DEPARTMENT OF ENVIRONMENTAL QUALITY
Environmental Assessment
Planning Prevention and Assistance Division
Technical & Financial Assistance Bureau

Name of Project: Lincolnwood Phase II Sewer Collection System, SID 536

Type of Project: Collection Sewers

Location of Project: Rattlesnake Valley

City/Town: City of Missoula **County**: Missoula

Description of Project: (Summary of Proposed Action):

Owners of thirty-six residences in the Lincolnwood neighborhood petitioned the City of Missoula to create a new SID to construct a collector sewer to serve a portion of the Lincolnwood area, which is located in the Rattlesnake Valley. Reasons for the petition are slow draining or failing septic systems, awareness of neighborhood sewage problems, wanting the security of a public sewer connection, and concern for public health, water quality and the environment. As existing on-site wastewater systems fail, new installations cannot be constructed that meet current on-site regulations of the Montana Department of Environmental Quality with regard to lot size. In response to a petition holding thirty-six signatures received from Lincolnwood property owners, the City of Missoula created SID 536 to provide sewer to a total of 71 parcels (73 total parcels, 2 vacant lots) in the Lincolnwood neighborhood. Two protests were filed with the City during the formal protest period. After a public participation process, the resolution to create the SID was approved by the City Council on December 5, 2005.

The project involves the construction of a sanitary sewer collection system in the Lincolnwood area not currently served by municipal sewer. Sanitary sewer collection lines have recently been extended to a portion of the Lincolnwood area (Phase I). The new collection system included in the proposed project (Phase II) will be tied into Phase I and will connect to an existing collector sewer. The project includes construction of approximately 4,170 linear feet of 8-inch sanitary sewer gravity main, 18 sanitary sewer manholes, 69 sanitary sewer gravity services, and surface restoration in all affected areas, including asphalt paving and landscaping. Figure 1 shows an aerial exhibit of the project area. A map identifying the parcels in SID 536 is included in Figure 2.

See the following two (2) attachments for supplementary information including benefits and purpose of the project:

- Description of the City of Missoula Wastewater Facilities Plan Project – Original Basis of the Rattlesnake Sewer Project
- Description of the Proposed Rattlesnake Sewer Project – Basis of the Project

Under Montana law, (75-6-112, MCA), no person, including a county, may construct, extend, or use a public sewage system until the Department of Environmental Quality (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.

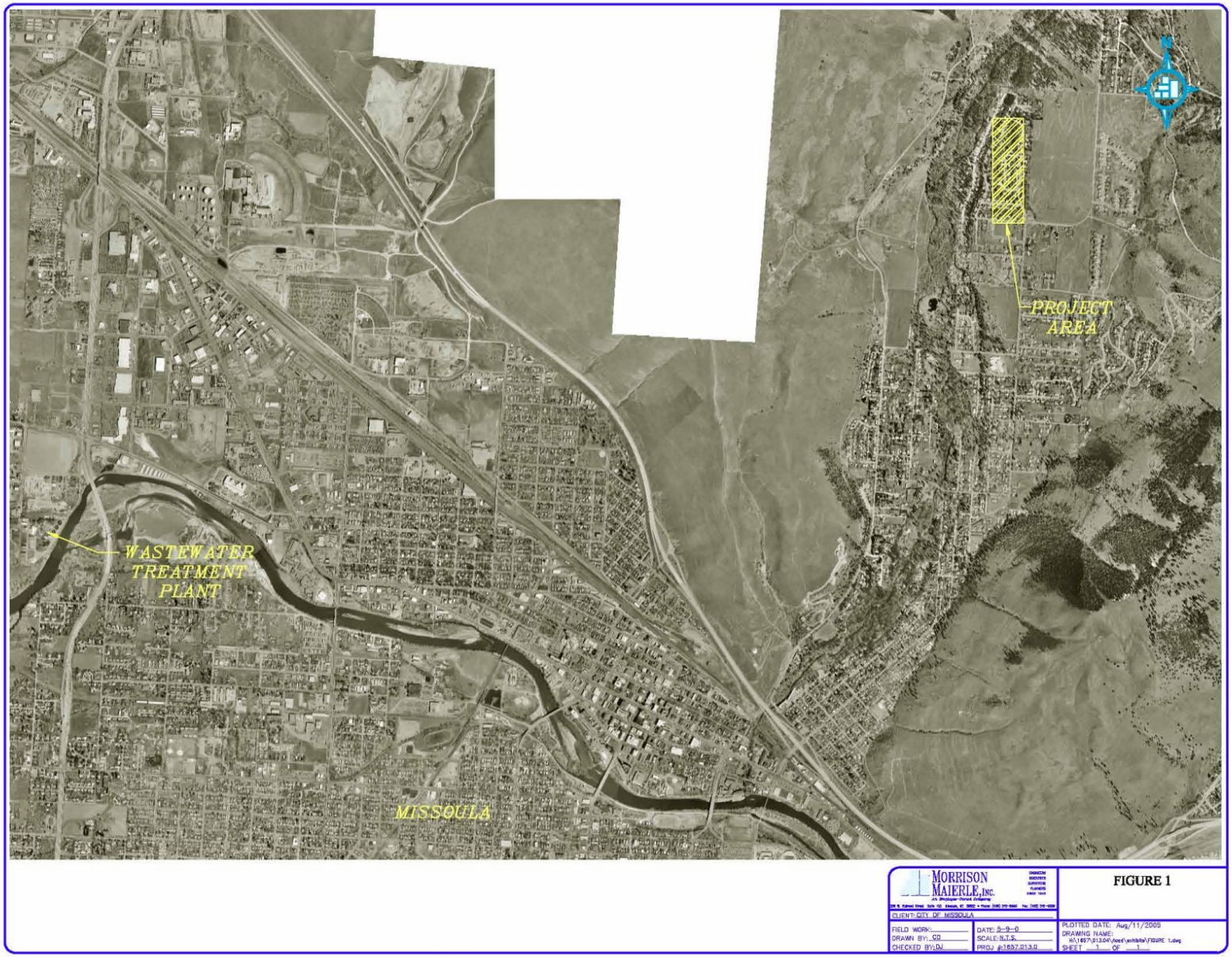
The DEQ, Technical & Financial Assistance Bureau, has received plans and specifications for its review and written approval in addition to an application for a State Revolving Fund (SRF) loan for the project and therefore has prepared this Environmental Assessment (EA) checklist. This EA checklist has been prepared to satisfy the requirements of the Montana Environmental Policy Act (MEPA), supplementing the June 2000 EPA FONSI/EA for the City of Missoula Wastewater Facilities Plan Update.

