agencies – DEQ will review and approve construction plans and specifications and issue a Stormwater Discharge General Permit for Construction Activity. A construction-dewatering permit issued by the DEQ may also be required. Missoula City/County adopted an Air Pollution Control Program in 1994, which will regulate air quality.

VII. PUBLIC PARTICIPATION

The development of the alternatives for long-term management of wastewater in the Rattlesnake Valley area involved technical considerations that would have a continuing impact on the community. External factors, which can be defined as an "operating environment", will have a distinct effect on the wastewater planning results. To focus on the "operating environment" on wastewater planning efforts, it was necessary that extensive communications be extended out to the public and stakeholders in the area. The City of Missoula held a significant number of public meetings and neighborhood visits to communicate the alternatives available and obtain public input. In addition, a formal hearing process was conducted for the development of the Special Improvement District SID #528. However, a lawsuit was filed on March 14, 2003 against the City of Missoula and SID #528. The citizen claimed that they did not have reasonable opportunity for public participation in the Missoula City Council's public process prior to a final City Council decision to create SID #528. On December 31, 2003, the District Judge declared the City's 2003 efforts denied residents their right to comment and participate in the decision. The City was ordered to restart the process, this time allowing citizens the right to comment or rebut City Staff presentations. The City restarted the process of creating SID #528 on February 18, 2004. This process began with a presentation and public participation at a Public Works Committee Meeting. Subsequently, there were three (3) Public Works Committee Meetings with public participation, one (1) Public Hearing at a City Council Meeting and one (1) City Council Meeting approving a Resolution creating SID #528 consisting of Subdistrict Nos. 1, 3 and 4, on a vote of 8 to 4. The City had received protest votes regarding the formation of SID 528 based on assessed value from Subdistrict No. 1 (Lincolnwood) at 67%, Subdistrict No. 2 (Upper Rattlesnake) at 81%, Subdistrict No. 3 (Lincoln School) at 55%, and Subdistrict No. 4 (Duncan Drive) at 71%. A protest of 75% or greater is required by law to compel removal of a subdistrict within an SID. Subdistrict No. 2 (Upper Rattlesnake) was therefore removed from the overall scope of work within the SID 528 project.

The following provides a partial list of public announcements, mailings and formal meetings conducted with the public throughout the evaluation. Additional informal and neighborhood meetings that were conducted are not listed:

- *March 7, 2002 – Public Announcement Neighborhood Council Website*
- *April 10, 2002 – Press release, Public Meeting, Public comment*
- *November 1, 2002 – Newsletter mailing to Rattlesnake residents*
- *November 7, 2002 – Homeowners Association meeting*
- *November 15, 2002 – Postcard mailing*
- *November 27, 2002 – Mailing estimated assessment & Public Meeting Notice*
- *December 4, 2002 – Press release, Public Meeting, Public comment*
- *December 23, 2002 – Public information announcement Press Release and Postcard*
- *January 16, 2003 – Mailing of Notice Resolution of Intention*
- *January 19,26, February 2, 2003 – Missoulian Legal ad*
- *February 3, 2003 – Public Hearing/City Council Meeting/Missoulian*
- *February 5, 2003 – Public Works Committee*
- *February 12, 2003 – Public Works Committee*
- *February 19, 2003 – Public Works Committee-Public comment*
- *February 24, 2003 – City Council Approved Resolution to Create Special Improvement District (SID) #528 – Public Comment*
- *March 16, 2003 – Citizen files lawsuit against the City of Missoula and Missoula SID #528.*
- *November 2, 2003 – Rattlesnake Valley Sewer Collection System Environmental Assessment advertised in the Missoulian*
- *December 31, 2003 – District Judge ruling stopping the project.*
- *February 18, 2004 – Public Works Committee Meeting, Rattlesnake Sewer Presentation, including public participation*
- *February 24, 2004 – Public Works Committee Meeting, Rattlesnake Sewer Presentation, including public participation*
- *February 25, 2004 – Public Works Committee Meeting, Rattlesnake Sewer Presentation, including public participation*
- *March 8, 2004 – Public Hearing*
- *March 17, 2004 – Public Works Committee Meeting continued to March 24, 2004 Public Works Committee Meeting*
- *March 24, 2004 – Public Works Committee Meeting including public participation*
- *March 24, 2004 – City Council approved Resolution creating SID #528 consisting of subdistrict Nos. 1, 3 & 4*

