

RECEIVED

FEB 22 2006

Notice of Findings of No Significant Impact

**LEGISLATIVE ENVIRONMENTAL
POLICY OFFICE**

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: Manhattan Wastewater Treatment System Improvements
 Location: Manhattan, Montana
 Project #: C301087-04
 Total Cost: \$4,223,263

The town of Manhattan is proposing to upgrade its wastewater treatment and collection systems. The purpose of this project is to: provide a long-term solution to MPDES permit compliance, meet current and future capacity needs of the community, eliminate excessive leakage from the town's current wastewater treatment lagoons, and reduce the amount of inflow and infiltration (I/I) into the town's collection system.

The recommended alternative is to replace portions of the collection system subject to excessive I/I and to construct a mechanical wastewater treatment plant that is capable of meeting effluent limitations for current and future populations. The treatment facility will be located in the southeast ¼ of Section 34, Township 2 North, Range 3 East. Federal and State grant and loan programs will fund this project.

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

1. Montana Department of Commerce, Community Development Division, 301 S. Park Avenue, P.O. Box 200523, Helena, Montana 59620-0523;
2. Montana Department of Environmental Quality, Planning, Prevention & Assistance Division, 1520 East Sixth Avenue, P.O. Box 200901, Helena, Montana 59620-0901;
3. U.S. Environmental Protection Agency, Region VIII, Montana Office, 10 W. 15 St., Suite 3200, Helena, MT 59626;
4. U.S. Army Corps of Engineers, Omaha District, 106 South 16th Street, Omaha, NE 68102-1618.

The environmental review record, including the EA and FONSI issued by each agency, is available for public examination on the DEQ website: www.deq.mt.gov 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	Town of Manhattan City Hall 120 W. Main PO Box 96 Manhattan, Montana 59718
---	---

Comments supporting or disagreeing with this decision may be submitted for consideration by each agency. After evaluating the comments received, the agency 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 Finding of No Significant Impact.

February 15, 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	Manhattan Wastewater Treatment Improvements
Location	Manhattan, Montana
Project Number	C301087-04
Total Cost	\$4,223,263

The community of Manhattan, through its May 2000 Preliminary Engineering Report (PER), and subsequent February 2004 and July 2005 PER amendments, has identified the need to upgrade its wastewater treatment and collection systems. The purpose of this project is to: 1) provide a long-term solution to Montana Pollutant Discharge Elimination System (MPDES) permit compliance, 2) meet a compliance schedule incorporated in the town's renewed MPDES permit, 3) meet the domestic capacity needs of the community, 4) eliminate excessive leakage to groundwater from the town's current wastewater treatment lagoons, and 5) reduce the amount of inflow and infiltration (I/I) into the town's collection system.

The recommended alternative identified in the PER and subsequent amendments is to replace portions of the collection system subject to excessive I/I and to construct a mechanical wastewater treatment facility utilizing aeration wheels, which is capable of meeting effluent limitations for current and future populations. The new mechanical wastewater treatment facility will be located in the southeast ¼ of Section 34, Township 2 North, Range 3 East, Principal Meridian Montana. The Aeration Wheel treatment facility achieves the treatment goals with the least operational complexity and long term costs.

Federal and State grant/loan programs will fund the project. Environmentally sensitive characteristics such as wetlands, floodplains, threatened or endangered species, and historical sites are not expected to be adversely impacted as a result of the proposed project. Public participation during the planning process demonstrated support for the selected alternative. No significant long-term environmental impacts were identified. An environmental assessment, which describes the project and analyzes the impacts in more detail, is attached to this Finding of No Significant Impact.

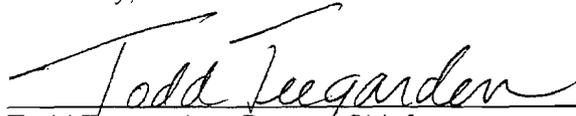
These documents are available for public scrutiny at the following locations:

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

Town of Manhattan City Hall
120 W. Main
PO Box 96
Manhattan, MT 59718

Comments supporting or disagreeing with this decision may be submitted for consideration by the Department of Environmental Quality. After evaluating the comments received, the agency 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 Finding of No Significant Impact.

Sincerely,

A handwritten signature in cursive script that reads "Todd Teegarden". The signature is written in black ink and is positioned above a horizontal line.

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

FINDING OF NO SIGNIFICANT IMPACT
Environmental Assessment
Wastewater Treatment Facility
Manhattan, Montana
October 2005

The U.S. Army Corps of Engineers, Omaha District, reviewed the Wastewater Treatment Facility environmental assessment (EA) prepared by the Town of Manhattan to satisfy the National Environmental Policy Act (NEPA), the Council on Environmental Quality's regulations for implementing NEPA (40 FR1500-1508), U.S. Army Corps of Engineers' regulations for implementing NEPA (33 CFR-325), and other appropriate environmental regulations. Federal participation in the review and acceptance of this EA was triggered by the use of Federal funds under Water Resource Development Act 1999, Section 595, in support of the water treatment plant upgrades for the Town of Manhattan in Gallatin County, Montana.

The proposed project involves the construction of a mechanical wastewater treatment facility located in the SE1/4 sec. 34, T. 2 N., R. 3 E. Approximately 6.9 acres of previously disturbed farmland would result from project implementation.

Significant facts considered during the scoping of alternatives included the project's functional dependency upon its location within the 100-year flood plain, aesthetics, reliability, maintenance, environmental impacts, and cost.

The "no action" alternative was considered and eliminated because it does not meet the needs of the project purpose, which is to regain Manhattan's ability to obtain drinking water and improve existing water quality. Manhattan proposes to solve both the water source and treatment problem by constructing an aeration wheel treatment facility. This treatment facility will include a mechanical screen; influent, effluent, return and waste sludge flow meters; two trains of aeration wheel reactors; two secondary clarifiers; an ultraviolet disinfection unit; an aerobic digester; a container filter; and a building to house blowers, pumps, lab equipment, and office space. Four other alternatives were considered and eliminated based on technical feasibility, cost, and environmental concerns.

All environmental and social factors relevant to the proposed project were considered in this assessment. These include, but are not necessarily limited to, threatened and endangered species, vegetation, wetlands, cultural resources, air quality, water quality, and wildlife. No adverse impacts to threatened and endangered species or cultural resources are expected because of the proposed project.

It is my finding, based on the EA, that the proposed activity would have no significant adverse impacts on the environment and that the proposed project would not constitute a major Federal action significantly affecting the quality of the human environment. The proposed improvement project has been coordinated with the appropriate resource agencies, and there are no significant unresolved issues. An environmental impact statement is not required.

22 NOV 2005

Date

SIGNED
COL JEFFREY A. BEDEY

Jeffrey A. Bedey
Colonel, Corps of Engineers
District Engineer

**MANHATTAN WASTEWATER TREATMENT FACILITY
ENVIRONMENTAL ASSESSMENT**

Prepared by:
Montana Department of Environmental Quality
Planning, Prevention, and Assistance Division
Technical and Financial Assistance Bureau
1520 East Sixth Avenue
PO Box 200901
Helena, Montana 59620-0901

TABLE OF CONTENTS

1.	INTRODUCTION	4
2.	PURPOSE AND NEED FOR ACTION	5
3.	EXISTING WASTEWATER TREATMENT PLANT	5
4.	PROJECT DESCRIPTION: CONSTRUCTION OF AN AERATION WHEEL TREATMENT FACILITY WITH DISCHARGE TO DITA DITCH.	6
5.	BACKGROUND.....	6
6.	ALTERNATIVES INCLUDING THE PROPOSED ACTION.....	9
6.1	ALTERNATIVE 1 - CONSTRUCTION OF A HYBRID LAGOON SYSTEM	10
6.2	ALTERNATIVE 2 - CONSTRUCTION OF AN OXIDATION DITCH WITH AN ANAEROBIC SELECTOR FOR BIOLOGICAL NUTRIENT REMOVAL	10
6.3	ALTERNATIVE 3 - CONSTRUCTION OF A SEQUENCING BATCH REACTOR.....	10
6.4	ALTERNATIVE 4 - CONSTRUCTION OF AERATION WHEEL TREATMENT FACILITY	10
6.5	ALTERNATIVE 5 - NO ACTION ALTERNATIVE.....	11
7.	ALTERNATIVE COMPARISONS.....	11
7.1	COST COMPARISON FOR TREATMENT ALTERNATIVES: ANNUAL EQUIVALENT COST ANALYSIS	11
7.2	BASIS OF SELECTION OF THE PREFERRED ALTERNATIVE	12
7.3	COMPARISON OF ENVIRONMENTAL IMPACTS	12
7.4	SELECTED ALTERNATIVE	13
8.	AFFECTED ENVIRONMENT	15
8.1	CLIMATE	15
8.2	GEOLOGY/TOPOGRAPHY	16
8.3	AIR QUALITY/NOISE	16
8.4	WATER RESOURCES	16
8.4.1	Wetlands	16
8.4.2	Surface Waters.....	17
8.4.3	Ground Water	17
8.4.4	Floodplain	17
8.5	SOCIOECONOMICS	17
8.6	LAND USE	17
8.7	CULTURAL RESOURCES	18
8.8	THREATENED AND ENDANGERED SPECIES	18
8.9	FISH AND WILDLIFE	18
8.10	VEGETATION	19
8.11	SOILS/PRIME FARMLAND	19
9.	ENVIRONMENTAL CONSEQUENCES.....	19
9.1	CLIMATE	19
9.2	GEOLOGY/TOPOGRAPHY	19
9.3	AIR QUALITY/NOISE	19
9.4	WATER RESOURCES.....	20
9.4.1	Wetlands	20
9.4.2	Surface Waters.....	20
9.4.3	Ground Water	20
9.4.4	Floodplain	20
9.5	SOCIOECONOMICS	20

9.6	LAND USE	21
9.7	CULTURAL RESOURCES.....	21
9.8	FISH AND WILDLIFE	21
9.9	VEGETATION.....	21
9.10	SOILS/PRIME FARMLAND	22
9.11	CUMULATIVE EFFECTS.....	22
10.	PUBLIC PARTICIPATION.....	22
11.	AGENCIES CONSULTED	23
12.	APPLICABLE REGULATIONS AND PERMITTING AUTHORITIES	24
13.	RECOMMENDATION FOR FURTHER ENVIRONMENTAL ANALYSIS.....	24
14.	REFERENCE DOCUMENTS.....	26

Figures:	Figure 1. Site Location Map
	Figure 2. Aeration Wheel Treatment Plant Schematic
	Figure 3. Treatment Plant Site
	Figure 4. Town Boundary Map
	Figure 5. Town Planning Area
	Figure 6. Areas of Potential Future Development

Attachments:	Appendix A. Agency Letters
	Appendix B. Environmental Statutes

MANHATTAN WASTEWATER TREATMENT FACILITY

ENVIRONMENTAL ASSESSMENT

COVER SHEET

A. PROJECT IDENTIFICATION

Applicant: Town of Manhattan
Address: P.O. Box 96
Manhattan, MT 59741
Project Number: C301087-04

B. CONTACT PERSON

Name: Mayor Eleanor Mest
~~Town of Manhattan~~
Address: P.O. Box 96
Manhattan, MT 59741
Telephone: (406) 284-3235

C. COMMENT PERIOD

Thirty (30) calendar days.

1. INTRODUCTION

This Environmental Assessment (EA) is prepared for the Town of Manhattan to satisfy the National Environmental Policy Act (NEPA), the Council on Environmental Quality's regulations for implementing NEPA (40 FR1500-1508), U.S. Army Corps of Engineers' regulations for implementing NEPA (33 CFR 325), and other appropriate environmental regulations. The purpose of an EA is to develop enough information to determine whether to prepare an environmental impact statement or a finding of no significant impact and to provide environmental information for decision makers. Environmental consequences are examined for the proposed wastewater treatment facility upgrades for the Town of Manhattan in Gallatin County, Montana.

The incorporated Town of Manhattan is located in the heart of the Gallatin Valley in Township 1 North, Range 3 East as shown in Figure 1. The Town is directly north of

Interstate 90 approximately 18 miles west of the City of Bozeman, in north central Gallatin County.

Federal and State grant/loan programs will fund this project. State and Federal agencies have been contacted regarding environmentally sensitive characteristics such as wetlands, floodplains, threatened or endangered species, and historical sites. Agency consensus is that environmentally sensitive characteristics are not expected to be adversely impacted as a result of the proposed project. Public participation during the planning process demonstrated support for the selected alternative. No significant long-term environmental impacts have been identified.

2. PURPOSE AND NEED FOR ACTION

The Town of Manhattan, through its May 2000 Preliminary Engineering Report (PER), and subsequent February 2004 and July 2005 PER amendments, has identified the need to upgrade its wastewater treatment and collection systems. Due to seasonally high ground water, the Town's wastewater collection system has historically been subject to high inflow and infiltration (I/I). This excessive I/I has reduced not only the sewage carrying capacity of the Town's collection system, but also the treatment capacity of the Town's wastewater lagoons. Due to hydraulic and organic overloading, excessive sludge buildup, and treatment limitations of facultative lagoon systems, the Town has experienced numerous effluent violations of its Montana Pollutant Discharge Elimination System (MPDES) permit. In addition to effluent violations, excessive leakage from the Town's lagoons has been considered an un-permitted discharge. As such, a compliance schedule has been incorporated into the town's renewed MPDES permit. This compliance schedule requires completion of construction and/or repair of a treatment works capable of meeting permit requirements by no later than August 31, 2006 (note: the Town has requested an extension to this deadline). Therefore, the purpose of the proposed project is to remedy the existing collection and treatment system deficiencies of the current wastewater system.

3. EXISTING WASTEWATER TREATMENT PLANT

The existing wastewater treatment facility consists of a two-cell facultative lagoon constructed in the early 1960's. Each cell has a surface area of 5.6 acres with a design operating depth of 5 feet with 3 feet of freeboard. The cells are not lined and leakage out of the lagoons is dramatic enough to visibly detect. Sludge was removed from both cells in 2001, which has further exacerbated the leakage problem. Because of excessive I/I, it is likely that there is not adequate sewage treatment due to hydraulic overloading and decreased detention time. Discharge of the treated wastewater is to Dita Ditch, which flows about two and one-half miles to the Gallatin River. The present wastewater system has 701 sewer connections with no significant commercial or industrial users.

4. PROJECT DESCRIPTION: CONSTRUCTION OF AN AERATION WHEEL TREATMENT FACILITY WITH DISCHARGE TO DITA DITCH.

The proposed project includes the construction of an aeration wheel treatment facility (See Figure 2). This treatment facility will include a mechanical screen; influent, effluent, return and waste sludge flow meters; two trains of aeration wheel reactors; two secondary clarifiers; an ultraviolet disinfection unit; an aerobic digester; a container filter; and a building to house blowers, pumps, lab equipment, and office space. It should be noted that the configuration of the facility may vary slightly from that listed above. Final layout will be determined in the design phase of the project.

Current wastewater flows for the Town of Manhattan are about 338,000 gallons per day (gpd). The treatment system will be sized to accommodate moderate growth with an average daily design flow of 371,000 gpd, but will be expandable to accommodate the full growth of 5,965 persons with an average daily design flow of 696,500 gpd anticipated with the new development when the need for expansion arises. Based on moderate growth, the design population for the treatment facility is expected to increase from about 1,380 to 2,710 persons during the 20-year planning period. Although the population is expected to nearly double, the wastewater flows are not anticipated to increase proportionately. This design assumption is based on the Town's plan to continue to aggressively pursue collection system improvements in order to decrease the amount of I/I in the system.

5. BACKGROUND

Manhattan has an estimated population of 1,380 residents with 701 sewer connections. Collection lines range in size from 8-12 inches and are a combination of vitrified clay, asbestos cement, and PVC. In 1978, approximately 5,200 feet (14%) of old collection lines were replaced with 8, 10, and 12-inch PVC; the 15-inch outfall line to the lagoon was slip-lined with 12-inch polyethylene pipe; and four manholes were replaced. Due to relatively flat slopes, heavy maintenance and cleaning is required for several of the collection lines in the Town. Television inspection of the collection system was conducted in March of 2000 and revealed that there are still several problem areas in town. Existing collection system deficiencies have been documented as follows:

- (1) High groundwater infiltrates into the deteriorated collection lines;
- (2) Gaps exist in pipe joints;
- (3) Severe root intrusions exist;
- (4) Manholes are deteriorated;
- (5) Abandoned flush tanks still remain in the collection lines; and
- (6) High maintenance requirements are associated with line plugging.