Legal Proceedings: The Lincolnwood Phase II Sewer Collection System was formerly a portion of the larger Rattlesnake Valley Sewer Collection Project (SID 528), which has been the subject of a series of 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 the Defendants' 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 to the Ninth Circuit Court of Appeals of the United States 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 District 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 Defendant City proceeded with the creation of SID's 533 and 534 out of the existing SID 528 without lawful authority, and that the Defendants are proceeding with the construction of sewer systems within SID's 528, 533 and 534 without lawful authority and without preparation of an environmental impact statement. The suit is pending in the Montana Fourth Judicial District Court, Missoula County.

Agency Action, Applicable Regulations and Permitting Authorities: 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.

Summary of Issues: The DEQ staff has identified no significant issues.


PROJECT AREA
WASTEWATER TREATMENT PLANT
MISSOULA
MORRISON MAIERLE, INC.
FIGURE 1
CLIENT: CITY OF MISSOULA
FIELD WORK:
DRAWN BY: CD
CHECKED BY: DJ
DATE: 5-9-0
SCALE: N.T.S.
PROJ #: 1637.013.0
PLOTTED DATE: Aug/11/2005
DRAWING NAME:
SHEET 1 OF 1

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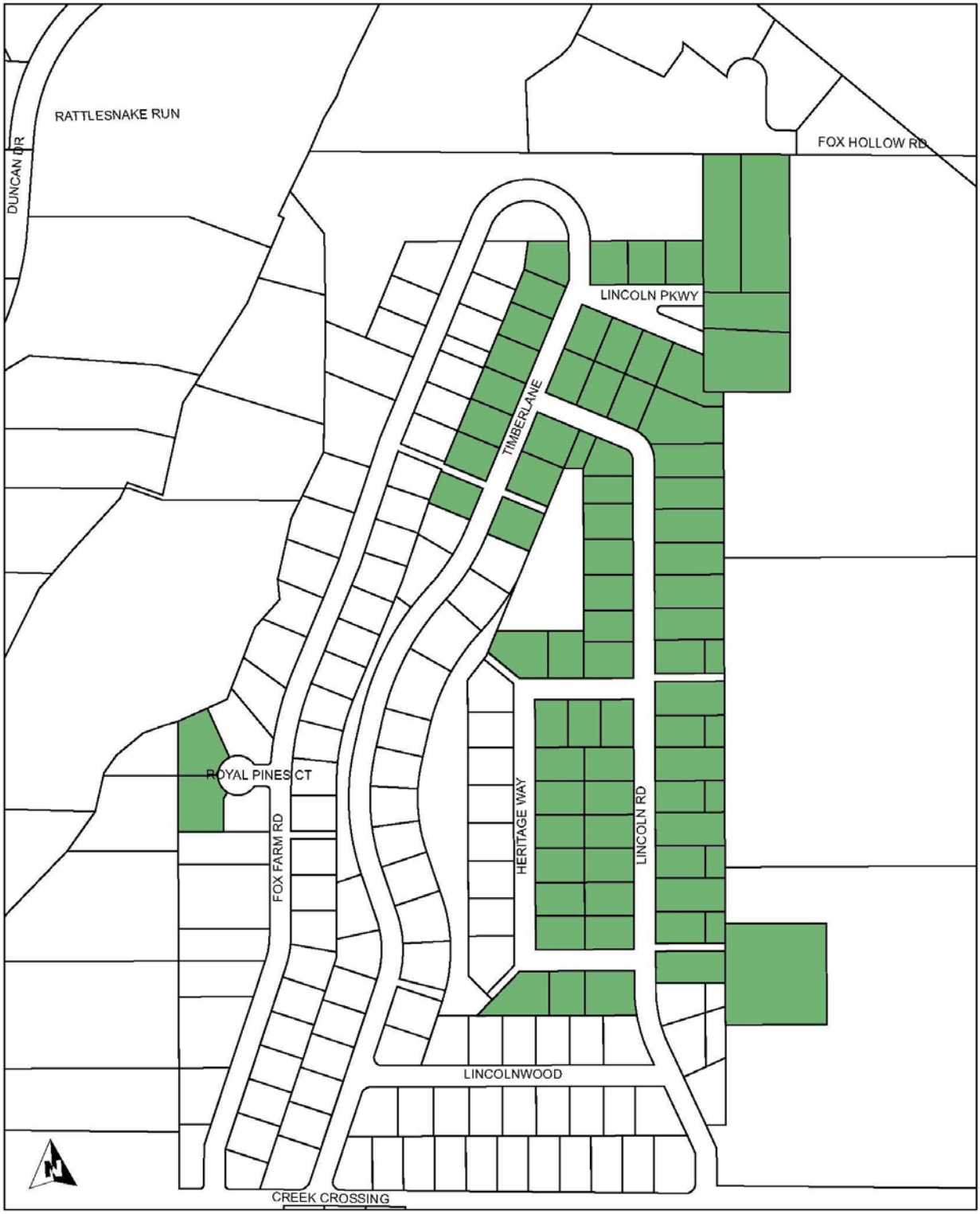