VIII. LEGAL PROCEEDINGS

On May 6, 2004, the Rattlesnake Coalition filed a Complaint in the United States District Court against the United States, the Environmental Protection Agency, Michael Leavitt, the Administrator thereof, and the City of Missoula alleging failure to comply with the National Environmental Policy Act (NEPA), in that no Environmental Impact Statement has been prepared with respect to the 1999 Missoula Wastewater Facilities Plan Update or with respect to a sewer system that the defendant proposed to construct in the Rattlesnake neighborhood. On

September 30, 2005, U.S. District Judge Donald Molloy dismissed the May 6, 2004 complaint filed by the Rattlesnake Coalition. On October 12, 2005, the Rattlesnake Coalition filed an appeal of the September 30, 2005 dismissal of the May 6, 2004 complaint.

On November 15, 2005, the Rattlesnake Coalition, Loreen Folsom, William Hollenbaugh, and Daniel Jensen filed a Complaint in the Montana Fourth Judicial Court, Missoula County. The Defendants named in this Complaint are the City of Missoula, the State of Montana, and the Montana Department of Environmental Quality. The Plaintiffs allege the Defendants proceeded with construction of sewer systems within SID's 533 and 534 without lawful authority and without preparation of an environmental impact statement.

IX. REFERENCE DOCUMENTS

The following documents have been utilized in the environmental review of this project and are considered to be part of the project file:

1. *Preliminary Engineering Report for the Rattlesnake Neighborhood Sewer Collection System,* Morrison Maierle, Inc., May 2002.

2. *Evaluation of Unsewered Areas in Missoula, Montana*, Missoula Valley Water Quality District, Environmental Health Division, Missoula City-County Health Department, March 1996.

3. *City of Missoula Wastewater Facilities Plan Update*, Brown and Caldwell, 1999.

4. *City of Missoula Wastewater Facilities Plan Update, Environmental Assessment,* Montana Department of Environmental Quality & United States Environmental Protection Agency, March 2000.

5. *City of Missoula Wastewater Facilities Plan Update,* United States Environmental Protection Agency, Finding of No Significant Impact, June 6, 2000.

X. AGENCIES CONSULTED

The following agencies have been contacted in regard to the City of Missoula's Wastewater Facilities Plan of which determined the basis for the project and in regard to the proposed Rattlesnake Neighborhood Sewer Collection System project:

1. The Montana Department of Fish Wildlife and Parks (FWP) reviewed the PER and had the following comments: Rattlesnake Creek is a key spawning tributary for several trout species, as well as a core area for bull trout spawning and rearing. The proposed Rattlesnake sewer system would complement watershed improvement efforts, as well as help protect the creek's fishery by reducing the nutrient inputs to groundwater that are usually associated with drainfields.

2. The U. S. Fish and Wildlife Service (FWS) was contacted but had no comment.

3. The Montana State Historic Preservation Office (SHPO) considered the impacts of the proposed project on historical sites and cultural resources. The Office indicated that because this project will be occurring on previously disturbed ground within existing right-of-ways that this project has a low likelihood of impacting cultural properties and that a recommendation for a cultural resource inventory is unwarranted at this time. The Office asks to be contacted and the site investigated should cultural materials be inadvertently discovered during construction. The Missoula Historic Preservation Officer was also contacted and he agreed that the project would have no adverse effect on historical or archaeological resources.

4. The Department of Natural Resources and Conservation (DNRC) was contacted but did not comment. According to the Missoula County Floodplain Administrator the project does not entail work within the delineated floodplain of Rattlesnake Creek. The project will not promote development within the floodplain and development is already prohibited within the floodway.

5. The Regional Sole Source Aquifer Coordinator, US EPA, Region VIII, commented that EPA offered its full support for the project to sewer the Rattlesnake Neighborhood and that the City of Missoula's efforts to reduce nutrient loading in the Missoula Valley Aquifer demonstrates uncommon leadership in the area of aquifer protection.