In the last five years, the Town has replaced more than 8,000 linear feet of gravity sewer in an effort to reduce infiltration into the system. These construction projects were identified in the May 2000 PER and original Environmental Assessment (EA). Ongoing I/I investigations have isolated 53-127 gallons per minute in a 4-block alley section

located between Second and Third Streets and Fifth and Sixth Streets. The Town plans to address these problem areas through continued collection system rehabilitation projects.

The original wastewater system was constructed in 1916 and consisted of a small gravity collection system, a septic tank of unknown size and a surface water discharge, which eventually reached the Gallatin River. Not much is known about the system between 1916 and the early 1960's, which is when the collection system was significantly expanded and the facultative lagoon system was constructed. An upgrade to the wastewater treatment system was completed in 1985, consisting of collection system rehabilitation, lagoon piping modifications to prevent short-circuiting, and valve replacement.

Problems associated with the existing wastewater treatment system include the following:

- (1) Violations of the existing MPDES discharge permit;
- (2) Excessive lagoon leakage;
- (3) Inadequate sewage treatment due to hydraulic overloading;
- (4) Inadequate sewage treatment due to organic overloading;
- (5) Inability of current system to remove nutrients, including ammonia; and
- (6) Inability of current system to accommodate expected growth in and around Manhattan.

The Town of Manhattan, through its May 2000 PER, evaluated six alternatives for upgrading its wastewater collection and treatment systems. The selected alternative from the May 2000 PER recommended replacement of the problem areas of the collection system, rehabilitation of some of the problem manholes, and modification of the existing facultative lagoon system to an aerated lagoon system with supplemental spray irrigation. This selected alternative required the purchase of an additional eight acres of land for the aeration cells and leasing of an additional 60 acres of adjacent land for spray irrigation of the effluent from April through October. In the past five years, the Town has completed significant portions of the collection system upgrades.

However, since the completion and approval of the May 2000 PER and subsequent publication of the original EA and Finding of No Significant Impact (FONSI) in July of 2000, the Town of Manhattan received notification from the Montana Department of Environmental Quality (DEQ) of policy changes regarding ammonia effluent limitations in the town's MPDES permit, which invalidated the selected alternative for wastewater treatment. In response to these policy changes, the DEQ performed a Use Attainability Analysis (UAA) of the receiving stream into which the Manhattan wastewater treatment system discharges. This 'stream' consists of a series of natural and manmade channels, which eventually discharge into the Gallatin River. The UAA indicated that approximately one and a half miles of the two and a half mile receiving stream (Dita Ditch) supports coldwater fisheries and associated aquatic life and is, therefore, classified as a B-1 stream using Montana's stream classification system. The upper one-mile of the receiving stream is ephemeral in nature and does not support sustainable aquatic life. The result of the findings in the UAA is that water quality standards (B-1) must be

protected in the receiving stream downstream from the Nixon Bridge Road. The Town's previously granted mixing zone was therefore modified to reflect the anticipated uses of the receiving waters. The water quality standard of particular interest in this case is the ammonia toxicity standard, which can be very difficult for lagoon-type wastewater treatment systems to meet on a year-round basis.

In addition, a couple of other complications have arisen since the publication of the original EA and FONSI. The first is that measurement of the existing wastewater flows showed that the flows are significantly higher than anticipated. The higher flow values can affect the sizing and cost of the treatment system. The second issue that surfaced is the proposed development of four large subdivisions in the area to the north, west and east of Manhattan. If the subdivisions are built as currently planned, they would more than double the population of Manhattan. It is envisioned that the subdivisions would hook up to Manhattan's infrastructure, thus significantly affecting the design of the wastewater treatment system. Montana's nondegradation law and rules effectively limit the mass of pollutants that can be discharged to state waters to what was approved in April 1993. In Manhattan's case, this means that if the Town grows considerably, it will need to remove more nitrogen and phosphorous from its wastewater discharge to continue to meet its load limits.

Because of the fact that treatment to meet ammonia toxicity standards in the receiving stream essentially precludes lagoon treatment and because of the higher flow projections and the new proposed subdivisions, Manhattan decided to once again look at treatment and disposal options in an amendment to its May 2000 PER. This amendment was prepared by Stahly Engineering and Associates and was finished in February 2004. This February 2004 PER evaluated five alternatives for treatment. The amendment recommends construction of a mechanical wastewater treatment facility utilizing aeration wheels, which is capable of phosphorus and nitrogen removal, including ammonia removal.

Under the February 2004 PER Amendment, the proposed treatment system was to be constructed within the footprint of one of the existing facultative lagoon cells, located north of Manhattan, on land currently owned by the Town. However, due to site constraints at the existing facultative lagoon facility, the Town of Manhattan investigated options for moving the proposed treatment plant site. In July 2005, Stahly Engineering and Associates prepared a second amendment to the PER that outlines the reasons for considering a new site. The primary issue driving relocation of the site is the elimination of lift stations in the areas that new developments are likely to occur. These developments include Pioneer Village, Centennial Crossing, and the Manhattan Meadows Subdivisions located north and west of Manhattan. Several additional subdivisions are also being proposed; however, these subdivisions are still in the preliminary planning stages.

Options for the new site were limited by the following constraints: the new site had to be lower in elevation than the existing lagoon site; the site had to remain along the existing discharge ditch (Dita Ditch); and the site had to remain out of the floodplain or other

environmentally sensitive areas. Only three sites were available that met these constraints. These three sites included Bos Dairy, the Town's landfill, and property owned by Manhattan Meadows Living, LLC. Bos Dairy was eliminated as a possible site because it would require wetland mitigation and storm drainage management due to its location at the bottom of a drainage, and also because there is an area of buried debris from the demolition of the old Manhattan School in this area. The landfill owned by the Town of Manhattan was also eliminated from consideration because there is no portion of remaining undisturbed ground that is large enough for the proposed wastewater treatment plant. The third site, Manhattan Meadows, LLC, is located further down the drainage from Bos Dairy. This property is currently a hay field that was recently purchased for development. The owner has expressed a willingness to exchange the required land for a 5-acre parcel adjacent to the Town's existing wastewater lagoons.

The Manhattan Meadows, LLC site has several advantages over the existing lagoon site. It has a lower inflow elevation, thus allowing access to treatment without lift stations for a larger area. It has lower groundwater elevations, thus eliminating groundwater construction constraints. And it also eliminates conflicts with utilizing the existing lagoons during construction of the new mechanical treatment plant. For that reason, a land exchange agreement with the property owner was executed in April of 2005. The new location of the proposed wastewater treatment facility is shown in Figure 3. The Town has requested that their MPDES permit be modified to reflect this new discharge location.

6. ALTERNATIVES INCLUDING THE PROPOSED ACTION

Five alternatives for addressing the District's wastewater treatment facilities upgrades and expansions were addressed in the February 2004 PER Amendment.

Alternatives 1 through 4 would be designed for a population of 2,710 persons and an average daily flow of 371,000 gpd. Treated effluent would be discharged into Dita Ditch. Components common to these alternatives include a mechanical screening unit; a grit removal unit; a building to house blowers, sludge pumps, etc.; ultra-violet (UV) disinfection; and influent and effluent flow measurement devices.

It should be noted that several lagoon-based options were evaluated in a separate document, WWTP Alternative Review for Manhattan, Montana, prepared in April, 2004, by Thomas, Dean and Hoskins, Inc. It was decided by the Town that the mechanical treatment systems had greater advantage in the long term than lagoon systems due to the smaller footprint and subsequent smaller land requirement, greater flexibility, and more reliable nutrient removal capabilities. Further analysis of lagoon treatment systems will not be discussed further in this assessment.

Another option that was briefly discussed in the February 2004 PER Amendment was the concept of piping the effluent two and a half miles to the Gallatin River in order to have more dilution in the larger receiving stream, thus possibly minimizing the requirement for ammonia removal. It was determined that, at the higher projected wastewater flows,

there would be no appreciable gain by piping to the river. At the higher flow rates, effluent limits would be governed by the nondegradation rules, which would most likely require some sort of nutrient removal anyway at these higher flow rates.

6.1 ALTERNATIVE 1 - CONSTRUCTION OF A HYBRID LAGOON SYSTEM

This alternative consists of constructing a single reaction basin using a portion of the existing lagoon embankment, two final clarifiers that are built into one end of the basin, alum container and injection system, polymer storage and injection system, and a rotary drum sludge thickener. Mixing and aeration of the reaction basin are provided by diffusers that hang from slowly moving air laterals on the water surface. In this alternative, the waste activated sludge would be thickened with a rotary drum thickener and then placed in an aerated sludge-holding pond. Sludge would be periodically pumped from the pond to the sludge drying beds or container filter for dewatering. After the sludge has been adequately dewatered, it would be either land applied to agricultural land at agronomic rates or disposed of in a licensed landfill. This alternative was not selected because of the cost for chemical addition (alum), which is necessary for phosphorous removal; the significant additional sludge produced from the addition of alum; and the relatively high capital and operation and maintenance (O&M) costs compared to other alternatives.

6.2 ALTERNATIVE 2 - CONSTRUCTION OF AN OXIDATION DITCH WITH AN ANAEROBIC SELECTOR FOR BIOLOGICAL NUTRIENT REMOVAL

This alternative consists of the construction of one or two oxidation ditch reactors, two secondary clarifiers, two aerobic digesters, and either sludge drying beds or a container filter dewatering apparatus. The reactors contain different zones for biological removal of carbon, nitrogen, and phosphorous. Waste sludge would be digested, dewatered or dried, and then sent to a landfill for disposal. Treated effluent would be disinfected with UV radiation and discharged to Dita Ditch. This alternative was not selected due to its high capital and O&M costs.

6.3 ALTERNATIVE 3 - CONSTRUCTION OF A SEQUENCING BATCH REACTOR

This alternative includes the construction of two sequencing batch reactors (SBRs), an equalization basin, two aerobic digesters, and either sludge drying beds or a container filter dewatering apparatus. Waste sludge would be digested, dewatered or dried, and then sent to a landfill for disposal. Treated effluent would be disinfected with UV radiation and discharged to Dita Ditch. Although this alternative is very comparable in cost to the selected alternative, it was not selected due to the requirement for more operator time and attention, its reliance on a higher degree of automation, and its relatively short hydraulic detention time may make it more vulnerable to upsets.

6.4 ALTERNATIVE 4 - CONSTRUCTION OF AERATION WHEEL TREATMENT FACILITY

This alternative includes the construction of two aeration wheel reactors and clarifier trains, two aerobic digesters, and either sludge drying beds or a container filter for dewatering the sludge. Waste sludge would be digested, dewatered or dried, and then sent to a landfill for disposal. Treated effluent would be disinfected with UV radiation

and discharged to Dita Ditch. This is the selected alternative based on a uniform cost comparison, lower power costs, ease of operation and maintenance, and expandability for future growth.

6.5 ALTERNATIVE 5 - NO ACTION ALTERNATIVE.

This alternative would leave the wastewater treatment system as is, with no improvements. The system would remain hydraulically and organically overloaded and the lagoons would continue to leak into the local, shallow groundwater. The system would continue to experience MPDES discharge permit violations that could lead to DEQ enforcement actions and fines. This alternative was not selected due to the existing problems with the system and the potential situation that the Town might have to put a moratorium on any future development within town.

7. ALTERNATIVE COMPARISONS

7.1 COST COMPARISON FOR TREATMENT ALTERNATIVES: ANNUAL EQUIVALENT COST ANALYSIS

The annual equivalent cost analysis is a means of comparing alternatives by converting capital, O&M, and salvage values into annual costs. Interest rate for amortizing construction cost over a 20-year period is 6% annually. The salvage value is based on straight-line depreciation of concrete, buildings, piping and earthwork at 20 years after construction. These items are projected to have a 50-year design life. The analysis is used to determine the most cost-effective alternative. Table 1 provides a summary of the annual equivalent cost analysis of the wastewater treatment project alternatives.

Based on the cost analysis shown in Table 1, Alternative 4 (the Aeration Wheel Treatment Facility) has the lowest annual cost and is the most cost effective alternative considering both capital and O&M costs. However, given the preliminary nature of these cost estimates, it should be noted that Alternative 3 (SBR) is essentially the same equivalent cost as Alternative 4.

TABLE 1

ITEM	ALT 1	ALT 2	ALT 3	ALT 4
	Biolac	Oxidation Ditch	SBR	Aeration Wheel
Capital Costs	\$2,898,344	\$2,967,810	\$2,724,940	\$2,952,410
Annual O&M Costs	\$156,611	\$161,164	\$146,961	\$124,140
Salvage Values	\$984,600	\$1,014,000	\$921,600	\$970,800
ANNUAL EQUIVALENT COST	\$323,460	\$331,506	\$304,184	\$296,906

7.2 BASIS OF SELECTION OF THE PREFERRED ALTERNATIVE

Selection of the preferred alternative was based upon several criteria, both monetary and non-monetary. Ranking criteria are weighted in terms of relative importance as shown in Table 2.

TABLE 2

	Weight Factor	ALT 1 Biolac Rank*/Score		ALT 2 Ox. Ditch Rank*/Score		ALT 3 SBR Rank*/Score		ALT 4 Aeration Wheel Rank*/Score	
Construction Cost	2.0	8	16.0	8	16.0	10	20.0	9	18.0
O&M Cost	1.5	7	10.5	7	10.5	8	12.0	10	15.0
Treatment Effectiveness	2.0	7	14.0	10	20.0	10	20.0	9	18.0
Equipment Reliability	1.0	7	7.0	10	10.0	8	8.0	10	10.0
Operational Ease	1.0	8	8.0	10	10.0	8	8.0	10	10.0
Ability to be Expanded	1.5	6	9.0	7	10.5	10	15.0	9	13.5
Energy Use	1.0	6	6.0	7	7.0	7	7.0	10	10.0
TOTALS		70.5		84.0		90.0		94.5	

*Rank is rated between 1 and 10

Based upon the cost analyses and non-monetary concerns as shown in Table 2, Alternative 4, the Aeration Wheel Treatment Facility, is the recommended alternative. This alternative is most favorable for the following reasons:

- Capital costs are reasonably low.
- The O&M costs are the lowest of the alternatives.
- It is capable of meeting permit limits now and in the future.
- This alternative is relatively easy to operate and reliable.
- It is easily expandable.
- Energy use is low relative to other alternatives.

7.3 COMPARISON OF ENVIRONMENTAL IMPACTS

All of the treatment alternatives evaluated should have positive environmental impacts with regard to water quality. As shown in Table 2, the energy use of the alternatives will vary to some degree, but all alternatives will require more energy than the current facility. Because all of the alternatives will employ the use of mechanical motors and/or blowers, there is expected to be an increase in the noise level at the facility, but no difference

between alternatives. None of the alternatives will require more land. There should be no significant impacts to cultural resources, air quality, wetlands, vegetation, wildlife, or transportation from any of the alternatives and there should be no difference in impacts between the alternatives.

7.4 SELECTED ALTERNATIVE

As described above, Alternative 4, the Aeration Wheel Treatment Facility, is the recommended alternative for the Town of Manhattan. A tentative schedule of milestone dates for the proposed project are as follows:

Plans and Specifications	July 1 – Nov. 15, 2005
DEQ Review	Aug. 22 – Nov. 15, 2005
Bidding and Award of Contract	Nov. 15 – Jan. 30, 2006
Construction	Feb. 1 – Sept. 30, 2006
Project Close Out	Sept. 30 – Dec. 31, 2006

Design criteria for the proposed project are:

Design year	2025
Design population	2,710
Design average daily flow, gallons per day (gpd)	371,000
Design peak day flow, gpd	606,500
Design peak hourly flow, gpd	1,143,400

The estimated project budget, as outlined in the July 2005 PER Amendment, is \$4,223,263 as shown in Table 3 below.

TABLE 3

ESTIMATED PHASE II IMPROVEMENTS COSTS	
ITEM	ESTIMATED COSTS
Preliminary Geotechnical / I&I	\$10,500
Monitoring Sewage Flow	\$2,190
Monitoring Stream Flow	\$4,000
Land Acquisition	\$85,000
Facility Plan Amendment	\$16,125
Engineering Design	\$254,500
Engineering Inspection	\$113,000
Construction	\$3,194,360
O&M Manual	\$15,000
Administration	\$11,207
Misc. (Legal, Audit)	\$12,863
SUBTOTAL	\$3,718,745
Contingency (10%)	\$356,755
SUBTOTAL	\$4,075,500
Financial Costs	\$19,025
SUBTOTAL	\$4,094,525
Reserve	\$128,738
TOTAL ESTIMATED COSTS	\$4,223,263

Funding sources for the project are shown in Table 4 below.