Lincolnwood Sewer SID 536

Exhibit A

Figure 2. SID 536 Parcel Map

Affected Environment & Impacts of the Proposed Project:

Y = Impacts may occur (explain under Potential Impacts). *Include frequency, duration (long or short term), magnitude, and context for any significant impacts identified. Address significant impacts related to substantive issues and concerns. Identify reasonable feasible mitigation measures (before and after) where significant impacts cannot be avoided and note any irreversible or irretrievable impacts. Include background information on affected environment if necessary to discussion.*

N = Not present or No Impact will likely occur. *Use negative declarations where appropriate (wetlands, T&E, Cultural Resources).*

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES
1. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE: Are soils present which are fragile, erosive, susceptible to compaction, or unstable? Are there unusual or unstable geologic features? Are there special reclamation considerations?	[N] Evaluations for the area indicate that the soil conditions are suitable for the proposed project and that there are no geological constraints. Source: *Preliminary Engineering Report* (PER) *for the Rattlesnake Neighborhood Sewer Collection System*, Morrison Maierle, Inc., May 2002. *City of Missoula Wastewater Facilities Plan Update*, Brown and Caldwell, 1999. *Environmental Assessment* (with reference to the *City of Missoula Wastewater Facilities Plan Update*), Department of Environmental Quality & United States Environmental Protection Agency, March 2000. No appreciable changes have occurred since these documents were published.
2. WATER QUALITY, QUANTITY AND DISTRIBUTION: Are important surface or groundwater resources present? Is there potential for violation of ambient water quality standards, drinking water maximum contaminant levels, or degradation of water quality?	[Y] Beneficial. 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 will be 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 & will result in improved quality of the Missoula Valley Aquifer (sole source aquifer), Rattlesnake Creek & the Clark Fork River, as discharges of nutrients & pathogens from partially treated septic systems, cesspools or seepage pits to groundwater will be reduced. Source: PER & City of Missoula Wastewater Facilities Plan Update.
3. AIR QUALITY: Will pollutants or particulate be produced? Is the project influenced by air quality regulations or zones (Class I airshed)?	[Y] 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 sewer facilities. The Lincolnwood neighborhood is an established residential neighborhood. The project area is built-out and includes one vacant parcel. Because there is only one undeveloped property no development related impacts are anticipated. Dust control will be conducted by the contractor during construction to mitigate temporary impacts.

IMPACTS ON THE PHYSICAL ENVIRONMENT	
	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. Source: City of Missoula Wastewater Facilities Plan Update, Missoula City/ County Health Dept. & Office of Planning and Grants.
4. VEGETATION COVER, QUANTITY AND QUALITY: Will vegetative communities be significantly impacted? Are any rare plants or cover types present?	[Y] The sewer collection system will be buried in public rights-of-way. There will be short-term underground construction in Heritage Park. There will be minor disturbance of vegetation. Disturbed vegetated areas will be reseeded and restored. Source: PER, City of Missoula Wastewater Facilities Plan Update, City staff, Morrison-Maierle, Inc.
5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS: Is there substantial use of the area by important wildlife, birds or fish?	[N] 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. Source: PER, City of Missoula Wastewater Facilities Plan Update, Morrison-Maierle, Inc., after consultation with OPG, & Jim Carlson, City-County Health Dept., 3/2002.
6. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES: Are any federally listed threatened or endangered species or identified habitat present? Any wetlands? Species of special concern?	[N]The project will not adversely impact any federally listed threatened, endangered, candidate or proposed 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 is usually associated with drainfields. None of the proposed project encroaches upon wetlands. Source: PER, City of Missoula Wastewater Facilities Plan Update, Missoula County Floodplain Administrator, Mack Long, Regional Supervisor, Montana Fish Wildlife & Parks, US Fish and Wildlife Service.
7. HISTORICAL AND ARCHAEOLOGICAL SITES: Are any historical, archaeological or paleontological resources present?	[N] The project area is not located within or near any historic boundaries and no historic structures will be disturbed. This project will have an impact on existing rights-of-way that have been previously disturbed. These rights-of-way contain no known or listed archaeological resources or historic structures, and are not within the boundaries of any National Register Historic District. Therefore this project would have no adverse effect on historical or archaeological resources. A cultural resource inventory is unwarranted at this time. Source: PER, City of Missoula Wastewater Facilities Plan Update, Philip Maechling, Missoula Historic Preservation Officer, Damon

IMPACTS ON THE PHYSICAL ENVIRONMENT	
	Murdo, State Historic Preservation Office
8. AESTHETICS: Is the project on a prominent topographic feature? Will it be visible from populated or scenic areas? Will there be excessive noise or light?	[Y] New sanitary sewers will be located underground and will thus have no visual impacts aside from short-term construction impacts. Temporary noise impacts will occur during the course of construction. Allowable construction times are included in the construction contract. Normal work period would be between 7:00am & 7:00pm. Source: PER
9. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY: Will the project use resources that are limited in the area? Are there other activities nearby that will affect the project? Will new or upgraded powerline or other energy source be needed)	[Y] There will be minor secondary effects on land, water, and air as discussed in this EA. Additional energy would be required to operate the 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. Source: PER, City of Missoula Wastewater Facilities Plan Update
10. IMPACTS ON OTHER ENVIRONMENTAL RESOURCES: Are there other activities nearby that will affect the project?	[N]

IMPACTS ON THE HUMAN ENVIRONMENT	
11. HUMAN HEALTH AND SAFETY: Will this project add to health and safety risks in the area?	[N] The proposed project would help eliminate failing on-site wastewater disposal systems resulting in decreased loading 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. There has been at least one documented case of coliform contamination of a public well owned by the Mountain Water Company as well as one documented case of fecal coliform contamination of a private well in the Rattlesnake. Source: PER & City of Missoula Facilities Plan Update, Missoula, Mountain Water and the Missoula "Evaluation of Unsewered Areas", City/County Health Department Staff
12. INDUSTRIAL, COMMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION: Will the project add to or alter these activities?	[N] There will be no impact to industrial or commercial activities. Source: City of Missoula Wastewater Facility Plan Update, City of Missoula Staff & City-County Health Department.
13. QUANTITY AND DISTRIBUTION OF EMPLOYMENT: Will the project create, move or eliminate jobs? If so, estimated number.	[N] The project will not create, move or eliminate jobs. Temporary jobs will be created for construction of the project. Source: City of Missoula and Missoula County staff, Missoula City/County Office of Planning and Grants.