6. The Tri-State Water Quality Council indicated that the Council applauds-and-wholeheartedly supports—the City of Missoula and Missoula County in carrying out their commitments to reduce nutrient loading to the Clark Fork River, of which this project is an important component.

Recommendation for Further Environmental Analysis:

[ ] EIS [ ] More Detailed EA [X] No Further Analysis

Rationale for Recommendation: The Rattlesnake Sewer project was included in the City of Missoula Wastewater Facilities Plan Update. An extensive environmental assessment (EA) was prepared for this plan, which included many projects proposed for the planning study area for the planning period (20 and 45 years). The EA determined no significant adverse environmental impacts related to the proposed projects. The DEQ and USEPA issued a Finding of No Significant Impact (FONSI) in June 2000. The FONSI was legally advertised, distributed to a list of interested agencies and comments were received for 30 days. No comments were received. Through this process DEQ and USEPA determined an environmental impact statement was not required and the EA was the appropriate level of analysis.

Since that time additional detailed information has become available concerning the Rattlesnake area in the form of the Preliminary Engineering Report (PER) for the Rattlesnake Neighborhood Sewer Collection System, Missoula Montana. Through this PER and the public process involved, the City of Missoula determined that a conventional collection sewer connecting to the existing collection system was the preferred alternative to solving the wastewater problems of the Rattlesnake area. Although a previous EA and FONSI had been done for the area, DEQ decided that, because more specific information was available, an environmental review for the Rattlesnake area may be appropriate. Through this EA the DEQ has verified the earlier finding that none of the adverse impacts of the proposed Rattlesnake Sewer 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. The EA is the appropriate level of analysis because none of the adverse effects of the impacts are significant.

EA Prepared By:

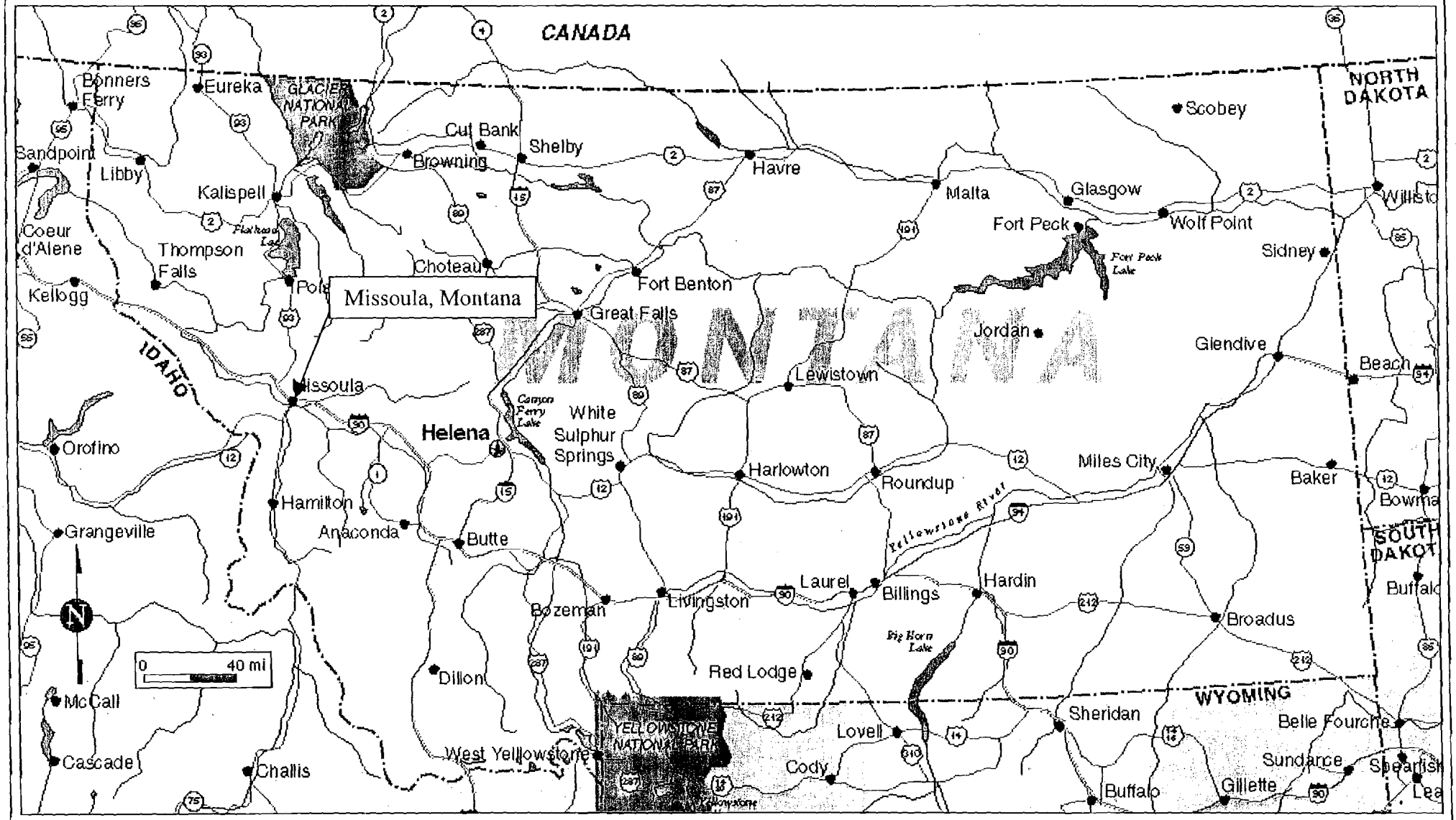
Skye A. Hatten, E.I. — Date 2/13/06

Reviewed By:

Paul LaVigne, P.E. — Date 2/14/06

Approved By:

Todd Teegarden, P.E. — Date 2/15/06



Montana Department of
ENVIRONMENTAL QUALITY

Figure 1. Site Location Map – Missoula, MT

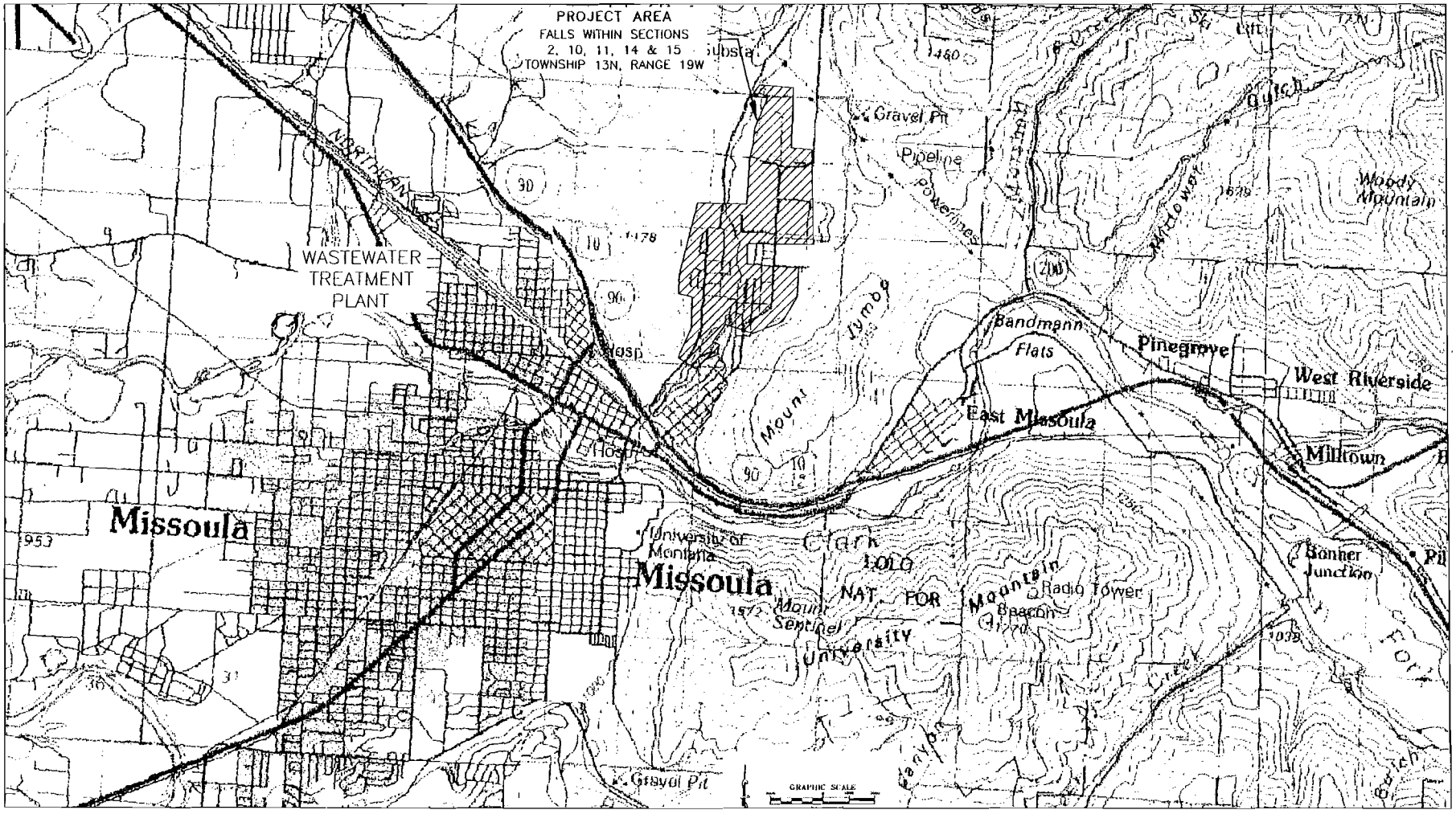