TABLE 4

Funding Source	Dollar amount	Percent of Total
Community Development Block Grant (federal grant)	\$500,000	11.8%
Treasure State Endowment Program (state grant)	\$418,435	9.9%
DNRC Renewable Resources Grant (state grant)	\$109,322	2.6%
EPA State and Tribal Assistance Grant (federal grant)	\$337,500	8%
Montana WPCSRF Loan	\$1,416,121	33.5%
COE Water Resources Development Act (federal grant)	\$1,300,000	30.8%
Manhattan Reserve	\$141,885	3.4%
TOTAL	\$4,223,263	100%

The Town of Manhattan has obtained grants from the DNRC Renewal Resources Grant and Loan program, the Community Development Block Grant program, the Treasure State Endowment Program, the EPA State and Tribal Assistance Grants program, and U.S. Army Corp of Engineers Water Resources Development Act grant program. The remaining cost of the project will be funded using the town's reserve and a low-interest loan from the Water Pollution Control State Revolving Fund loan program. Sewer rates will be approximately \$45.20/month. The economic impacts of the proposed project on the current ratepayers of the city are summarized in Table 5.

TABLE 5

	Current	Projected
Annual O&M Costs	\$118,436	\$219,000
Annual Debt Service, including coverage	\$65,213	\$192,597
Total Annual Costs	\$183,649	\$411,597
Total System Annual Revenue	\$259,099	\$417,648
Total System Equivalent Dwelling Units	752	770
Total Residential Equivalent Dwelling Units	700	711
Average Monthly Residential User Rate	\$30.20	\$45.20
Total Annual Residential Revenue	\$253,680	\$385,646
Percent of Total Annual Revenue from Residential	93%	92%

8. AFFECTED ENVIRONMENT

Wastewater services for the town of Manhattan are provided within the town boundary (shown in Figure 4), and also include Woodenshoe Lane, which is part of the planning area (shown in Figure 5). The community is located about 2 miles south of the Gallatin River in a mostly rural farming area. The town was legally incorporated on May 22, 1911, and in 1916 a basic wastewater treatment system was constructed. The present wastewater system has 701 sewer connections with no significant commercial or industrial users. The town's economy is based mostly on agriculture. The service area for wastewater system improvements for the 20-year planning period includes the incorporated town and adjacent areas likely to be developed during the project planning period (see Figure 6).

8.1 CLIMATE

Average annual precipitation is 13-15 inches and the average annual temperature is 42° F. There are 95-115 frost-free days and freezes can arrive as early as the last week of August or as late as the end of September.

8.2 GEOLOGY/TOPOGRAPHY

Much of the area in the immediate vicinity of Manhattan is valley land with low, rolling hills. Interstate 90 runs just south of town and it is a major route for both locals and tourists. Manhattan is located in the central part of the Gallatin Valley, a broad, intermontane valley. The elevation is 4,250 feet above sea level. The geotechnical evaluation performed at the proposed site indicates a subsurface profile of silty gravel with sand, indicating the presence of alluvium and decomposed bedrock.

8.3 AIR QUALITY/NOISE

The air quality program in Montana is managed by the Montana Department of Environmental Quality, Air Resource Management Bureau. Their goal is to achieve and maintain reasonable levels of air quality to protect human health, safety, and welfare and to meet the National Ambient Air Quality Standards (NAAQS) through the Clean Air Act. Monitoring is done in areas of potentially high levels of particulate matter, ozone, sulfur dioxide, nitrogen dioxide, lead, and carbon monoxide, as listed in the NAAQS. Air pollution that exceeds the standards causes public health hazards, nuisance, annoyance damage to buildings, property, animals, plants, forests, crops, exposed metals and may interfere with the enjoyment of life or property.

The nearest air quality monitoring station is in Belgrade, 10 miles downwind from the town of Manhattan. Recordings at Belgrade are below the standards of concern for particulate matter.

8.4 WATER RESOURCES

The Montana Pollutant Discharge Elimination System (MPDES) is managed by the Montana Department of Environmental Quality, Water Protection Bureau. The DEQ issues MPDES permits to point sources that discharge into state waters. These permits contain effluent limitations and requirements for sampling and reporting of discharges. The effluent limitations incorporate both technology-based and water-quality based limitations. The water quality based limitations are designed to protect the water quality standards of the receiving streams. These standard are designed to support specific designated uses such as coldwater fisheries, drinking water sources, and/or recreational activities.

For the Town of Manhattan, the receiving stream, Dita Ditch, is classified as a B-1 waterbody. Waters classified B-1 are to be maintained suitable for drinking, culinary and food processing purposes, after conventional treatment; bathing, swimming and recreation; growth and propagation of salmonid fishes and associated aquatic life, waterfowl and furbearers; and agricultural and industrial water supply.

8.4.1 Wetlands

The presence of the Gallatin River and Baker and Camp creeks, as well as high groundwater levels, make wetlands common in the low-lying and drainage areas north of the Manhattan area near the rivers. Wetlands are present within the drainage area proximal to the project location.

8.4.2 Surface Waters

Major surface water features in the vicinity include the West and East Forks of the Gallatin River, which join approximately two and one-half miles north of Manhattan. The smaller streams, Baker and Camp Creeks, located west of Manhattan, flow northward into the West Fork of the Gallatin River. Additionally, many sloughs are located along the roadways and abandoned railroad grades and irrigation canals are found throughout the area.

8.4.3 Ground Water

The water table in the Manhattan area has a minimum depth of less than 10 feet and typically is not greater than 35 feet in depth. Groundwater is recharged in the upland areas by percolation of snowmelt, rainfall and irrigation waters into the valley till. It is also recharged near the side of the valley by water lost from streams where they flow onto valley till from the surrounding mountains and some water enters the bottom of the valley till deposits by upward movement of groundwater along fractures in the older rocks below. Sources of groundwater also include seepage from irrigation canals and associated irrigation from the West Fork of the Gallatin River along with Baker and Camp Creeks.

8.4.4 Floodplain

The proposed facility is located approximately ½ mile south of the mapped 100-year floodplain.

8.5 SOCIOECONOMICS

The entire Gallatin Valley has experienced rapid growth in the past two decades and Manhattan is a desirable place to live due to its rural nature and close proximity to Bozeman. Detailed census data for 1990 indicated that 1,034 people resided in the Town of Manhattan. As of July 1996, the Census and Economic Information Center of the Montana Department of Commerce estimated a population of 1,380. Population projections for the twenty-year planning period are based upon input from the Manhattan Steering Committee, historical population data, U.S. Census of Population data, the Manhattan Planning Board recommendations, the 1998 Town of Manhattan Master Plan Update, and recommendations from the Town's contracted planner. According to the Department of Commerce population data, the historical growth over the past decade is approximately 3% per year. This is similar to the projected growth rate of 45% per decade over the 20-year planning period. The Town's economy is based mostly on agriculture.

8.6 LAND USE

Land use within the Town of Manhattan limits is dominated by residential homes (451 homes and 52 multi-family) with some non-residential users (48 commercial, 11 commercial/residential, 52 manufacture/modular, and 14 other). In addition, there are 67 users along Woodenshoe Lane that are located outside of the Town limits but receive wastewater services.

Land use in the immediate vicinity surrounding the Manhattan town boundaries is agricultural, light industry and commerce, residential, and recreational in nature. Agricultural uses include irrigated pastures and croplands, feedlots and dairy operations. Land use within the planning area is expected to change significantly in the future. Four large subdivisions in the area to the north, west and east of Manhattan have been proposed. The proposed wastewater treatment facility would offer treatment of the residential wastewater generated from these proposed subdivisions.

8.7 CULTURAL RESOURCES

The Montana State Historic Preservation Office (SHPO) responded to a request for information comments regarding the proposed project in a letter dated May 13, 2005. According to their records, there have been no previously recorded historic or archaeological sites within the designated search locales. SHPO felt that there is a low likelihood cultural properties will be impacted from this project and, as such, felt a cultural resource inventory is unwarranted at this time. However, if cultural materials are inadvertently discovered during the project, SHPO asked that their office be contacted and the site investigated

8.8 THREATENED AND ENDANGERED SPECIES

A letter, dated May 27, 2005, was sent to the U.S. Fish and Wildlife Service (USFWS) requesting information and comments regarding the proposed project. The USFWS responded with a letter, dated June 10, 2005, stating that the USFWS does not anticipate adverse impacts to any federally listed threatened, endangered, candidate or proposed species. Therefore, listed threatened and endangered species is not discussed further in this document.

8.9 FISH AND WILDLIFE

The Gallatin River, Baker and Camp Creeks, and unnamed tributaries contain a variety of game and non-game fish. The primary game fish species include rainbow trout, brown trout, and mountain whitefish. There are also brook trout and cutthroat trout in smaller numbers. Non-game fish include the mottled sculpin, longnose dace, white sucker, and longnose sucker. These waters are destination areas for fisherman because of the high quality of fishing.

A variety of wildlife is present in and around the Manhattan area because of its close proximity to the Gallatin River. Whitetail deer are the most abundant of the 30-40 species of mammals present. Other mammals present include the shrew, deer mouse, meadow mouse, raccoon, skunk, red fox, and coyote. Common reptile species include the western terrestrial garter snake and boreal toad.

Bird species are also abundant in the area. Of the 144 neotropical bird species, 98 (68%) occur in the riparian habitats surrounding Manhattan. Canadian geese are abundant year-round, both as migrants and residents. The bald eagle is present year-round, but no breeding pairs are known to reside in the vicinity. The peregrine falcon is a spring and fall migrant, as are a variety of waterfowl. Great Horned owls and osprey nest in the area also.

8.10 VEGETATION

The proposed project would occur on an old hay field that was recently purchased for development. No native vegetation occurs within the proposed project area.

Native vegetation within the Manhattan area has generally been altered for agricultural purposes. The exception is within the Gallatin River riparian areas. Lands used for grain production have been cultivated for barley and wheat. Permanent pasturelands have been seeded with smooth brome, wheatgrasses, foxtail and introduced grasses and forbs. Vegetation has been severely impacted in areas occupied by feedlots and dairy operation, east and north of the current sewage lagoons.

8.11 SOILS/PRIME FARMLAND

Prime farmlands exist within much of the area surrounding Manhattan provided that adequate irrigation is available eight out of ten years. Some residential development also exists in the immediate vicinity of Manhattan. A majority of the lands in the locale have been disturbed by cultivation. Some lands have been placed into cultivation, others permanent pasture, while some have been converted into feedlots and dairy operations.

An inquiry was made to the Natural Resource Conservation Service regarding the proposed project. The NRCS responded with a letter dated June 3, 2005 that stated that all of the soils in the project area have an "important farmland classification", to include farmland of local importance, statewide importance, and prime farmland if irrigated. These soils are described as Amesha Cobbly Loam, 2 to 8 percent slopes, Amesha Loam, 4 to 8 percent slopes, and Amesha Loam, 0 to 4 percent slopes.

9. ENVIRONMENTAL CONSEQUENCES

9.1 CLIMATE

Due to the magnitude of the proposed project, it is not likely to adversely affect the climate of the area.

9.2 GEOLOGY/TOPOGRAPHY

The proposed project would slightly alter the topography in the area, but not to an extent that would be considered noticeable. Therefore, the proposed project is not likely to adversely affect the geology/physiography of this region.

9.3 AIR QUALITY/NOISE

Short-term negative impacts on the air quality will occur from heavy equipment dust and exhaust fumes during project construction. Proper construction practices and dust abatement measures will be taken during construction to control dust, thus minimizing this problem. As with all mechanical wastewater treatment systems, odors will be generated and may be detectable in areas proximal to the facility. However, this odor should be minimized if proper O&M practices are followed.

Short-term impacts from excessive noise levels may occur during construction of the proposed project improvements. Construction activities are anticipated to last approximately seven months during the winter of 2005 and the spring of 2006. Construction will occur only during normal working hours. The operation of the wastewater treatment facilities will produce some noise associated with the mechanical equipment (blowers, pumps, motors, etc.).

9.4 WATER RESOURCES

9.4.1 Wetlands

Wetlands are present within the drainage area proximal to the project location. However, no wetlands are present at the proposed project location and as such, will not be impacted by the construction of a new wastewater treatment facility. There may be impacts to wetlands, however, associated with growth in and around the community as a result of this project. Before dredged or fill material can be discharged or placed into waters of the United States, including wetlands, a 404 permit must first be obtained from the U.S. Army Corps of Engineers. Before issuing this permit, any potential, future impacts to wetlands will be addressed.

9.4.2 Surface Waters

The existing and proposed wastewater treatment facility will discharge to surface water (Dita Ditch to the Gallatin River). The proposed site is located away from any year round surface water sources and no impacts to surface water are anticipated during construction, as erosion control measures will be utilized. Disturbed areas will be reseeded following work. The proposed improvements will reduce groundwater pollution thereby indirectly improving surface water quality.

9.4.3 Ground Water

The existing lagoon system has been documented to leak excessively, thus presenting a significant source of groundwater pollution and a public health risk. Consequently, the recommended wastewater system improvements would eliminate the existing groundwater pollution and public health risk thereby directly improving the groundwater in the immediate area.

9.4.4 Floodplain

As the proposed project is located outside of the 100-year floodplain, no impacts are anticipated and a floodplain development permit is not required.

9.5 SOCIOECONOMICS

This project will eliminate an existing lagoon that is presently leaking excessive amounts of marginally treated wastewater to groundwater and eventually to surface water resources. Local rural residents use groundwater in this area as their primary drinking water source. The new mechanical wastewater treatment system will treat wastewater to an acceptable level before being discharged to surface water. Threats to ground water will be eliminated, as the present facultative ponds will be de-commissioned once the new wastewater treatment facility is constructed. The older, problem portions of the

collection system that have high groundwater infiltration may be repaired or replaced as part of the project, thereby eliminating the threat to the public's health.

During construction of the proposed project, energy will be consumed causing a direct short-term impact on this resource. On a long-term basis, additional energy will be required due to the mechanical nature of this wastewater treatment facility. This additional energy demand cannot be avoided; however, it is relatively minimal relative to regional demands.

This project may result in increased growth in and around the community. Such growth can contribute to secondary impacts such as increased traffic, loss of agricultural land, increased demand on local governmental services, etc.

9.6 LAND USE

A developer recently purchased the land to be subdivided for residential use. Therefore, historical land use of the property would change from farming to urban. Land uses surrounding Manhattan would continue to be agricultural, light industry and commerce, residential, and recreational in nature.

The selected alternative will most likely affect the growth of the community, because the wastewater system improvements will be designed to allow treatment of additional wastewater from an increased population and service area. Collection system upgrades mostly utilize the existing pipeline trench in the affected streets. There would be no change in future land uses in the immediately affected area from existing collection system upgrades. However, new collection systems would be installed should the proposed subdivisions connect to the Town's wastewater system. In addition, the land use of the proposed subdivisions would also change from farming to urban.

9.7 CULTURAL RESOURCES

Although there are no cultural properties recorded in the vicinity of the proposed project, construction activities will be require immediate reporting to the State Historic Preservation Office should any artifacts be uncovered. Research by the State Historic Preservation Office noted that a cultural resource inventory is "unwarranted."

9.8 FISH AND WILDLIFE

The proposed project is not likely to adversely affect wildlife within or near the project area. Because the proposed project is located in a previously farmed area and is considered low quality habitat, fish and wildlife would not be adversely impacted by project implementation.

9.9 VEGETATION

Vegetation in the excavation areas would be affected; however, all of these species are common and plentiful in the area. After the project is complete, the area would be reseeded with native vegetation to replace what was lost. Therefore, the proposed project is not likely to adversely affect vegetation.

9.10 SOILS/PRIME FARMLAND

The proposed project will affect soils/prime farmland where excavation occurs. In addition, this project will likely result in increased growth in and around the community. As such, prime farmland may be lost by the proposed subdivisions. Currently, over 500 acres have been proposed to be subdivided.

9.11 CUMULATIVE EFFECTS

No significant adverse impacts are anticipated. Increased development in the area could ultimately result in increased nutrient loading to Dita Ditch. However, Montana's Nondegradation Law would limit this increased loading. Increased traffic in the area is also possible. Increasing the capacity of the wastewater treatment facility may allow for more growth in the planning area and may concentrate development nearer Manhattan as opposed to more sprawling development.

There are no significant commercial or industrial wastewater contributors to the Manhattan wastewater treatment facility. There are no known plans for significant economic development, such as mines, public facilities, manufacturing or commercial facilities that would significantly increase the population of Manhattan. However, there is one large development that has requested annexation, which consists of approximately 35 single-family lots and 14 business or light industrial lots. In addition, there are four large subdivisions planned for the area to the north, west and east of Manhattan. These developments are included in the population projections and the design wastewater flows.