IMPACTS ON THE HUMAN ENVIRONMENT	
14. LOCAL AND STATE TAX BASE AND TAX REVENUES: Will the project create or eliminate tax revenue?	[N] Not applicable to this project. Source: Missoula Office of Planning & Grants
15. DEMAND FOR GOVERNMENT SERVICES: Will substantial traffic be added to existing roads? Will other services (fire protection, police, schools, etc.) be needed?	[Y] Temporary impacts on automobile traffic may exist during construction of sewers. Traffic control will be required to mitigate impacts during construction. Since the project will not result in significant additional development in the neighborhood, no additional traffic will be generated as a result of the project. Source: PER & City of Missoula Wastewater Facilities Plan Update.
16. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS: Are there State, County, City, USFS, BLM, Tribal, etc. zoning or management plans in effect?	[N] During preparation, the City of Missoula Wastewater Facilities Plan Update and the PER were subject to continuous review by City/County Staff and elected officials to ensure compatibility with land use plans and regulations. The plan is also consistent with the objectives and goals of the Growth Management Task Force. The 1999 Missoula City/County Consolidated Plan provides a strategic plan for community development needs. The 2002 Missoula City/County Growth Policy includes general growth plan for the entire urban area and County. The 1998 Urban Comprehensive Plan, Chapter 6 & Appendix A were adopted by both the City & County of Missoula and sets growth objectives for the area. In Appendix A the urban growth area established the zone where urban growth will be promoted. The sewer project lies within the urban growth area established in this document. Chapter 6 also shaped urban growth. Source: City of Missoula Facilities Plan Update, PER, 2000 Environmental Assessment, Missoula City/County Office of Planning & Grants..
17. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES: Are wilderness or recreational areas nearby or accessed through this tract? Is there recreational potential within the tract?	[N] No impact is anticipated. Source: City of Missoula staff and Morrison Maierle.
18. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING: Will the project add to the population and require additional housing?	[N] No impact is anticipated. The project area is built-out and includes one vacant parcel. Source: PER, City of Missoula Wastewater Facilities Plan Update, Morrison-Maierle.
19. SOCIAL STRUCTURES AND MORES: Is some disruption of native or traditional lifestyles or communities possible?	[N] No impact is anticipated. Source: City of Missoula Wastewater Facility Plan Update and Missoula City/County Office of Planning & Grants.
20. CULTURAL UNIQUENESS AND DIVERSITY: Will the action cause a shift in some unique quality of the area?	[N] No impact is anticipated. Source: PER, City of Missoula Wastewater Facilities Plan Update and City of Missoula staff.
21. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:	[Y] Some residents of the Lincolnwood area petitioned the City to create a sewer SID. SID 536 was formed by the City of Missoula on December 5, 2005 for the purpose of undertaking sanitary sewer improvements in the Lincolnwood area. Costs will be mitigated by a

IMPACTS ON THE HUMAN ENVIRONMENT	
	grant from DNRC and low interest State Revolving Fund loans. Source: City of Missoula Staff
22(a). PRIVATE PROPERTY IMPACTS: Are we regulating the use of private property under a regulatory statute adopted pursuant to the police power of the state? (Property management, grants of financial assistance, and the exercise of the power of eminent domain are not within this category.) If not, no further analysis is required.	[Y] The installation of sewer requires that property owners pay sewer user fees even though they are not connected to the sewer system. Source: City of Missoula staff
22(b). PRIVATE PROPERTY IMPACTS: Is the agency proposing to deny the application or condition the approval in a way that restricts the use of the regulated person's private property? If not, no further analysis is required.	[N]
22(c). PRIVATE PROPERTY IMPACTS: If the answer to 21(b) is affirmative, does the agency have legal discretion to impose or not impose the proposed restriction or discretion as to how the restriction will be imposed? If not, no further analysis is required. If so, the agency must determine if there are alternatives that would reduce, minimize or eliminate the restriction on the use of private property, and analyze such alternatives. The agency must disclose the potential costs of identified restrictions.	[N]

23. *Description of and Impacts of other Alternatives Considered:*

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. Alternative 1 – No action (existing service): This 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 treatment plant to provide capacity for the Wastewater Facilities Service area and is responsive to growth management objectives and 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: This 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.