Figure 2. Rattlesnake Sewer Project Area Map

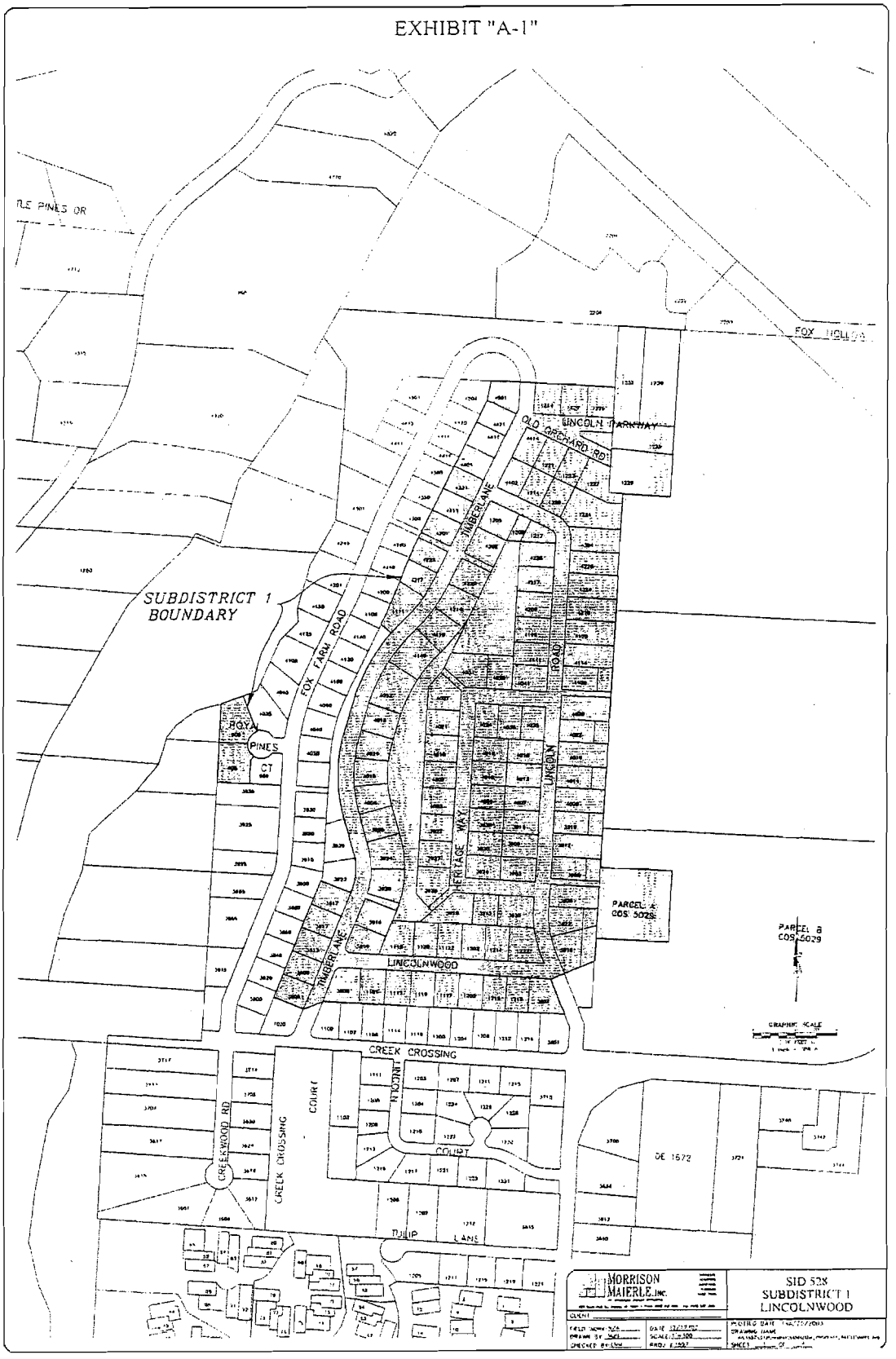


Figure 3. Subdistrict No. 1 (Lincolnwood) Boundary Map

EXHIBIT "A-2"