Collection system upgrades mostly utilize the existing pipeline trench in the affected streets. There would be no change in future land uses in the immediately affected area from the existing collection system upgrades. However, should the proposed subdivisions connect to the Town's wastewater system, new collection systems would need to be installed. The land use in and around the proposed subdivisions would change from farming to urban.

10. PUBLIC PARTICIPATION

A high level of community involvement took place during the facility planning process. A steering committee consisting of a wide range of community members was formed to further involve the public. Five public meetings were held with the steering committee to discuss population projections, treatment alternatives, sewer rates, ways to stimulate community input, and provide review input to the engineers. In addition, the steering committee developed a community awareness fact sheet, which was distributed to all sewer users. The fact sheet explained the existing wastewater system deficiencies, gave notice that wastewater fees would be increased again for the second time in a year, and invited public participation and feed back. A community needs assessment relative to how the community would like to see development occur, what services need to be improved, and information on user rate increases was created to solicit community input.

In addition, several public meetings were held to discuss the proposed mechanical wastewater treatment facility alternatives and various plant locations. Surrounding

landowners directly adjacent to the plant were contacted and are generally in support of the new plant location. The community and the Town counsel are in agreement that an upgrade to the Town's wastewater treatment facility is necessary. Overall, there is public support for the proposed project.

11. AGENCIES CONSULTED

The following agencies have been contacted concerning the proposed construction of this project. Included is a summary of each agency's comments concerning any adverse environmental impacts that should be considered on the project.

The Montana Department of Fish, Wildlife and Parks (MFWP) reviewed the proposed project and had comments concerning the cumulative impacts on local waterways, but no major comments directed at the proposed facility. MFWP recommended avoiding any construction activity near surface waters that might destabilize the existing channel configurations, or disturb riparian or wetland vegetation. Additionally, MFWP recommended that actions be taken to prevent localized stream disturbances during actual construction. MFWP commented that drainage within and through the facility is critical to avoid increased sediment and other contaminants from entering waterways.

The Montana Historical Society's Historic Preservation Office (SHPO) considered the impacts of the proposed project on local historic sites and cultural resources. According to their records, there have been no previously recorded historic or archaeological sites within the designated search locales. SHPO felt that there is a low likelihood cultural properties will be impacted and, as such, felt a cultural resource inventory is unwarranted at this time. However, if cultural materials are inadvertently discovered during the project, SHPO asked that their office be contacted and the site investigated.

The Montana Department of Environmental Quality (DEQ) reviewed the proposed project and had comments concerning required water quality permits for construction related activities. In addition, the DEQ stated that the Town would be required to amend their wastewater discharge permit to reflect the proposed changes in the wastewater treatment facility and discharge location.

The USFWS reviewed the proposed project and commented that they did not anticipate adverse impacts to any federally listed threatened, endangered, candidate or proposed species. In addition, the USFWS stated that Corp of Engineers Section 404 permits may be required if wetlands are impacted by the project.

The NRCS reviewed the proposed project and determined that all of the soils in the proposed site have an "important farmland classification", to include farmland of local importance, statewide importance, and prime farmland if irrigated. If requested by the local landowner, this land qualifies for protection under the Farmland Protection Act.

The Department of the Army Corps of Engineers was contacted regarding the proposed project. The Corps of Engineers is responsible for administering Section 404 of the

Clean Water Act, which regulates the excavation or placement of dredged or fill material below the ordinary high water mark of our nation's rivers, streams, lakes or in wetlands. To date, no written comments have been received. Because WRDA grant money will be used for this project, the Corp of Engineers contributed to the development of this Environmental Assessment.

The Montana Department of Natural Resources and Conservation was contacted regarding the proposed project. To date, no written comments have been received.

12. APPLICABLE REGULATIONS AND PERMITTING AUTHORITIES

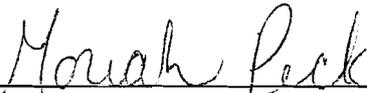
No additional permits will be required from the State Revolving Fund section of the DEQ for this project after review and approval of the submitted plans and specifications. However, coverage under the stormwater general discharge permit for construction activities is required from the DEQ Water Protection Bureau prior to the beginning of construction. Additionally, the Town's MPDES permit must be modified to reflect the new discharge location prior to putting the new system online. A construction dewatering permit from the DEQ Water Protection Bureau may also be required if ground water is encountered during construction of the new wastewater treatment plant and de-watering activities are necessary.

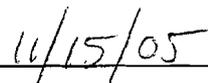
13. RECOMMENDATION FOR FURTHER ENVIRONMENTAL ANALYSIS

EIS More Detailed EA No Further Analysis

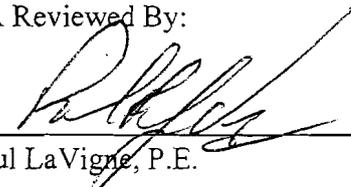
Rationale for Recommendation: Through this EA, the DEQ has made a preliminary determination that none of the adverse impacts of the proposed Manhattan wastewater treatment facility project are significant. Therefore, an environmental impact statement is not required. The environmental review was conducted 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 expected to be significant.

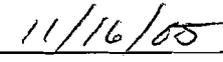
EA Prepared By:


Moriah Peck, E.I.T.


Date

EA Reviewed By:


Paul LaVigne, P.E.


Date

EA Approved By.

Todd Teegarden

Todd Teegarden, P.E.

11/15/05

Date

14. 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:

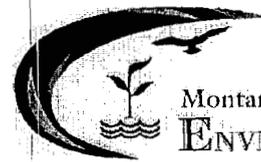
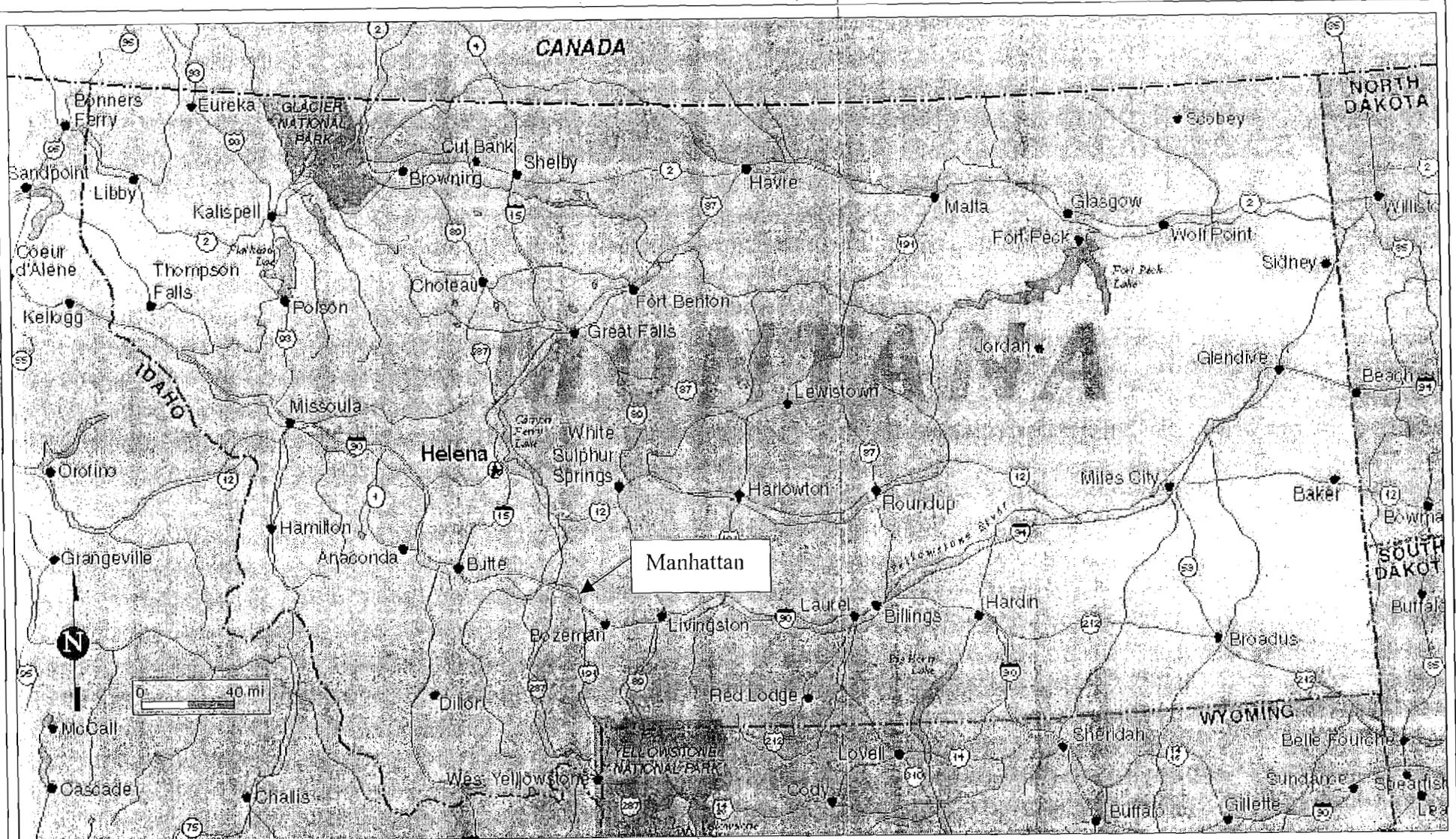
Wastewater Facility Plan (Preliminary Engineering Report) Town of Manhattan, May 2000, prepared by Stahly Engineering & Associates.

Amendment to Town of Manhattan May 2000 Wastewater Facility Plan (Preliminary Engineering Report), February 2004, prepared by Stahly Engineering & Associates.

Wastewater Treatment Plant Alternative Review for Manhattan, Montana, April 2004, prepared by Thomas, Dean, & Hoskins, Inc.

2nd Amendment to Town of Manhattan May 2000 Wastewater Facility Plan (Preliminary Engineering Report), July 2005, prepared by Stahly Engineering & Associates.

Uniform Application Form for Montana Public Facility Projects for the Manhattan Wastewater Treatment Facility Upgrade, August 2000 and subsequent updates, prepared by Stahly Engineering & Associates.