LINCOLNWOOD SEWER COLLECTION SYSTEM ALTERNATIVES

In May 2002, the City of Missoula and their consultant, Morrison-Maierle, Inc. completed a Preliminary Engineering Report for the Rattlesnake Neighborhood Sewer Collection System. The project area is in the Rattlesnake Valley located northeast of downtown Missoula as shown in Figure 1. The Rattlesnake Valley is a developed area with a significant number of on-site wastewater treatment systems. The failure rate of on-site systems in the Rattlesnake Valley is documented in the "Evaluation of Unsewered Areas" prepared by the Water Quality District in 1996. According to that document, over 23 percent of all on-site wastewater systems in the Rattlesnake permitted since 1967 have failed and been replaced. The average size of the parcels included in the Lincolnwood project is approximately one-quarter of an acre. The Montana Department of Environmental Quality has determined that for lots connected to a public water supply system, the minimum acceptable lot size to support an on-site wastewater treatment and disposal system is 20,000 square Feet (0.46 acre). Thus, most lots in the project area simply do not have adequate space for a drainfield and particularly not for a replacement area as well. None of the 73 lots within the project area meet the Montana Departments of Environmental Quality's minimum size requirement. Therefore on-site treatment is not a viable alternative for the Lincolnwood project. As drainfields in the project area fail, new installations cannot be constructed that meet the current on-site sanitary sewer regulations of the Montana

Department of Environmental Quality. Over 58 percent of the systems installed in the Rattlesnake Valley are either cesspools or seepage pits that provide minimal treatment of the wastewater. The failing on-site systems provide harmful nutrient loading to the Missoula aquifer, Rattlesnake Creek and the Clark Fork River. The City of Missoula has entered into the Voluntary Nutrient Reduction Program (VNRP) with a pledge to reduce nutrient loading to the Clark Fork River. Through this program the City has committed to reducing nutrients discharged from the Wastewater Treatment Plant (WWTP) through the biological nutrient removal (BNR) plant upgrade but also to reduce non-point source nutrient loading by eliminating half of the valley's 6,780 on-site wastewater treatment systems in operation. The Lincolnwood project in the Rattlesnake Valley represents an opportunity to eliminate 71 on-site systems. This PER effort identified the need for significant upgrades of wastewater facilities.

The following 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.

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: This alternative 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.

4. Alternative 4 – Septic Tank Effluent Pump 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.

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 "no action" and advanced on-site wastewater treatment alternatives are not acceptable solutions to the problems to be solved by this project. Small diameter variable grade sewer, septic tank effluent pump system and conventional sewer were analyzed in detail in the PER. The three alternatives were compared using both economic and non-economic factors. A present worth analysis was performed to evaluate the economic factors and a matrix was developed to compare the non-economic factors of the alternatives. The conventional gravity sewer was identified as the preferred alternative for this project.

FINANCIAL IMPACT OF PROJECT:

The City of Missoula has created SID 536 to help fund the Lincolnwood Phase II Sewer Collection Project in the Rattlesnake Valley Neighborhood.

Funding resources for the project are as follows:

- $10,000 grant from the Department of Natural Resources and Conservation's Renewable Resource Grant and Loan program (RRGL)
- $438,000 SID loan from the Water Pollution Control State Revolving Fund (SRF)
- $422,000 Revenue Bond Loan from the Water Pollution Control State Revolving Fund (SRF)

Special Improvement District (SID) assessments on property owners will be used to repay the SRF loan over 20 years. The average monthly assessment will be approximately $37.00/month. The operation and maintenance user fee for the wastewater system will be $11.50 with the potential of increasing in the future. The combined total of assessment and user fee is about 2% of the median household income ($30,366) for the City of Missoula, which is considered affordable by EPA criteria.

24. Listing and Evaluation of Mitigation, Stipulations and Other Controls Enforceable by the Agencies

Air Quality – Dust control will be required and provided 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 will be mitigated by these restrictions.

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.

Historical and Archaeological Sites – If any archaeological resources are discovered during construction, the Montana State Historic Preservation Organization (SHPO) must be notified.

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

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.

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.

Density and Distribution of Population and Housing – The project area is built-out except for one parcel and the installation of the sewer main will not result in additional significant development of the area.

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.

***25. Summary of Magnitude and Significance of Potential Impacts*:** No significant adverse impacts are anticipated.

***26. Cumulative Effects*:** No significant adverse impacts are anticipated.

27. Preferred Action Alternative and Rationale:

Recommendation for Further Environmental Analysis:

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

Rationale for Recommendation: The Rattlesnake Sewer project, which included the Lincolnwood area, 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 were anticipated. 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 open to the public 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 through the *Preliminary Engineering Report for the Rattlesnake Neighborhood Sewer Collection System,* Morrison Maierle, Inc., May 2002. Through this Preliminary

Engineering Report (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, since more specific information was available, an environmental review for the Lincolnwood project area was appropriate. Through this EA, which satisfies the requirements of the Montana Environmental Policy Act (MEPA), the DEQ has verified the earlier finding that none of the adverse impacts of the proposed Lincolnwood sewer collection 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.

During the course of the preparation of the EA for this project (Lincolnwood Phase II SID 536), an extensive EA was also prepared and published for the Rattlesnake Neighborhood Collection System Project (Rattlesnake Project). The Rattlesnake Project EA determined that no significant adverse environmental impacts related to the proposed project were anticipated. The DEQ and USEPA each issued a FONSI. A Notice of Findings of No Significant Impact was legally advertised and distributed to a list of interested agencies along with the FONSI and EA. The comment period for the Rattlesnake Project FONSI and EA is open at the time of preparation and publishing of this Lincolnwood Phase II EA.

28. Public Involvement: See attached Public Participation list.

29. Persons and agencies consulted in the preparation of this analysis: Montana Department of Fish Wildlife and Parks, U.S. Fish and Wildlife Service, Montana State Historic Preservation Office, Montana Department of Natural Resources and Conservation, US Army Corps of Engineers, Missoula County Floodplain Administrator, US Environmental Protection Agency, City of Missoula Staff and Missoula County Staff.

EA Prepared By:

_____ _____
Skye A. Hatten, E.I. Date

Reviewed By:

_____ _____
Paul LaVigne, P.E. Date

Approved By:

_____ _____
Todd Teegarden, P.E. Date

ATTACHMENTS:

DESCRIPTION OF THE CITY OF MISSOULA WASTEWATER FACILITIES PLAN PROJECT – ORIGINAL BASIS OF THE RATTLESNAKE SEWER PROJECT

The Wastewater Facilities Plan Update proposes to continue routing wastewater from the Missoula Urban Area to the City's central wastewater treatment plant. The sewer system and treatment plant will be expanded to provide capacity for service to the Urban Service Area. Biological nutrient removal will be implemented at the Missoula Wastewater Treatment Plant to divert nitrogen and phosphorus, which are plant nutrients, from the Clark Fork River.