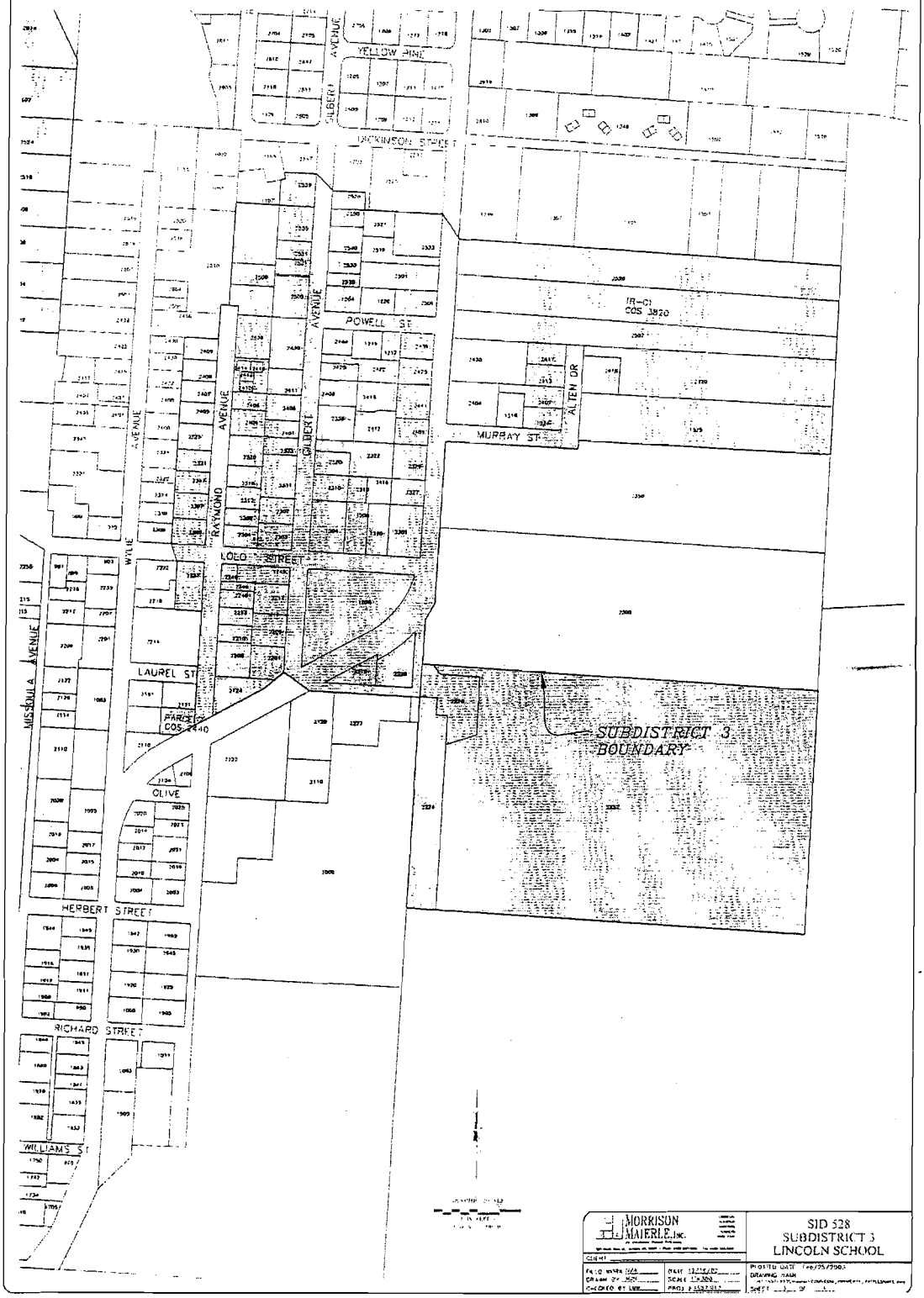


Figure 4. Subdistrict No. 3 (Lincoln School) Boundary Map

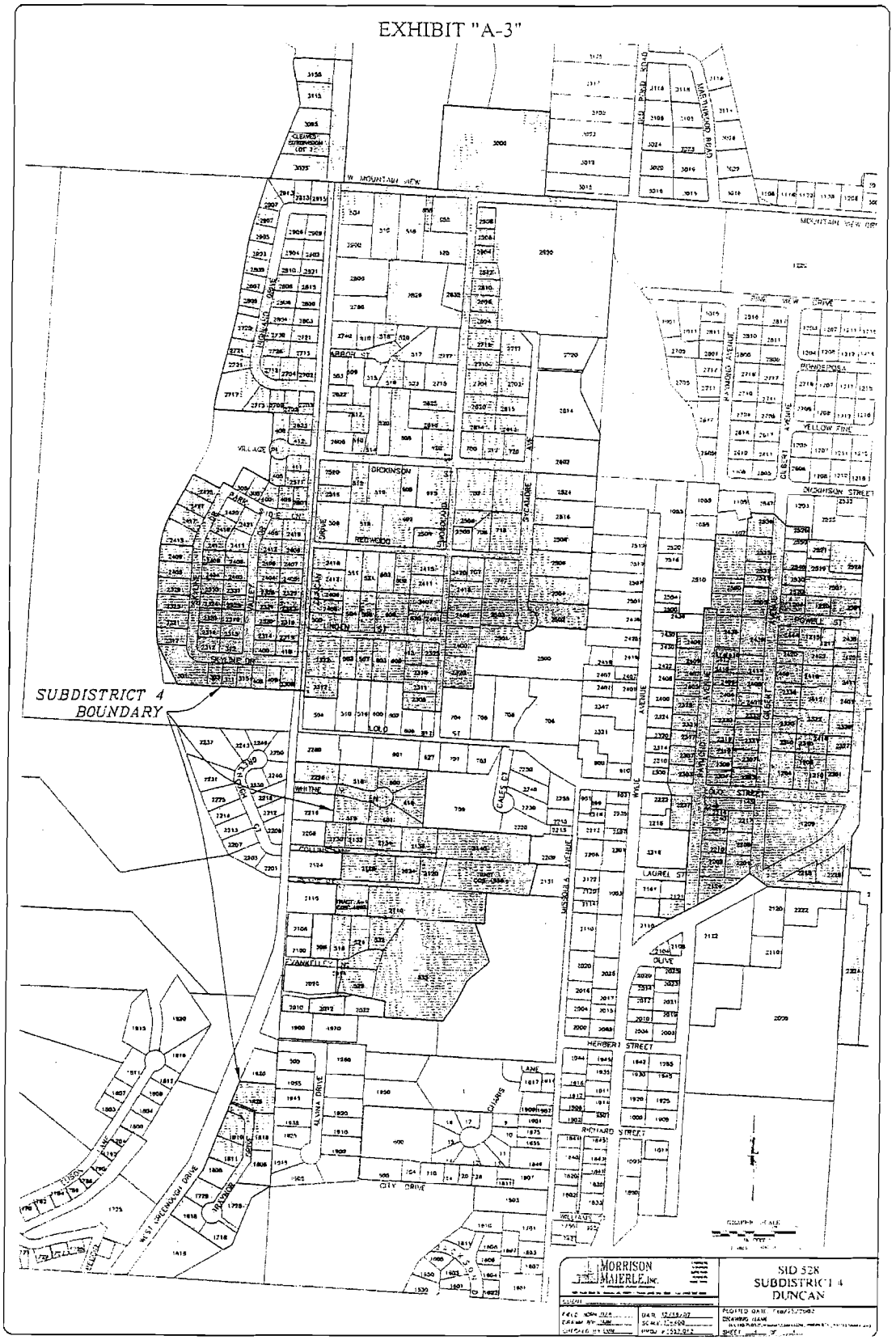


Figure 5. Subdistrict No. 4 (Duncan Drive) Boundary Map

MT HISTORICAL SOCIETY
HISTORIC PRESERVATION
PO BOX 201201
HELENA MT 59620-1201

ENVIRONMENTAL QUALITY
COUNCIL
STATE CAPITOL RM #106
PO BOX 201701
HELENA MT 59620-1701

DIRECTOR
RESOURCE ASSESSMENT
FW & P
PO BOX 200701
HELENA MT 59620-0701

BRENT ESMOIL
US FISH & WILDLIFE SERVICE
100 NO PARK STE 320
HELENA MT 59601

DIRECTOR
DNRC
PO BOX 201601
HELENA MT 59620-1601

US ARMY CORP OF ENG
10 W 15
HELENA MT 59626

↑ Core List

↓ Optional List

ADMINISTRATOR
R & P DIVISION
FW & P
PO BOX 200701
HELENA MT 59620-0701

DIRECTOR
MT FIELD OFFICE - HUD
7 W 6th AVE
HELENA MT 59601

ENVIR REVIEW OFFICER
US DEPT OF INTERIOR
DENVER FEDERAL CENTER
PO BOX 25007
DENVER CO 80225-0007

ECOLOGICAL SERVICES
585 SHEPHARD WAY
HELENA MT 59601-9785

BUREAU OF LAND MGMT
222 N 32RD ST
PO BOX 36800
BILLINGS MT 59107-6800