Montana Department of
ENVIRONMENTAL QUALITY

Figure 1. Site Location Map – Manhattan, MT

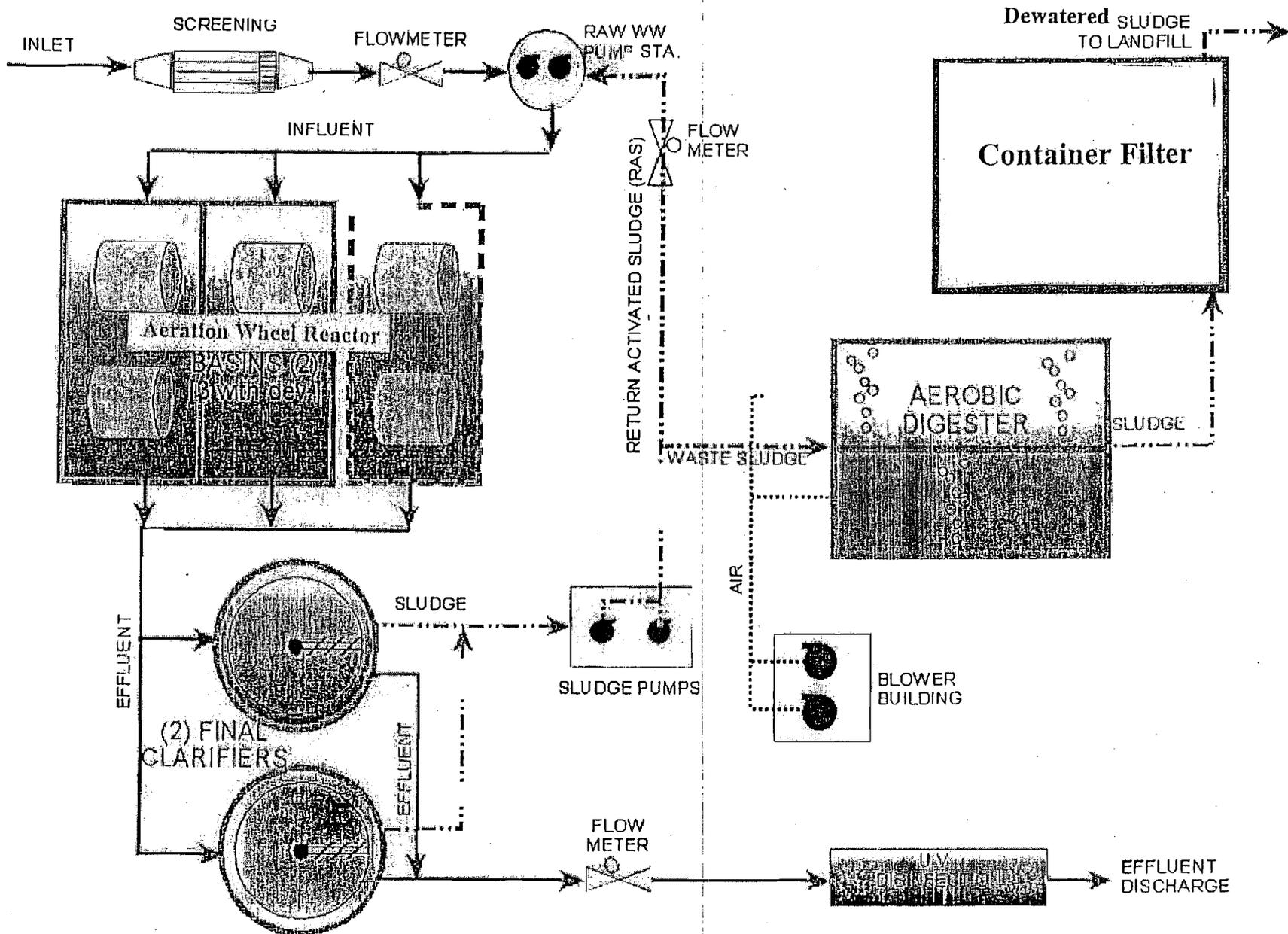


Figure 2. Aeration Wheel Treatment Plant Schematic

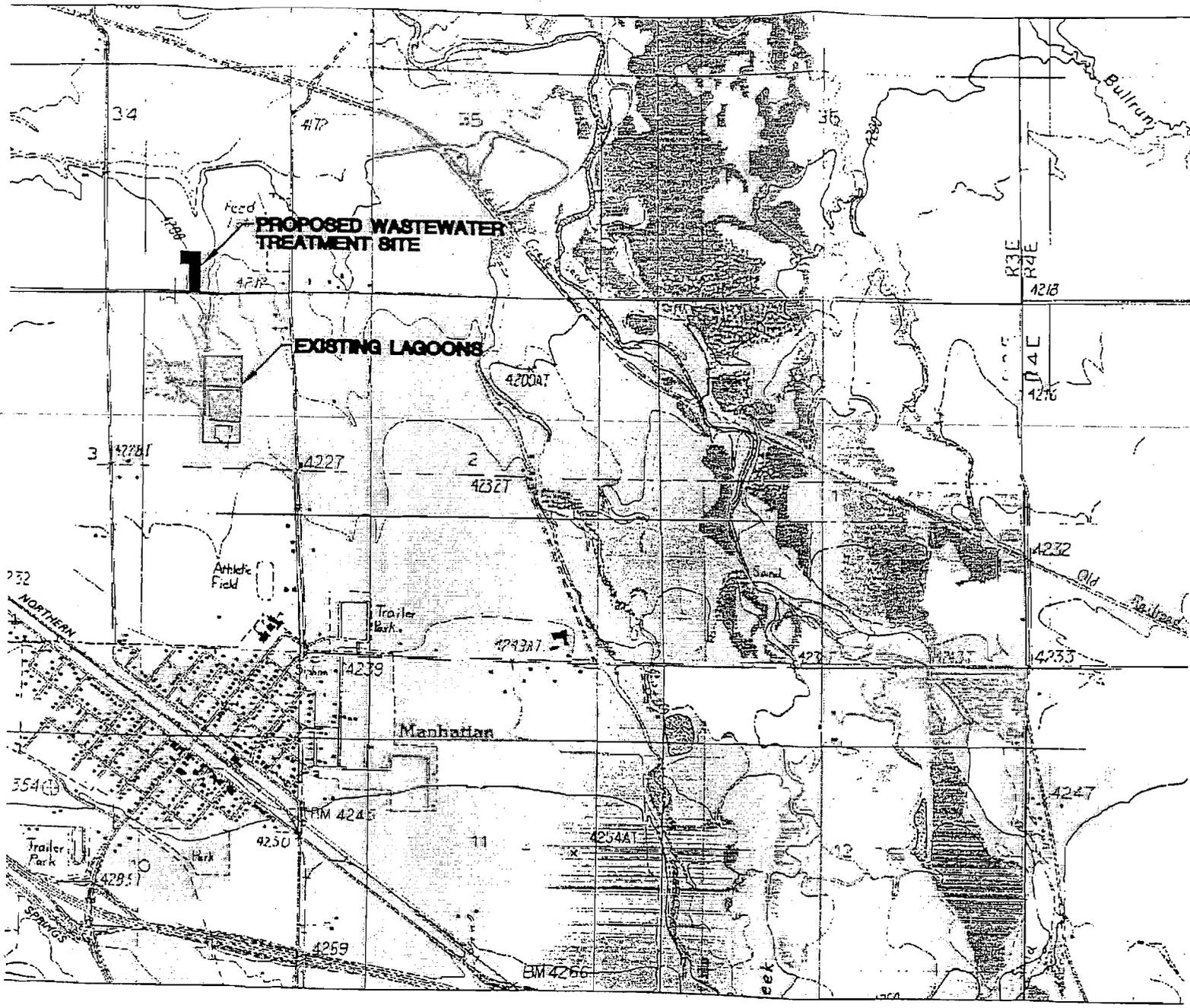


Figure 3. Treatment Plant Site

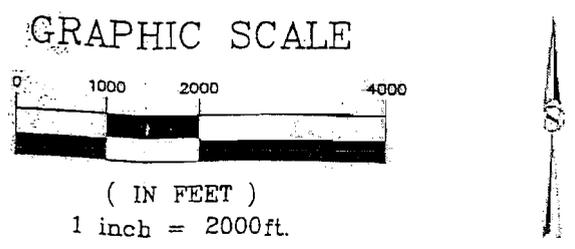


Figure 4. Town Boundary Map

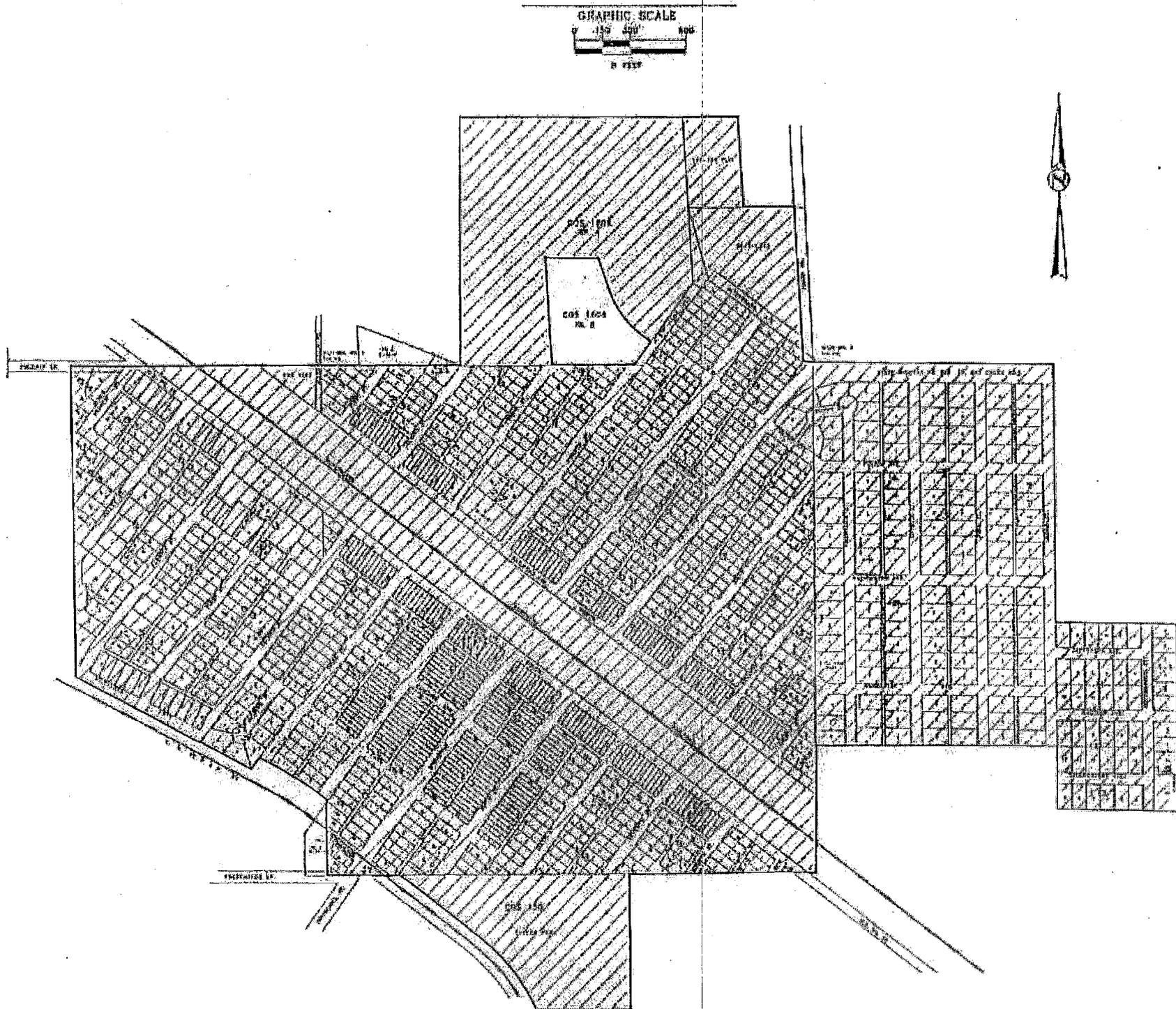


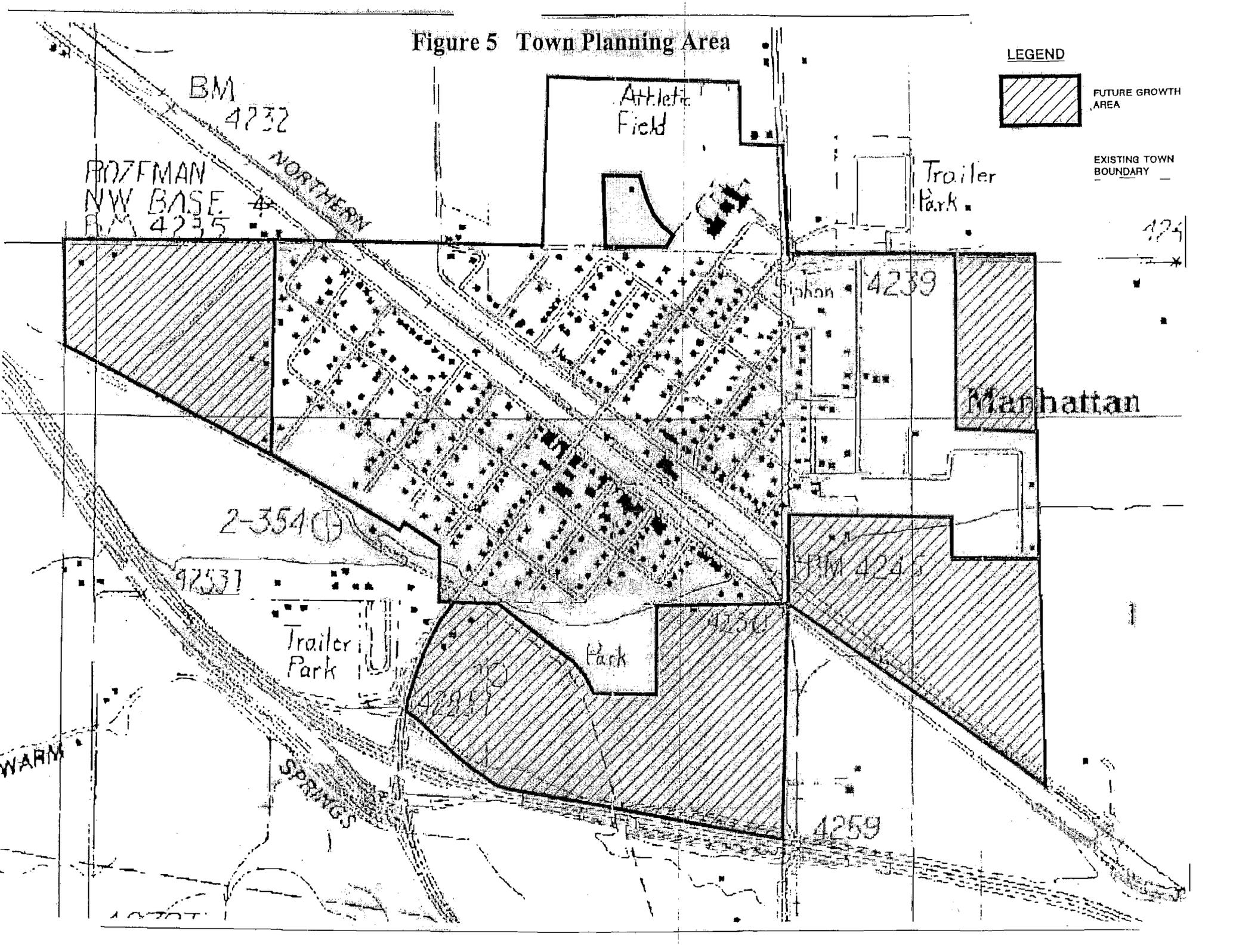
Figure 5 Town Planning Area

LEGEND



FUTURE GROWTH AREA

EXISTING TOWN BOUNDARY



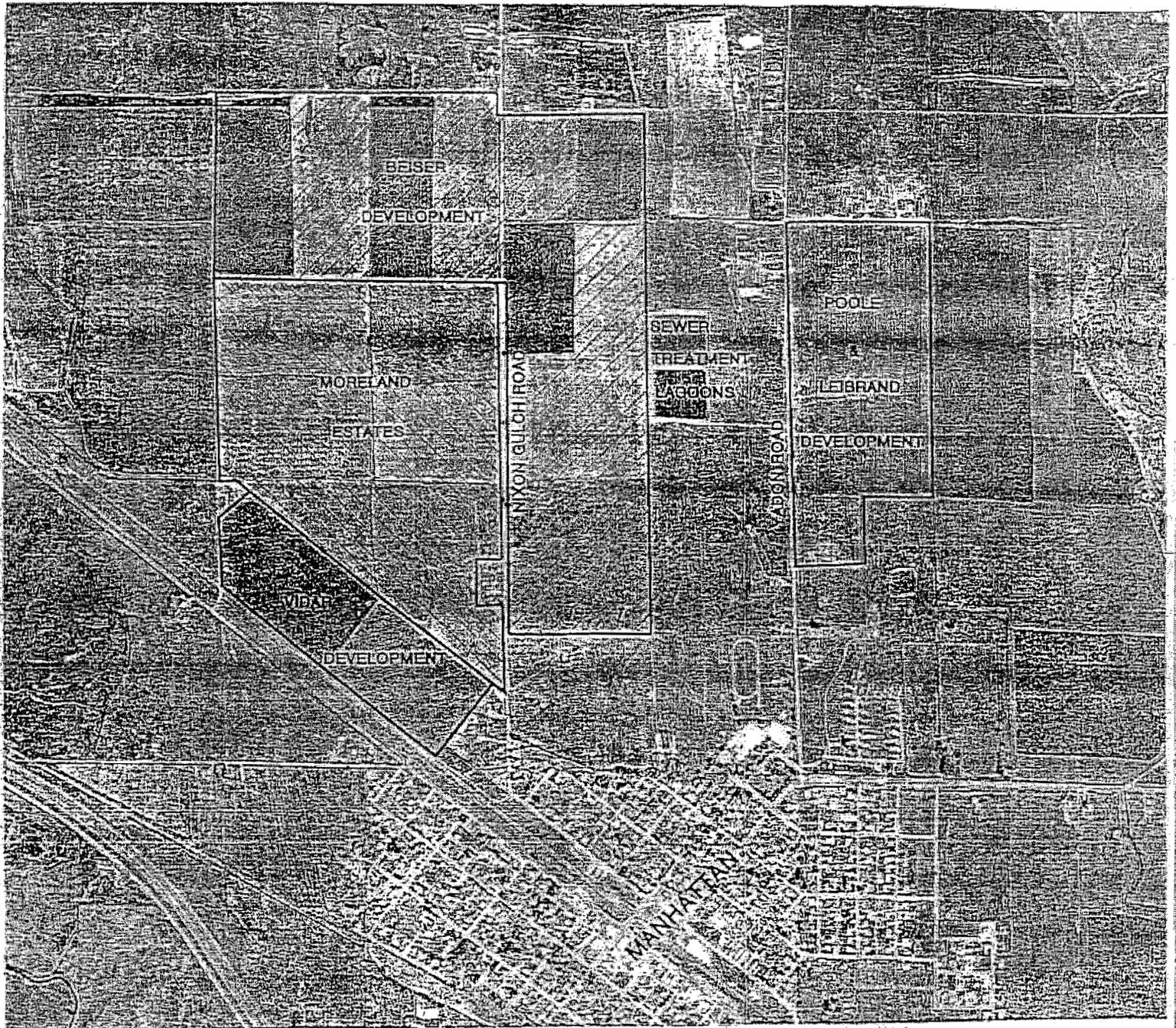


Figure 6. Areas of Potential Future Development

Appendix A

AGENCY LETTERS

United States Department of Agriculture



Natural Resources Conservation Service
3710 Fallon Street, #B
Bozeman, MT 59718

RECE

JU

Phone: (406)522-4000
Fax: (406)585-1272

Subject: Manhattan Wastewater Treatment Facility

Date: June 3, 2005

To: Murray Strong, Environmental Specialist
Stahly Engineering & Associates

File Code:

This memo is in response to your inquiry concerning the development of the Manhattan Wastewater Treatment Facility and potential impacts to important farmland soils on the proposed site. I have enclosed a soil map with associated soil mapunits, and a soil report. All of the soils in this area have an "important farmland classification", to include farmland of local importance, statewide importance, and prime farmland if irrigated.

If you have any further questions, please call me at 522-4012.

Sincerely,

A handwritten signature in cursive script that reads "Wendy Williams".

Wendy Williams, Resource Conservationist, Bozeman Field Office

Prime and other Important Farmlands

Gallatin County Area, Montana

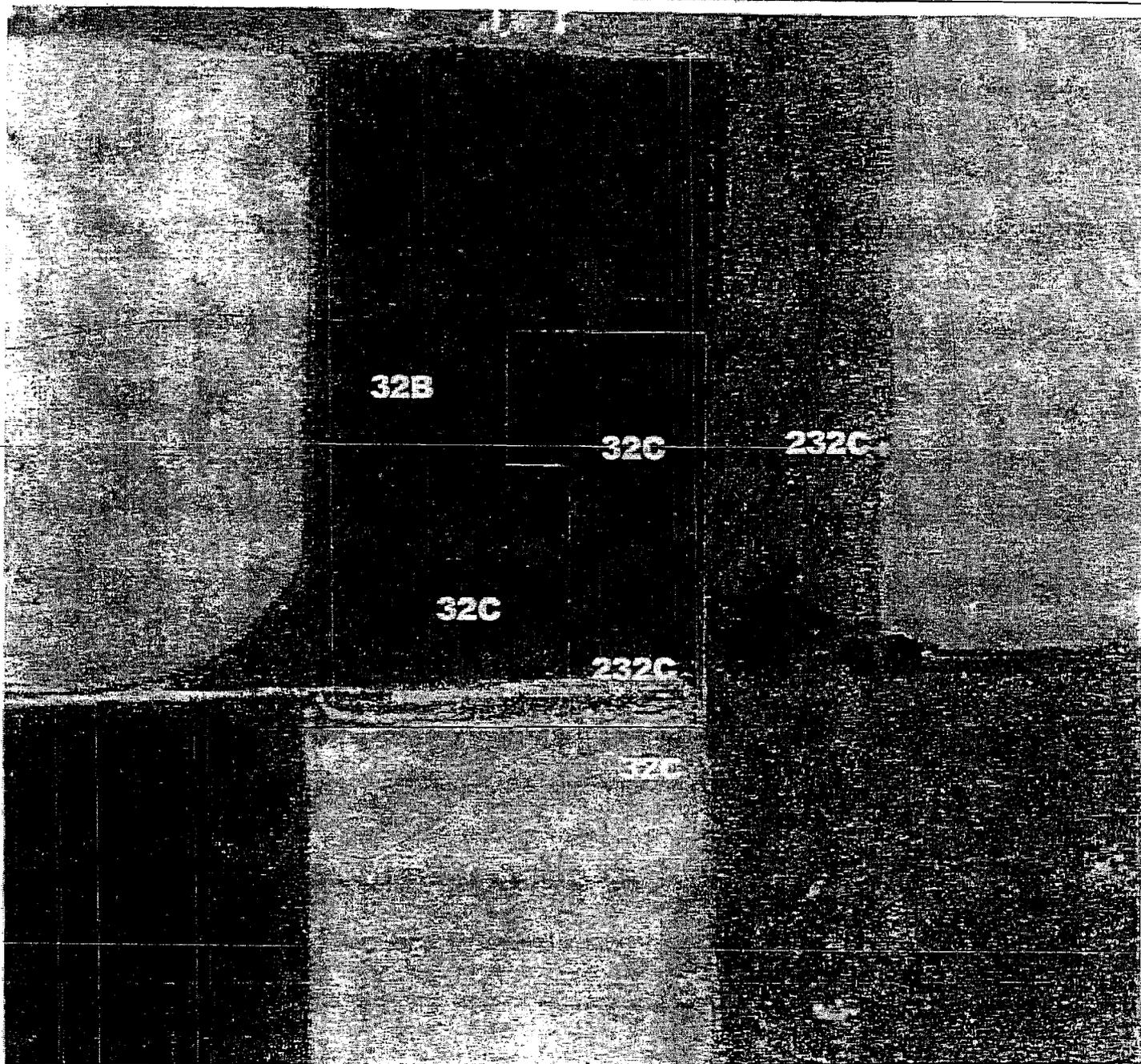
Map symbol	Map unit name	Farmland classification
232C	AMESHA COBBLY LOAM, 2 TO 8 PERCENT SLOPES	Farmland of local importance
32C	AMESHA LOAM, 4 TO 8 PERCENT SLOPES	Farmland of statewide importance
32B	AMESHA LOAM, 0 TO 4 PERCENT SLOPES	Prime farmland if irrigated