The recommended plan includes extension of sewer service to areas within the City that are currently served by septic systems. Septic system contributions of nitrogen to the Clark Fork and Bitterroot rivers would be reduced. The proposed plan also allows for future expansion to the 1999 Wastewater Facilities Plan Study Area boundary. The plan, which is shown conceptually in Figure 2, achieves economies of scale by building upon the historical investment in facilities.

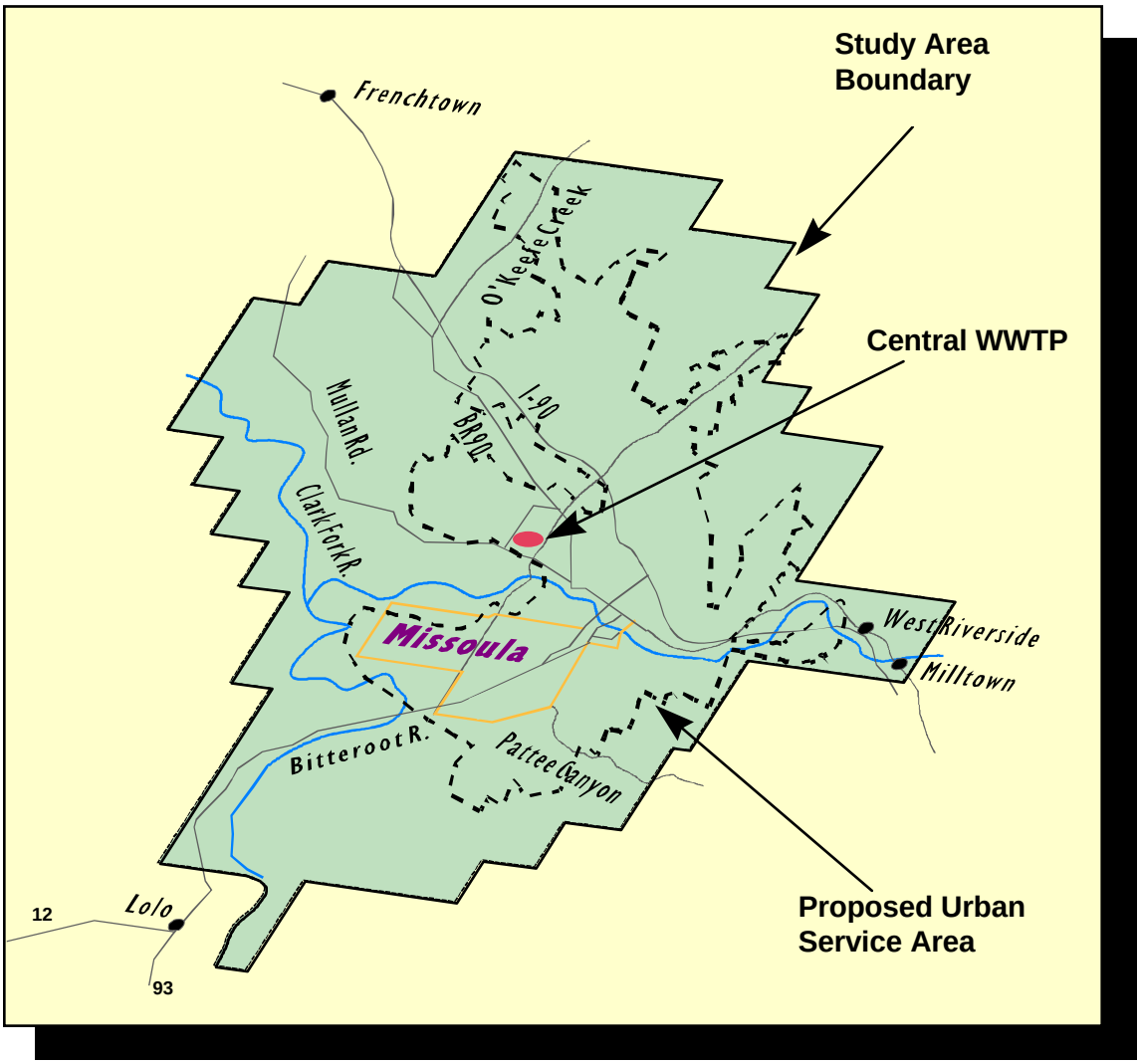

Figure 2. Recommended City of Missoula Wastewater Facilities Plan

DESCRIPTION OF THE PROPOSED RATTLESNAKE SEWER PROJECT – BASIS OF THE PROJECT

The Rattlesnake Sewer Project is an implementation project derived from the *Missoula Wastewater Facilities Plan Update, 1999*. The project plans for infrastructure for the Rattlesnake Neighborhood Area of Missoula County to be funded by a Special Improvement District (SID) consistent with the Missoula Wastewater Facility Plan Update.

The objective of the Missoula Wastewater Facility Plan Update was to develop a publicly acceptable, affordable plan for managing wastewater facilities to protect the environment, specifically the Missoula Valley Aquifer, Bitterroot River and the Clark Fork River. To implement this objective, the City of Missoula and Missoula County have developed a plan that defined the boundaries of the sewer service area, identified the collection system and wastewater treatment needs, and defined a capital improvement program, including budget and schedule. Key issues considered during the planning process included growth management, study area boundary, groundwater protection, surface water protection, cost of service and affordability, sewer configuration, annexation, sewer extension policy, City/County relationship and public communication.