COMM DEVELOPMENT BUREAU
LOCAL GOVT ASST DIV
DEPT OF COMMERCE
PO BOX 200523
HELENA MT 59620-0523

STATE CONSERVATIONIST
US SOIL CONSERVATION
FEDERAL BLDG RM #443
10 E BABCOCK
BOZEMAN MT 59715

ENVIR PROJECT REV
US DEPT OF INTERIOR
OFFICE OF THE SECT
WASHINGTON DC 20240

JEAN RILEY
MONTANA D. O. T.
ENVIRONMENTAL SERVICES
BUREAU
PO BOX 201001
HELENA MT 59620-1001

REGIONAL DIRECTOR
US BUREAU RECLAMATION
FEDERAL BLDG
PO BOX 36900
BILLINGS MT 59103-6900

ECOLOGICAL SERVICES
US FISH & WILDLIFE SERV
BILLINGS SUBOFFICE
2900 4TH AVE N RM #301
BILLINGS MT 59107

GALLATIN AIRPORT AUTHORITY
GALLATIN FIELD AIRPORT
BELGRADE MT 59714

STATE DIRECTOR
RURAL DEVELOPMENT
PO BOX 850
BOZEMAN MT 59715

MUNICIPAL SYSTEMS UNIT
8P-W-MS
US EPA REGION VIII
999 18TH ST STE #500
DENVER CO 80202-2466

DAVID S STELLING
FAA
FAA BUILDING STE #2
2725 SKYWAY DR
HELENA MT 59601

OFFICE OF THE GOVERNOR
STATE CAPITAL RM 204
PO BOX 201701
HELENA MT 59620-1701

DIRECTOR
MRAN
304 N 18TH AVE
BOZEMAN MT 59715-3114