Soils Map



USDA-NRCS
Bozeman FO
Carli Lofing

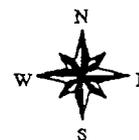
Date: 05/27/2005



Legend

- Planned Land Units
- Section Locator
- Soil_a_mt622.shp

Scale: 1:2640
1"=220 ft



RECEIVED

MAY 16 2005

MONTANA HISTORICAL SOCIETY

225 North Roberts ♦ P.O. Box 201201 ♦ Helena, MT 59620-1201
♦ (406) 444-2694 ♦ FAX (406) 444-2696 ♦ www.montanahistoricalsociety.org ♦

May 13, 2005

Murray Strong
SE&A
3530 Centennial Drive
Helena, MT 59601

RE: STAHLY ENGINEERING: MANHATTAN WASTEWATER TREATMENT
FACILITY. SHPO Project #: 2005051219

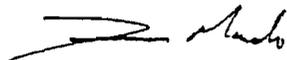
Dear Mr. Strong:

I have conducted a cultural resource file search for the above-cited project located in Section 34, T2N R3E. According to our records there have been no previously recorded historic or archaeological sites within the designated search locales. The absence of cultural properties in the area does not mean that they do not exist but rather may reflect the absence of any previous cultural resource inventory in the area, as our records indicated none.

We feel that there is a low likelihood cultural properties will be impacted. We, therefore, feel that a recommendation for a cultural resource inventory is unwarranted at this time. However, should cultural materials be inadvertently discovered during this project we would ask that our office be contacted and the site investigated. Thank you for consulting with us.

If you have any further questions or comments you may contact me at (406) 444-7767 or by e-mail at dmurdo@mt.gov.

Sincerely,


Damon Murdo
Cultural Records Manager

File: DEQ/AIR&WATER WASTE MNG/2005



United States Department of the Interior

RECEIVED
JUN 15 2005

FISH AND WILDLIFE SERVICE

ECOLOGICAL SERVICES
MONTANA FIELD OFFICE
100 N. PARK, SUITE 320
HELENA, MONTANA 59601
PHONE (406) 449-5225, FAX (406) 449-5339

File: M29 (I)

June 10, 2005

Murray Strong
Stahly Engineering and Associates, Inc.
3530 Centennial Drive
Helena, Montana 59601

Dear Mr. Strong:

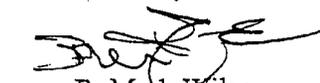
This is in response to your May 27, 2005 request for information and comments regarding the Manhattan Wastewater Treatment Facility. We appreciate the opportunity to review this project proposal and provide comments. These comments have been prepared under the authority of and in accordance with the provisions of the Fish and Wildlife Coordination Act (16 U.S.C. 661 et. seq.) and the Endangered Species Act (16 U.S.C. 1531 et. seq.).

Considering the nature, scope and location of the project, the Service does not anticipate adverse impacts to any federally listed threatened, endangered, candidate or proposed species. There may be state species of concern in the vicinity of the project and we recommend contacting the Montana Department of Fish, Wildlife and Parks at 1420 East Sixth Ave., P.O. Box 200701, Helena, MT 59620-0701, 406-444-2535 or the Montana Natural Heritage Program, 1515 East 6th Avenue, Box 201800, Helena, MT 59620-1800, 406-444-5354.

If wetlands are impacted by this project, Corps of Engineers Section 404 permits may be required. The Service suggests any proposed or future project be designed to avoid and minimize impacts to wetland areas, stream channels and surrounding vegetation to the greatest extent possible. Direct, indirect and cumulative impacts, along with future activities required to maintain these improvements, should be analyzed.

The Service appreciates your efforts to incorporate fish and wildlife resource concerns, including threatened and endangered species, into your project planning. If you have questions or comments related to this issue, please contact Katrina Dixon at 406-449-5225 extension 222.

Sincerely,


R. Mark Wilson
Field Supervisor



Montana Fish, Wildlife & Parks

RECEIVED

JUN 07 2005

1400 South 19th Ave
Bozeman, MT 59718

June 6, 2005

Murray Strong, Environmental Specialist
Stahly Engineering
3530 Centennial Drive
Helena, MT 59601

Dear Mr. Strong,

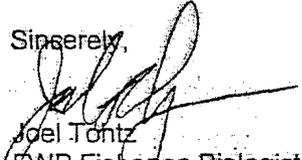
On May 27, 2005 I received a map from you showing the location of a proposed wastewater treatment facility to be constructed near Manhattan. Based on this map you asked that I provide comments concerning "impacts to formally classified lands, wetlands, biological resources, and water quality."

Without other information, my principle concerns are generic to this type of development and the potential to harm local waterways. Generally, you should plan to avoid any construction activity near surface waters that might destabilize existing channel configurations. You will want to avoid disturbing riparian or wetland vegetation. And you will want to avoid situations that might deliver pollutants to surface waters, as can happen for example when paved surfaces concentrate oil or other petroleum products later mobilized by rain or snowmelt. Drainage within and through the facility is a critical planning consideration to avoid increasing sediment or other contaminants that might be delivered to local waterways.

You will also want to prevent localized stream disturbances during actual construction. I anticipate that your construction plans will include actions to reduce or mitigate sediment delivery, and to prevent discharges of petroleum products or other harmful substances into nearby streams, ditches, or to lands capable of delivering these substances to nearby waterways. An important project goal should be to ensure that the completed facility poses no direct or persistent environmental threat to the local watershed.

I hope that my comments are useful to you at this time. I look forward to hearing how your project plans develop. Please contact me with any questions.

Sincerely,


Joel Tontz
FWP Fisheries Biologist
406-994-8938



RECEIVED
JUN 20 2005

Brian Schweitzer, Governor

June 17, 2005 P.O. Box 200901 • Helena, MT 59620-0901 • (406) 444-2544 • www.deq.mt.gov

Murray Strong
Stahley Engineering
3530 Centennial Drive
Helena, MT 59601

RE: Manhattan Wastewater Treatment Facility

Dear Mr. Strong:

The Department is in receipt of your May 26, 2005 letter to Steve Welsh, Permitting and Compliance Division Administrator requesting that the Department identify any permitting requirements or other issues that may be necessary for the above reference project. The City proposes to construct a new wastewater treatment plant.

Pursuant to Section 75-5-402 of the Montana Water Quality Act (WQA), the Department is required to examine plans and other information to determine whether a permit is necessary. In order for the Department to complete this review, the proponent must complete the applicable discharge permit application forms for the proposed activity, provide the information required by the applicable rule and submit the necessary application fees. Alternatively, the applicant may submit detailed plans and specifications on the proposed activity along with a description of the volume and nature of the wastes to be discharged. In accordance with ARM 17.30.201; the fee for review of plans and specifications is one-half of the application fee. Bureau staff are available to assist you in determining the appropriate application requirements.

Based on the information submitted, the Department is unable to determine what permits are necessary for the proposed project. For your convenience I have enclosed a fact sheet that describes water quality related permits for construction activities. Discharge of storm water from: industrial facilities as defined in ARM 17.30.1102(29) and (30); from construction activities as defined in ARM 17.30.1002(28); and from municipal separate storm sewer systems (MS4) as defined in ARM 17.30.1102(23), are subject to the permitting requirement of the Montana Pollutant Discharge Elimination System (MPDES).

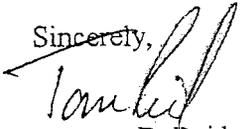
In general, the Montana WQA prohibits the discharge of sewage, industrial or other wastes, including sediment, to state waters without a current permit from the Department. The definition of state waters includes any body of water on the surface or underground (ground water) and includes irrigation systems, ephemeral and intermittent drainage systems, lake, ponds or other waterways. Discharge of wastes to state surface water is regulated under the Montana Pollutant Discharge Elimination System (MPDES) program; a discharge, or potential discharge, to state ground water are regulated under the Montana Ground Water Pollution Control System. The WQA also prohibits the construction, operation or use of an outlet that is used to discharge waters to state water [75-5-605(2), MCA] without a current permit from the Department.

Mr. Murray Strong
June 17, 2005
Page 2 of 2

Pursuant to 75-5-605(2), MCA, the City must amend their wastewater discharge permit to reflect the proposed changes in the wastewater treatment facility.

Additional information on permitting requirements may be obtained by contacting the Water Protection Bureau at (406) 444-3080 or on the Department's Website at: www.deq.state.mt.us.

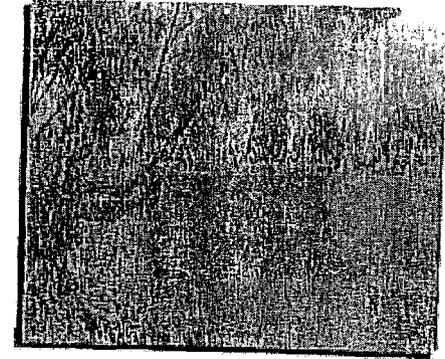
Sincerely,


Thomas D. Reid
Water Quality Permits Program Manager
Water Protection Bureau

File: General

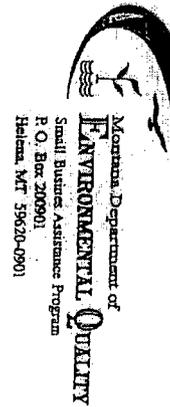
cc Fact Sheet: Construction Related Water Quality Permits
Storm Water Requirements for Construction Activity

Storm Water Requirements for Construction Activity



Montana Department of
**ENVIRONMENTAL
QUALITY**

April 2003



Montana Department of
**ENVIRONMENTAL
QUALITY**
Small Business Assistance Program
P. O. Box 200901
Helena, MT 59620-0901

1. 100% erosion control at this public construction work site is required to be in place before any discharge of storm water from the site. The fee for this permit is \$450.00 per calendar year for commercial or public projects, and \$250.00 for residential (single family dwelling) projects. The annual fee amount per discharge is \$450.00 (per calendar year) for commercial or public projects, and there is no annual fee for residential (single family dwelling) projects.

printed on
recycled paper

the construction activity site. The NOI (application) fee amount per discharge for storm water associated with construction activity is \$450.00 for commercial or public projects, and \$250.00 for residential (*single family dwelling*) projects. The annual fee amount per discharge is \$450.00 (*per calendar year*) for commercial or public projects, and there is no annual fee for residential (*single family dwelling*) projects.

Where Can I Find More Information?

I. MT Department of Environmental Quality
Water Protection Bureau
Storm Water Program
P. O. Box 200901 • 1520 East Sixth Ave.
Helena, MT 59620-0901
1-406-444-3080

The following website contains the General Permit, fee information, the NOI form, the SWPPP form, and the NOT form:
<http://www.deq.state.mt.us/wqinfo/MPDES/StormwaterConstruction.asp>

II. MT Department of Environmental Quality
Small Business Assistance Program
P.O. Box 200901 • 1520 East Sixth Ave.
Helena, MT 59620-0901
1-800-433-8773
<http://www.deq.state.mt.us/ppa/p2/index.asp>

III. USEFUL GUIDANCE
EPA Menu of Construction BMPs Website
(use "Fact Sheets")
at: http://cfpub.epa.gov/mpdes/stormwater/menuofbmps/con_site.cfm



What is the Purpose of a Storm Water Pollution Prevention Plan (SWPPP)?

A SWPPP is developed and implemented by the permittee for three major purposes:

1. Assessing the characteristics of the site such as nearby surface waters, topography, and storm water runoff patterns;
2. To identify potential sources of pollutants such as sediment from disturbed areas, and stored wastes or fuels; and
3. To identify Best Management Practices (BMPs) which will be used to minimize or eliminate the potential for these pollutants to reach surface waters through storm water runoff.

BMPs at construction activity sites typically consist of various erosion and sediment control measures. Erosion and sediment control at construction sites is best accomplished with proper planning, installation, and maintenance of controls.

Most erosion and sediment controls require regular maintenance to operate correctly. Accumulated sediments should be removed frequently and materials should be checked periodically for wear. Regular inspections by qualified personnel should be performed after major storm or snowmelt events and as required in the General Permit.

What are the Fees?

Fees based on the number of discharges are determined by multiplying the appropriate fee amount by the number of named or perennial surface waters (as shown on a USGS topographic map) which could receive storm water runoff from

Storm Water Requirements for Construction Activity

April 2003

What is Montana's Storm Water Discharge Permit Program for Construction Activity?

The 1972 amendments to the Federal Water Pollution Control Act, later referred to as the Clean Water Act (CWA), prohibit the discharge of any pollutant to waters of the United States unless the discharge is authorized by a National Pollutant Discharge Elimination System (NPDES) permit.

In Montana, the Department of Environmental Quality (DEQ) is authorized to administer the NPDES Program through the Montana Pollutant Discharge Elimination System (MPDES) Program.

Traditionally, efforts to improve water quality under the NPDES program have focused on reducing pollutants in industrial process wastewater and municipal sewage treatment plant discharges. Over time, it became evident that more diffuse sources of water pollution, such as storm water runoff from construction sites, are also significant contributors to water quality problems.

Typically, sediment runoff rates from construction sites are 10 to 20 times greater than those from agricultural lands, and 1,000 to 2,000 times greater than those of forestlands. During a short period of time, construction activity can contribute more

sediment to streams than is naturally deposited over several decades. This accelerated deposition causes both physical and biological harm to Montana's surface waters.

In 1990, the federal Environmental Protection Agency (EPA) promulgated rules establishing Phase I of the NPDES storm water program. Phase I addressed, among other discharges, discharges from larger construction activities disturbing 5 acres or more of land. In Montana, since 1992 the DEQ has been permitting these storm water discharges from larger construction projects through the MPDES Program.

Phase II of the NPDES storm water program covers smaller construction activities disturbing between 1 and 5 acres. Phase II became final on December 8, 1999 with smaller construction activity permitting to initiate on March 10, 2003. Montana has incorporated these new MPDES Phase II storm water requirements, as well as existing Phase I requirements, into the Administrative Rules of Montana (ARM), Title 17, Chapter 30, Subchapters 11, 12, and 13.

Who Requires Storm Water Discharge Permit Coverage Under Montana Rules?

Effective March 10, 2003, construction activity which results in the "disturbance" of equal to or greater than 1 acre of total land area will need to obtain permit coverage under the General Permit for Storm Water Discharges Associated with Construction Activity (called "General Permit"). Construction activity includes the disturbance of less than 1 acre of total land area that is part of a larger common plan of development or sale if the larger

common plan will ultimately disturb 1 acre or more (such as subdivisions with phased work over years).

What is the Definition of "Disturbance" of a Construction Site?

"Disturbance" (related to construction activity) means areas that are subject to clearing, excavating, grading, stockpiling earth materials, and placement/removal of earth material performed during construction projects. For construction activities that result in disturbances of less than five acres of total land area, the acreage of disturbance does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the facility.

What is the Definition of an "Operator" of a Construction Site?

"Operator" is the term which is used for permittees, when permitting storm water discharges associated with construction activity. The term is defined in Part V.T.8. of the General Permit. Operators would typically be both the owner and contractor of a construction project, but may also include other parties if they meet the definition of operator.