The Missoula facilities planning area was established by the City through planning sessions involving representatives of the City and County, Consultants, Growth Management Task Force and Wastewater Advisory Committee. The need for the facilities planning effort was based on several goals for improvement of wastewater disposal services in the planning area. Namely, the focus was on a plan for wastewater treatment to protect the Clark Fork River and a plan for serving unsewered areas to protect the Missoula sole-source aquifer and Bitterroot and Clark Fork Rivers.

A primary environmental feature of western Montana, northern Idaho and eastern Washington is the Clark Fork River/Lake Pend Oreille/Pend Orielle River watershed, of which the Clark Fork River is a tributary. In recent years, there has been public concern about water quality degradation in the basin, particularly eutrophication (enrichment), which is exhibited by excessive growth of nuisance-attached algae. The Montana Department of Environmental Quality (DEQ) performed a water quality evaluation of the Clark Fork River basin and found that nitrogen and phosphorus are causing deleterious algal growth. Approximately one-half of the basin's phosphorus load and one-quarter of the nitrogen present in the lower Clark Fork River during the summer comes from the Missoula urban area ground water seepage that is contaminated by septic system effluent. Consequently, the State of Montana developed water quality goals and promoted a voluntary program to remove nutrients from wastewater effluent discharges. The Tri-State (Montana, Idaho and Washington) Implementation Council was established to develop approaches for controlling nutrient discharges in the basin. The Tri-State Implementation Council, Nutrient Target Subcommittee published the final "Clark Fork River Voluntary Nutrient Reduction Program" on June 15, 1998, following an extensive period of review, revisions and discussion. A Memorandum of Understanding was signed on August 20, 1998, by the Montana Department of Environmental Quality, Butte Silver-Bow, City of Deer Lodge, City of Missoula, Stone Container Corporation, Clark Fork-Pend Oreille Coalition, Missoula City/County Health Department Board of Health, Board of County Commissioners, Missoula County, and Tri-State Implementation Council. EPA approved the Voluntary Nutrient Reduction Program (VNRP) on October 21, 1998. The VNRP established a ten-year period from the date of signatures by the parties to achieve the in-stream nutrient and algal targets.

Interim evaluations are planned at least every three years. The Rattlesnake Sewer Project is one of a list of many projects that are being implemented to achieve the goals of the VNRP.

Consistent with the selected Alternative B – Central Treatment from the City of Missoula Wastewater Facilities Plan, the Rattlesnake Sewer Project plans for gravity collector sewers to provide neighborhood sewer service in the Rattlesnake Area of the City of Missoula. All of the project area is located within the City of Missoula's wastewater facilities service area boundary that was established.

PURPOSE AND NEED FOR ACTION FOR THE RATTLESNAKE AREA

The Missoula Valley aquifer has been designated the only Sole Source Aquifer (SSA) in EPA's Region VIII. The overall goal of the SSA designation is

"...to ensure that projects receiving Federal financial assistance in an SSA project review area is designed and constructed in a manner that will prevent the introduction of contaminants into the SSA in quantities that would create a significant hazard to public health."

The Missoula aquifer is the community's sole source of drinking water and is extremely vulnerable to contamination. As such, the City and County of Missoula have adopted a proactive rather than a reactive position in terms of protecting the aquifer from contamination. This is evidenced by the millions of dollars already spent by the City developing an adequate wastewater treatment plant as well as connecting unsewered properties to the City's system. The current Wastewater Facility Services Plan's findings concluded that a high priority for the City should be connecting unsewered City and County properties within the City's Wastewater Service Area Boundary to the City's system (copy on file with City of Missoula, Engineering Division).

There are known failures of on-site septic systems within the Rattlesnake Sewer service area. The failures of these systems have placed the public at risk for contact with untreated wastewater and have the potential for impacting domestic groundwater wells in the area.

The problem related to pollution of the aquifer and the health hazards related to exposure to under- or untreated sewage and wastewater is existing, continual and long-term if not addressed now. A list of ongoing studies that have addressed the continuing concerns about the water quality in the Missoula Valley is presented in Table 1.

Table 1. Studies that document water quality issues in the Missoula Valley.

A Single Layer Transient Flow Model of the Missoula Aquifer by Ross Miller, 1990	*This study was done for the Missoula City-County Health Department. By combining the existing water level data into a single database, more detailed potentiometric surfaces maps were developed than were previously available, allowing for a more precise method of studying contaminant transport.*
A Rationale and Alternatives for Controlling Nutrients and Eutrophication Problems in the Clark Fork River Basin, by Gary L. Ingman, State of Montana Department of Health and Environmental Sciences, Water Quality Bureau, 1992	*This study, subtitled Section 525 of the 1987 Clean Water Act Amendments, focused on the Clark Fork-Pend Oreille Basin's most significant interstate water quality problem: that of excessive nutrients and resulting cultural eutrophication, or enrichment. The report summarizes Montana's Section 55 assessment results and presents management options. It also serves as Montana's contribution to a Clark Fork – Pend Oreille Basin Management Plan that facilitates the protection and restoration of beneficial water uses in the three-state (Montana, Idaho and Washington) drainage area. The Missoula City-County Health Department's Environmental Health/Water Quality division has utilized this study.*
Missoula Carrying Capacity Study, by Land and Water Consulting, 1996.	*Study researched the effects of septic system loading on groundwater quality.*
Evaluation of Unsewered Areas in Missoula Montana, prepared by the Water Quality District in 1996.	*Study found that the Rattlesnake area had a very high number of septic systems and resulting volume of sewage being discharged to the subsurface. Also noted high septic system failure rate.*
Storm and Ground Water Quality Impacts of Chemical Deicer Usage in Missoula, Montana, a study prepared in 1997 by the Missoula City-County Health Department's Missoula Valley Water Quality District for the Montana Department of Environmental Quality's Air Quality Division.	*This report presented conclusions and recommendations about the use of chemical deicers in Missoula, noting that although they do not seem to have a significant negative impact to groundwater, continued sampling was recommended.*
Water Quality Status and Trends Monitoring System for the Clark Fork-Pend Oreille Watershed, prepared by Land & Water Consulting for the Tri-State Implementation Council in 1999.	*This report provides a brief summary of water quality and algae data collected during seven months in 1998. The Missoula City-County Health Department's Environmental Health/Water Quality division utilizes this study.*