How do "Operators" Obtain General Permit Coverage?

"Operators" requiring coverage under the General Permit for their storm water discharges associated with construction activity obtain this permit coverage by the DEQ's Storm Water Program receiving the following Notice of Intent (NOI) Package items by the proposed construction start date:

NOI form with all requested items completed;

- Storm Water Pollution Prevention Plan (SWPPP) addressing all requested items in the General Permit (a form has been developed for optional use if desired); and
- Application fee and first year annual fee based on the number of discharges (see below) and type of construction project (either residential (single family dwelling), or commercial/public).

Applicants must read and be familiar with the General Permit to assist in the completion of the forms and submittal of the NOI Package.

Permit transfers are not allowed. Signatory requirements in rule and the General Permit allow only certain qualified people to sign NOI forms and other reports.

All NOIs require a Notice of Termination (NOT) form to be submitted when the construction activity is complete and the site has achieved "final stabilization" or if the "operator" changes. "Final stabilization" means the time at which all soil-disturbing activities at a site have been completed and a vegetative cover has been established with a density of at least 70% of the pre-disturbance levels, or equivalent permanent, physical erosion reduction methods have been employed. Final stabilization using vegetation must be accomplished using seeding mixtures or forbs, grasses, and shrubs that are adapted to the conditions of the site. Establishment of a vegetative cover capable of providing erosion control equivalent to pre-existing conditions at the site will be considered final stabilization.

Fact Sheet
Water Quality Permits for Construction Related Activities
Water Protection Bureau
Montana Department of Environmental Quality

MPDES Storm Water Permit: Construction related activities that result in greater than one acre of disturbance and may generate storm water runoff from the construction site during the life of the project must obtain authorization prior to initiation of the construction activity. For purposes of this regulation, construction activities include clearing, grading, excavation, and stockpiling or placement of earthen materials. Routine maintenance activities that disturb less than 5 acres and do not change the original configuration of the site are not subject to this regulation. The owner or operator is required to develop a Storm Water Pollution Prevention Plan (SWPPP). These discharges are covered under a general permit (MTR10000). Coverage under the general permit is effective upon receipt of a completed NOI package (application, storm water pollution prevention plan, and fee).

MPDES Construction Dewatering: Non-storm water discharges of sediment laden water from coffer dams, trenches, pipeline construction, excavation pits, borrow areas, well development or other activities that is discharged to state waters, including irrigation canals, drainage ditches and wetlands, are prohibited unless authorized by the Department. Typically, these activities are authorized under the Department's general permit for construction dewatering (MTG070000). Under most conditions the permittee is required to construct and operate some form of treatment to remove turbidity and sediment to meet state water quality standards. The discharge of ground water that contains petroleum contaminants or other wastes must be authorized and comply with the requirements of the Department's petroleum clean up general permit (MTG790000 or MTX30000) prior to discharge to state surface or ground water. These permits are typically issued within 30 days of receipt of a completed application.

Short-term water quality standard for turbidity (318): Montana water quality standards prohibit the increase in sediment or turbidity above specific amounts in state surface waters. A Section 318 authorization provides a short-term turbidity standard for activities that are conducted in state waters and may cause disturbance of the stream bed sediments. A 318 authorization is typically processed in 7 to 21 days but may require longer review for complexity or environmentally sensitive areas.

401 Certification: Section 404 of the federal Clean Water Act is administered by the US Army Corps of Engineers; these permits are for dredge and fill in waters of the US, including wetlands. Please contact the Corps at (406) 441-1375. The Department provides CWA 401 certification of 404 projects and works directly with the Corps on these issues. A joint application form is used.

General Information

Fees: All of the above permits require the applicant to pay a fee prior to Department review of the application. The fee varies depending on the type of permit and complexity of the project. A fee schedule is available upon request at (406) 444-3080, or on the Department's website at:

www.deq.state.mt.us

Appendix B

COMPLIANCE WITH ENVIRONMENTAL STATUTES

Environmental Assessment for Wastewater System Improvements for the Town of
Manhattan, Gallatin County, Montana

American Indian Religious Freedom Act (AIRFA) of 1978, 42 U.S.C. 1996. Not Applicable. AIRFA protects the rights of Native Americans to exercise their traditional religions by ensuring access to sites, use and possession of sacred objects, and the freedom to worship through ceremonials and traditional rites. The proposed project area is located at a site previously farmed for hay, which was recently purchased for development. Therefore, the proposed project would not adversely affect the protections offered by this Act. Access to sacred sites by Tribal members would not be affected.

Bald Eagle Protection Act, 16 U.S.C. Sec. 668, 668 note, 668a-668d. In compliance. This Act prohibits wantonly possessing, selling, transporting, or trading of bald or golden eagle or eagle part, alive or dead. The Endangered Species Act (ESA) contains requirements on Corps projects concerning bald eagles. See Endangered Species Act.

Clean Air Act, as amended 42 U.S.C. 1857h-7, et seq. In compliance. The purpose of this act is to protect public health and welfare by the control of air pollution at its source, and to set forth primary and secondary national Ambient Air Quality Standards to establish criteria for States to attain, or maintain. Air quality, is not expected to be impacted to any measurable degree by the activities associated with the proposed wastewater system improvements, though watering for dust control may be part of project specifications due to limited excavation activities.

Clean Water Act, as amended, (Federal Water Pollution Control Act) 33 U.S.C. 1251, et seq. In compliance. The objective of this Act is to restore and maintain the chemical, physical and biological integrity of the Nation's waters (33 U.S.C. 1251). The project involves upgrading the town of Manhattan's wastewater treatment facility to meet state and federal discharge permit limitations. Construction of the facility will not involve the placement of fill material in a wetland or a drainage with a defined 'bed and bank'. Therefore, a Section 404 permit is not required for this project.

The total acreage that will be disturbed is more than 1 acre. Therefore, a National Pollutant Discharge Elimination System permit will be required from the state of Montana. Appropriate measures will be taken to minimize erosion and storm water discharges during and after construction.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980. Not applicable. CERCLA is triggered by (1) the release or substantial threat of a release of a hazardous substance into the environment; or (2) the release or substantial threat of a release of any pollutant or contaminant into the environment, which presents an imminent threat to the public health and welfare. The extent such knowledge is available, 40 CFR Part 373 requires notification of CERCLA hazardous substances in

real estate transactions. The proposed project does not involve a federal real estate transaction.

Endangered Species Act, as amended, 16 U.S.C. 1531, et seq. In compliance. Section 7 (16 U.S.C. 1536) states that all Federal departments and agencies shall, in consultation with and with the assistance of the Secretary of the Interior, insure that any actions authorized, funded, or carried out by them do not jeopardize the continued existence of any threatened or endangered (T&E) species, or result in the destruction or adverse modification of habitat of such species which is determined by the Secretary to be critical. Correspondence from the USFWS on June 10, 2005 notes *"the Service does not anticipate adverse impacts to any federally listed threatened, endangered, candidate or proposed species."*

Farmland Protection Policy Act, 7 U.S.C. 4201, et seq. In compliance. This act instructs the Department of Agriculture, in cooperation with other departments, agencies, independent commissions and other units of the Federal government, to develop criteria for identifying the effects of Federal programs on the conversion of farmland to nonagricultural uses.

An inquiry was made to the Natural Resource Conservation Service regarding the proposed project. The NRCS responded with a letter dated June 3, 2005 that stated that all of the soils in the project area have an "important farmland classification", to include farmland of local importance, statewide importance, and prime farmland if irrigated. These soils are described as Amesha Cobbly Loam, 2 to 8 percent slopes, Amesha Loam, 4 to 8 percent slopes, and Amesha Loam, 0 to 4 percent slopes. If requested by the local landowner, this land qualifies for protection under the Farmland Protection Act; no such request has been made to date.

Federal Water Project Recreation Act, as amended, 16 U.S.C. 460-1 (12), et seq. Not applicable. The Act establishes the policy that consideration be given to the opportunities for outdoor recreation and fish and wildlife enhancement in the investigating and planning of any Federal navigation, flood control, reclamation, hydroelectric or multi-purpose water resource project, whenever any such project can reasonably serve either or both purposes consistently. This project does not involve any Federal navigation, flood control, reclamation, and hydroelectric or multi-purpose water resource projects.

Fish and Wildlife Coordination Act, as amended, 16 U.S.C. 661, et seq. In compliance. The FWCA requires governmental agencies, including the Corps, to coordinate activities so that adverse effects on fish and wildlife will be minimized when water bodies are proposed for modification. A letter, dated May 27, 2005, was sent to the U.S. Fish and Wildlife Service (USFWS) requesting information and comments regarding the proposed project. The USFWS responded with a letter, dated June 10, 2005, stating that the USFWS does not anticipate adverse impacts to any federally listed threatened, endangered, candidate or proposed species.

Land and Water Conservation Fund Act (LWCFA), as amended, 16 U.S.C. 4601-4 et seq. Not applicable. Planning for recreation development at Corps projects is coordinated

with the appropriate states so that the plans are consistent with public needs as identified in the State Comprehensive Outdoor Recreation Plan (SCORP). The Corps must coordinate with the Secretary of the Interior (NPS) to insure that no property acquired or developed with assistance from this Act will be converted to other than outdoor recreation uses. If conversion is necessary, approval of NPS is required, and plans are developed to relocate or re-create affected recreational opportunities. No lands involved in the proposed project were acquired or developed with LWCF funds.

National Environmental Policy Act, as amended, 42 U.S.C. 4321, et seq. In compliance. Provisions must be made to ensure that environmental information is available to public officials and citizens before decisions are made and before actions are taken. No major concerns have been raised regarding significant environmental effects. An EA has been completed in accordance with ER200-2-2, Procedures For Implementing NEPA (33 CFR 230).

National Historic Preservation Act, as amended, 16 U.S.C. 470 et seq. In compliance. Federal agencies having direct or indirect jurisdiction over a proposed Federal or federally assisted undertaking shall take into account the effect of the undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register of Historic Places (NRHP). Although there are no cultural properties recorded near the proposed project, construction activities will require immediate reporting to the State Historic Preservation Office should any artifacts be uncovered. Research by the State Historic Preservation Office noted that a cultural resource inventory is "unwarranted at this time."

Noise Control Act 1972, 42 U.S.C. Sec 4901-4918. In compliance. This Act establishes a national policy to promote an environment for all Americans free from noise that jeopardizes their health and welfare. Federal agencies are required to limit noise emissions to within compliance levels. Noise emission levels at the project site could increase temporarily during construction; however, appropriate measures would be taken to keep the noise level within the compliance levels including limiting hours of construction. The operation of the wastewater treatment facilities will produce some noise associated with mechanical equipment (blowers, pumps, motors, etc.). However, these noise levels should be within the accepted thresholds.

North American Wetlands Conservation Act, 16 U.S.C. Sec. 4401 et. Seq. Not Applicable. This Act establishes the North American Wetlands Conservation Council (16 U.S.C.4403) (NAWCC) to recommend wetlands conservation projects to the Migratory Bird Conservation Commission (MBCC). Section 9 of the Act (16 U.S.C. 4408) addresses the restoration, management, and protection of wetlands and habitat for migratory birds on Federal lands. Federal agencies acquiring, managing, or disposing of Federal lands and waters are to cooperate with the Fish and Wildlife Service to restore, protect, and enhance wetland ecosystems and other habitats for migratory birds, fish and wildlife on their lands, to the extent consistent with their missions and statutory authorities. There is no opportunity to restore, protect, or enhance wetlands with the proposed project.

Rivers and Harbors Act, 33 U.S.C. 401, et seq. Not applicable. Section 9 of this act prohibits the construction of any dam or dike across any navigable water of the United States (US) in the absence of Congressional consent and approval of the plans by the Chief of engineers and the Secretary of the Army. Section 10 of the Rivers and Harbors Act prohibits the unauthorized obstruction or alteration of any navigable water of the US. The proposed project would not be impacting navigable waters of the United States.

Watershed Protection and Flood Prevention Act, 16 U.S.C. 1101, et seq. 33 U.S.C. 701b. Not applicable. This Act authorizes the Secretary of Agriculture to cooperate with states and other public agencies in works for flood prevention and soil conservation, as well as the conservation, development, utilization, and disposal of water. This act imposes no requirements on Corps Civil Works projects.

Wild and Scenic Rivers Act, as amended, 16 U.S.C. 1271, et seq. Not applicable. This act establishes that certain rivers of the Nation, with their immediate environments, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values, shall be preserved in free-flowing condition, and that they and their immediate environments shall be protected for the benefit and enjoyment of present and future generations: The proposed project does not occur within the Missouri National Recreation River boundary.

Environmental Justice (E.O. 12898). In compliance. Federal agencies shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States. This project would positively impact minority and/or low-income populations with all benefits equal.

Floodplain Management (E.O. 11988) 42 CFR 26951. In compliance. Section 1 requires each agency provide leadership and take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health and welfare, and to restore and preserve the natural and beneficial values served by floodplains in carrying out its responsibilities for (1) acquiring, managing, and disposing of Federal lands and facilities; (2) providing Federally undertaken, financed, or assisted construction and improvements; and (3) conducting Federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulating, and licensing activities. The proposed project construction must occur in the floodplain in order to achieve its purpose. The proposed project would not occur in a flood plain.

Protection of Wetlands (E.O. 11990). Not applicable. Federal agencies shall take action to minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands in carrying out the agencies responsibilities. Each agency, to the extent permitted by law, shall avoid undertaking or providing assistance for new construction located in wetlands unless the head of the agency finds (1) that there is no practicable alternative to such construction, and (2) that the proposed

action includes all practicable measures to minimize harm to wetlands, which may result from such use. In making this finding, the head of the agency may take into account economic, environmental and other pertinent factors. Each agency shall also provide opportunity for early public review of any plans or proposals for new construction in wetlands. There are no wetlands occurring within the proposed project area and no wetlands would be filled or otherwise impacted due to the construction of the project.

CEO Memorandum. August 10, 1980, Interagency Consultation of Avoid or Mitigate Adverse Effects on Rivers in the Nationwide Inventory. Not applicable. This memorandum states that each Federal agency shall take care to avoid or mitigate adverse effects on rivers identified in the Nationwide Inventory. The work will not include areas listed on the National Rivers Inventory.

Prepared by: Mariah Peck Date: 11/15/05

Approved by: Todd Teegard Date: 11/15/05



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 8
MONTANA OFFICE
10 WEST 15TH STREET - SUITE 3200
HELENA, MT 59626

FEB 7 2006

Ref: 8P-W-MS

FINDING OF NO SIGNIFICANT IMPACT

PROJECT: Manhattan Wastewater Treatment and Collection Systems Upgrades

TO: All Interested Government Agencies and the Public

As required by the National Environmental Policy Act (NEPA), an environmental review has been performed on the proposed Environmental Protection Agency (EPA) grant for the above project.

<u>PROJECT NUMBER:</u>	XP-98884201-0
<u>EPA GRANT:</u>	\$ 337,500
<u>MONTANA DNRC GRANT:</u>	\$ 109,322
<u>MONTANA SRF LOAN:</u>	\$1,416,121
<u>CDBG GRANT:</u>	\$ 500,000
<u>TSEP GRANT:</u>	\$ 418,435
<u>ACE WATER RESOURCES GRANT:</u>	\$1,300,000
<u>MANHATTAN RESERVE:</u>	\$ 141,885
<u>TOTAL COST:</u>	\$4,223,263

The Town of Manhattan, through a 2000 Preliminary Engineering Report, with subsequent amendments in 2004 and 2005, has identified the need to upgrade its wastewater treatment and collection systems. The purpose of this project is to: 1) provide a long-term solution to Montana Pollutant Discharge Elimination System (MPDES) permit compliance, 2) meet a compliance schedule incorporated in the town's renewed MPDES permit, 3) meet the domestic capacity needs of the community, 4) eliminate excessive leaching to groundwater from the town's current wastewater treatment lagoons, and 5) reduce the amount of inflow and infiltration into the town's wastewater collection system.

The proposed infrastructure project for the town of Manhattan consists of construction of an aeration wheel treatment facility, which will include a mechanical screen, influent, effluent, return and waste sludge flow meters, two (2) trains of aeration wheel reactors, two (2) secondary clarifiers, an ultraviolet disinfection unit, an aerobic digester, a container filter, and a building to house blowers, pumps, lab equipment and office space. The system will be sized for an average daily design flow of 371,000 gallons per day (gpd), but will be expandable to an average daily design flow of 696,500 gpd to accommodate community growth. Treated effluent will be discharged to Dita Ditch and then to the Gallatin River, north of Manhattan. The project is proposed to be funded by an EPA Special Appropriations Grant and the federal and state grant/loan programs listed above.