The Sole Source Aquifer Petition for the Missoula Valley Aquifer, 1997	*This petition was prepared by the Environmental Health Division of the Missoula City-County Health Department and submitted to the EPA in 1997. The Missoula Valley Aquifer was subsequently declared a Sole Source Aquifer in 1998.*
Missoula Wastewater Facilities Plan Update, 1999, prepared by Brown and Caldwell for the City of Missoula.	*Comprehensive plan for the City's wastewater system extensions and upgrades.*

In the 1980s, the City of Missoula made numerous improvements to its wastewater collection and treatment system. To continue to protect the Clark Fork River and the Missoula Valley Aquifer, as well as to accommodate growth, plans for future wastewater system extensions and upgrades began to be developed. City and County officials and representatives of the private sector came together to begin this process.

Missoula Wastewater Facilities Plan -
The key document addressing this planning is the Missoula Wastewater Facilities Plan. The plan defines the condition of the existing infrastructure and describes improvements necessary to protect water resources for the next 50 years. The original Plan was completed in June of 1984 in compliance with Federal EPA guidelines after considerable effort including a lengthy review and public comment. This comprehensive study encompassed many areas including the planning area characteristics, future conditions in Missoula, infiltration/inflow, wastewater flow and loading projections, discharge requirements, the wastewater treatment plant and interceptors. Each of these areas is analyzed, summarized and recommendations are made. In 1994, a contract was awarded to Brown and Caldwell to update Missoula's Wastewater Facilities Plan. The final document was adopted in 2000.

Wastewater Collection System Master Plan -
A Wastewater Collection System Master Plan maps the existing sewer lines, direction of flow and collection sites for each line. The complete Wastewater Facilities Plan and the Collection System Master Plan are on file with the City of Missoula Engineering Division and are available upon request.

Growth Management Planning Group -
The Growth Management Planning Group was formed to address planning for growth in Missoula County. This group was developed in a collaborative effort by the City and County and is comprised of not only City and County staff and elected officials but of many concerned citizens. It was important to the group to have public involvement at each step of the planning process. Therefore, all meetings were published in the local paper and were open to the public. The Themes Document, revised in February 1996, shows that the Growth Management Planning Group recognized the need to achieve two equally important goals: 1) protect critical lands and natural resources, riparian resources, hillsides, air and water quality and open spaces and 2) enhance human resources, such as health and safety, social, educational, recreational, and cultural services, employment and housing.

Reoccurrence of the Problem -
The City & County have been aware of problems in the Rattlesnake area and has taken positive planning steps to find the best solution for these problems. The Wastewater Facilities Plan and Subdistrict Facilities Studies were key documents completed that determined that ultimately any improvement in the maintenance of the existing facilities in the Rattlesnake Area would ultimately bring about only short-term and inadequate solutions. The sewering of the Rattlesnake area has been a priority.

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 project evaluation. The SID 528 project has been the subject of two lawsuits, one of which was dismissed and one of which is pending in United States District Court.

The Lincolnwood Phase II Sewer Collection System was formerly a part of the larger Rattlesnake Valley Sewer Collection Project (SID 528). Due to delay of SID 528 mostly attributed to legal issues, several residents of the Lincolnwood neighborhood petitioned the City of Missoula to form a new SID to construct a collector sewer to serve the Lincolnwood area. In response to a petition holding thirty-six signatures received from Lincolnwood property owners, the City of Missoula created SID 536 to provide sewer to a total of 71 residences (73 total parcels, 2 vacant lots) in the Lincolnwood neighborhood. Two protests were filed with the City during the formal protest period.

Listed below are public announcements, meetings and participation that occurred during the evaluation of the Lincolnwood Phase II Sewer Collection Project:

***November 7, 2005** – Citizen Petition for Sewer (36 signatures) delivered to the City of Missoula, Public Works Department. Referral to Public Works Committee Resolution of Intention to Create SID.*
***November 9, 2005** – Public Works Committee Meeting, Public comment taken.*
***November 14, 2005** – City Council passed a Resolution of Intention to Create SID 536 (Resolution No. 6990), Opportunity given for public comment.*
***November 20, 2005** – Legal Ad in The Missoulian.*
***November 27, 2005** – Legal Ad in The Missoulian.*
***December 5, 2005** – City Council holds a Public Hearing, Public comment taken. City Council approved Resolution to Create SID 536 Lincolnwood Phase II Sewer Project (Resolution No. 7007).*

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 projects:

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 input to groundwater that is usually associated with drainfields.

2. The U. S. Fish and Wildlife Service (FWS) commented that they do not anticipate adverse impacts to any federally listed threatened, endangered, candidate or proposed species.

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. Should cultural materials be inadvertently discovered during construction of this project, they ask to be contacted and the site investigated. 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 he offered his 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.

REFERENCES

The following is a list of references used in the preparation of this environmental assessment:

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

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

3. *Environmental Assessment* (with reference to the *City of Missoula Wastewater Facilities Plan Update*), Department of Environmental Quality & United States Environmental Protection Agency, March 2000.

4. *Finding of No Significant Impact* (with reference to the *Environmental Assessment* and the *City of Missoula Wastewater Facilities Plan Update*), United States Environmental Protection Agency, June 2000.