Impacts to environmentally sensitive characteristics such as classified land use, cultural resources, wetlands, floodplains, threatened or endangered species, and water quality were considered. None of these environments are expected to be adversely impacted as a result of the proposed project.

The review process did not indicate that significant environmental impacts would result from the proposed action. Consequently, a preliminary decision not to prepare an EIS has been made. This action is taken on the basis of careful review of the engineering report, environmental information documents, and other supporting documentation. An environmental assessment which describes the project and specifically analyzes its impacts is attached to this Finding of No Significant Impact. These documents are available for public review at the following locations:

Montana DEQ
1520 East Sixth Avenue
PO Box 200901
Helena, MT 59620-0901

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

Comments supporting or disagreeing with this decision may be submitted for consideration by the EPA, to:

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

After evaluating the comments received, EPA will make a final decision. No administrative action will be taken on the project for at least 30 calendar days after release of the Finding of No Significant Impact.

Sincerely,



Kerrigan G. Clough
Deputy Regional Administrator

MANHATTAN WASTEWATER TREATMENT FACILITY
ENVIRONMENTAL ASSESSMENT

TABLE OF CONTENTS

1. INTRODUCTION	4
2. PURPOSE AND NEED FOR ACTION	5
3. EXISTING WASTEWATER TREATMENT	5
4. PROJECT DESCRIPTION: CONSTRUCTION OF AN AERATION WHEEL TREATMENT FACILITY WITH DISCHARGE TO DITA DITCH	6
5. BACKGROUND	6
6. ALTERNATIVES INCLUDING THE PROPOSED ACTION	9
6.1 ALTERNATIVE 1 - CONSTRUCTION OF A HYBRID LAGOON SYSTEM	10
6.2 ALTERNATIVE 2 - CONSTRUCTION OF AN OXIDATION DITCH WITH AN ANAEROBIC SELECTOR FOR BIOLOGICAL NUTRIENT REMOVAL	10
6.3 ALTERNATIVE 3 - CONSTRUCTION OF A SEQUENCING BATCH REACTOR	10
6.4 ALTERNATIVE 4 - CONSTRUCTION OF AERATION WHEEL TREATMENT FACILITY	10
6.5 ALTERNATIVE 5 - NO ACTION ALTERNATIVE	11
7. ALTERNATIVE COMPARISONS	11
7.1 COST COMPARISON FOR TREATMENT ALTERNATIVES: ANNUAL-EQUIVALENT COST ANALYSIS	11
7.2 BASIS OF SELECTION OF THE PREFERRED ALTERNATIVE	12
7.3 COMPARISON OF ENVIRONMENTAL IMPACTS	12
7.4 SELECTED ALTERNATIVE	13
8. AFFECTED ENVIRONMENT	15
8.1 CLIMATE	15
8.2 GEOLOGY/TOPOGRAPHY	16
8.3 AIR QUALITY/NOISE	16
8.4 WATER RESOURCES	16
8.4.1 Wetlands	16
8.4.2 Surface Waters	17
8.4.3 Ground Water	17
8.4.4 Floodplain	17
8.5 SOCIOECONOMICS	17
8.6 LAND USE	17
8.7 CULTURAL RESOURCES	18
8.8 THREATENED AND ENDANGERED SPECIES	18
8.9 FISH AND WILDLIFE	18
8.10 VEGETATION	19
8.11 SOILS/PRIME FARMLAND	19
9. ENVIRONMENTAL CONSEQUENCES	19
9.1 CLIMATE	19
9.2 GEOLOGY/TOPOGRAPHY	19
9.3 AIR QUALITY/NOISE	19
9.4 WATER RESOURCES	20
9.4.1 Wetlands	20

9.4.2 Surface Waters	20
9.4.3 Ground Water	20
9.4.4 Floodplain	20
9.5 SOCIOECONOMICS	20
9.6 LAND USE	21
9.7 CULTURAL RESOURCES	21
9.8 FISH AND WILDLIFE	21
9.9 VEGETATION	21
9.10 SOILS/PRIME FARMLAND	21
9.11 CUMULATIVE EFFECTS	22
10. PUBLIC PARTICIPATION	22
11. AGENCIES CONSULTED	23
12. APPLICABLE REGULATIONS AND PERMITTING AUTHORITIES	24
13. RECOMMENDATION FOR FURTHER ENVIRONMENTAL ANALYSIS	24
14. REFERENCE DOCUMENTS	25

Figures: Figure 1. Site Location Map

Figure 2. Aeration Wheel Treatment Plant Schematic

Figure 3. Treatment Plant Site

Figure 4. Town Boundary Map

Figure 5. Town Planning Area

Figure 6. Areas of Potential Future Development

Attachments: Appendix A. Agency Letters

Appendix B. Environmental Statutes

MANHATTAN WASTEWATER TREATMENT FACILITY
ENVIRONMENTAL ASSESSMENT

COVER SHEET

A. PROJECT IDENTIFICATION

Applicant: Town of Manhattan
Address: P.O. Box 96
Manhattan, MT 59741
Project Number: C301087-04

B. CONTACT PERSON

Name: Mayor Eleanor Mest
Town of Manhattan
Address: P.O. Box 96
Manhattan, MT 59741
Telephone: (406) 284-3235

C. COMMENT PERIOD

Thirty (30) calendar days.

1. INTRODUCTION

This Environmental Assessment (EA) is prepared for the Town of Manhattan ("the town" or "Manhattan") to satisfy the National Environmental Policy Act (NEPA), the Council on Environmental Quality's regulations for implementing NEPA (40 FR1500-1508), U.S. Army Corps of Engineers' regulations for implementing NEPA (33 CFR 325), and other appropriate environmental regulations. The purpose of an EA is to develop enough information to determine whether to prepare an environmental impact statement or a finding of no significant impact and to provide environmental information for decision makers. Environmental consequences are examined for the proposed wastewater treatment facility upgrades for the Town of Manhattan in Gallatin County, Montana.

The incorporated Town of Manhattan is located in the heart of the Gallatin Valley in Township 1 North, Range 3 East as shown in Figure 1. The town is directly north of Interstate 90 approximately 18 miles west of the City of Bozeman, in north central Gallatin County.

Federal and State grant/loan programs will fund this project. State and Federal agencies have been contacted regarding environmentally sensitive characteristics such as wetlands, floodplains, threatened or endangered species, and historical sites. Agency consensus is that environmentally sensitive characteristics are not expected to be adversely impacted as a result of the proposed project. Public participation during the planning process demonstrated support for the selected alternative. No significant long-term environmental impacts have been identified.

2. PURPOSE AND NEED FOR ACTION

The Town of Manhattan, through its May 2000 Preliminary Engineering Report (PER), and subsequent February 2004 and July 2005 PER amendments, has identified the need to upgrade its wastewater treatment and collection systems. Due to seasonally high ground water, the town's wastewater collection system has historically been subject to high inflow and infiltration (I/I). This excessive I/I has reduced not only the sewage carrying capacity of the town's collection system, but also the treatment capacity of the town's wastewater lagoons. Due to hydraulic and organic overloading, excessive sludge buildup, and treatment limitations of facultative lagoon systems, the town has experienced numerous effluent violations of its Montana Pollutant Discharge Elimination System (MPDES) permit. In addition to effluent violations, excessive leakage from the town's lagoons has been considered an un-permitted discharge. As such, a compliance schedule has been incorporated into the town's renewed MPDES permit. This compliance schedule requires completion of construction and/or repair of a treatment works capable of meeting permit requirements by no later than August 31, 2006 (note: the town has requested an extension to this deadline). Therefore, the purpose of the proposed project is to remedy the existing collection and treatment system deficiencies of the current wastewater system.

3. EXISTING WASTEWATER TREATMENT PLANT

The existing wastewater treatment facility consists of a two-cell facultative lagoon constructed in the early 1960s. Each cell has a surface area of 5.6 acres with a design operating depth of 5 feet with 3 feet of freeboard. The cells are not lined and leakage out of the lagoons is dramatic enough to visibly detect. Sludge was removed from both cells in 2001, which has further exacerbated the leakage problem. Because of excessive I/I, it is likely that there is not adequate sewage treatment due to hydraulic overloading and decreased detention time. Treated wastewater is discharged to Dita Ditch, which flows about two and one-half (2.5) miles to the Gallatin River. The present wastewater system has 701 sewer connections with no significant commercial or industrial users.

4. PROJECT DESCRIPTION: CONSTRUCTION OF AN AERATION WHEEL TREATMENT FACILITY WITH DISCHARGE TO DITA DITCH

The proposed project includes the construction of an aeration wheel treatment facility (see Figure 2). This treatment facility will include a mechanical screen; influent, effluent, return and waste sludge flow meters; two (2) trains of aeration wheel reactors; two (2) secondary clarifiers; an ultraviolet disinfection unit, an aerobic digester; a container filter; and a building to house blowers, pumps, lab equipment, and office space. It should be noted that the configuration of the facility may vary slightly from that listed above. Final layout will be determined in the design phase of the project. Current wastewater flows for the town of Manhattan are about 338,000 gallons per day (gpd). The treatment system will be sized to accommodate moderate growth with an average daily design flow of 371,000 gpd, but will be expandable to accommodate the full growth of 5,965 persons with an average daily design flow of 696,500 gpd anticipated with the new development when the need for expansion arises. Based on moderate growth, the design population for the treatment facility is expected to increase from about 1,380 to 2,710 persons during the 20-year planning period. Although the population is expected to nearly double, the wastewater flows are not anticipated to increase proportionately. This design assumption is based on the town's plan to continue to aggressively pursue collection system improvements in order to decrease the amount of I/I in the system.

5. BACKGROUND

Manhattan has an estimated population of 1,380 residents with 701 sewer connections. Collection lines range in size from 8-12 inches and are a combination of vitrified clay, asbestos cement, and PVC. In 1978, approximately 5,200 feet (14%) of old collection lines were replaced with 8, 10, and 12-inch PVC; the

15-inch outfall line to the lagoon was slip-lined with 12-inch polyethylene pipe; and four (4) manholes were replaced. Due to relatively flat slopes, heavy maintenance and cleaning is required for several of the collection lines in the town. Television inspection of the collection system was conducted in March of 2000 and revealed that there are still several problem areas in town. Existing collection system deficiencies have been documented as follows:

- (1) High groundwater infiltrates into the deteriorated collection lines
- (2) Gaps exist in pipe joints
- (3) Severe root intrusions exist
- (4) Manholes are deteriorated
- (5) Abandoned flush tanks still remain in the collection lines, and
- (6) High maintenance requirements are associated with line plugging

In the last five (5) years, the town has replaced more than 8,000 linear feet of gravity sewer in an effort to reduce infiltration into the system. These construction projects were identified in the May 2000 PER and original EA. Ongoing I/I investigations have isolated 53-127 gallons per minute in a 4-block alley section located between Second and Third Streets, and Fifth and Sixth Streets. The town plans to address these problem areas through continued collection system rehabilitation projects.

The original wastewater system was constructed in 1916 and consisted of a small gravity collection system, a septic tank of unknown size and a surface water discharge, which eventually reached the Gallatin River. Not much is known about the system between 1916 and the early 1960s, which is when the collection system was significantly expanded and the facultative lagoon system was constructed. An upgrade to the wastewater treatment system was completed in 1985, consisting of collection system rehabilitation, lagoon piping modifications to prevent short-circuiting, and valve replacement. Problems associated with the existing wastewater treatment system include the following:

- (1) Violations of the existing MPDES discharge permit
- (2) Excessive lagoon leakage
- (3) Inadequate sewage treatment due to hydraulic overloading
- (4) Inadequate sewage treatment due to organic overloading
- (5) Inability of current system to remove nutrients, including ammonia, and
- (6) Inability of current system to accommodate expected growth in and around Manhattan

The Town of Manhattan, through its May 2000 PER, evaluated six (6) alternatives for upgrading its wastewater collection and treatment systems. The selected alternative from the May 2000 PER recommended replacement of the problem areas of the collection system, rehabilitation of some of the problem manholes, and modification of the existing facultative lagoon system to an aerated lagoon system with supplemental spray irrigation. This selected alternative required the purchase of an additional eight (8) acres of land for the aeration cells and leasing of an additional 60 acres of adjacent land for spray irrigation of the effluent from April through October. In the past five (5) years, the town has completed significant portions of the collection system upgrades.

However, since the completion and approval of the May 2000 PER and subsequent publication of the original EA and Finding of No Significant Impact (FONSI) in July of 2000, the Town of Manhattan received notification from the Montana Department of Environmental Quality (DEQ) of policy changes regarding ammonia effluent limitations in the town's MPDES permit, which invalidated the selected alternative for wastewater treatment. In response to these policy changes, DEQ performed a Use Attainability Analysis (UAA) of the receiving stream into which the Manhattan wastewater treatment system discharges. This 'stream' consists of a series of natural and manmade channels, which eventually discharge into the Gallatin River. The UAA indicated that approximately one and one-half (1.5) miles of the two and one-half (2.5) mile receiving stream (Dita Ditch) supports coldwater fisheries and associated aquatic life and is, therefore, classified as a B-1 stream using Montana's stream classification system. The

upper one (1) mile of the receiving stream is ephemeral in nature and does not support sustainable aquatic life. The result of the findings in the UAA is that water quality standards (B-1) must be protected in the receiving stream downstream from the Nixon Bridge Road. The town's previously granted mixing zone was therefore modified to reflect the anticipated uses of the receiving waters. The water quality standard of particular interest in this case is the ammonia toxicity standard, which can be very difficult for lagoon-type wastewater treatment systems to meet on a year-round basis.

In addition, a couple of other complications have arisen since the publication of the original EA and FONSI. The first is that measurement of the existing wastewater flows showed that the flows are significantly higher than anticipated. The higher flow values can affect the sizing and cost of the treatment system. The second issue that surfaced is the proposed development of four (4) large subdivisions in the area to the north, west and east of Manhattan. If the subdivisions are built as currently planned, they would more than double the population of Manhattan. It is envisioned that the subdivisions would hook up to Manhattan's infrastructure, thus significantly affecting the design of the wastewater treatment system. Montana's nondegradation law and rules effectively limit the mass of pollutants that can be discharged to state waters to what was approved in April 1993. In Manhattan's case, this means that if the town grows considerably, it will need to remove more nitrogen and phosphorous from its wastewater discharge to continue to meet its load limits.

Because of the fact that treatment to meet ammonia toxicity standards in the receiving stream essentially precludes lagoon treatment and because of the higher flow projections and the new proposed subdivisions, Manhattan decided to once again look at treatment and disposal options in an amendment to its May 2000 PER. This amendment was prepared by Stahly Engineering and Associates and was finished in February 2004. The February 2004 PER amendment evaluated five (5) alternatives for treatment and recommends construction of a mechanical wastewater treatment facility utilizing aeration wheels, which is capable of removing phosphorus, nitrogen and ammonia.

Under the February 2004 PER Amendment, the proposed treatment system was to be constructed within the footprint of one (1) of the existing facultative lagoon cells, located north of Manhattan, on land currently owned by the town. However, due to site constraints at the existing facultative lagoon facility, the Town of Manhattan investigated options for moving the proposed treatment plant site. In July 2005, Stahly Engineering and Associates prepared a second amendment to the PER that outlines the reasons for considering a new site. The primary issue driving relocation of the site is the elimination of lift stations in the areas that new developments are likely to occur. These developments include Pioneer Village, Centennial Crossing, and the Manhattan Meadows Subdivisions located north and west of Manhattan. Several additional subdivisions are also being proposed; however, these subdivisions are still in the preliminary planning stages.

Options for the new site were limited by the following constraints: the new site had to be lower in elevation than the existing lagoon site, the site had to remain along the existing discharge ditch (Dita Ditch), and the site had to remain out of the floodplain or other environmentally-sensitive areas. Only three (3) sites were available that met these constraints. These three (3) sites included Bos Dairy, the town's landfill, and property owned by Manhattan Meadows Living, LLC. Bos Dairy was eliminated as a possible site because it would require wetland mitigation and storm drainage management due to its location in a drainage bottom, and also because there is an area of buried debris from the demolition of the old Manhattan School in this area. The landfill owned by the Town of Manhattan was also eliminated from consideration because there is no portion of remaining undisturbed ground that is large enough for the proposed wastewater treatment plant. The third site, Manhattan Meadows, LLC, is located further down the drainage from Bos Dairy. This property is currently a hay field that was recently purchased for development. The owner has expressed a willingness to exchange the required land for a 5-acre parcel adjacent to the town's existing wastewater lagoons.

The Manhattan Meadows, LLC site has several advantages over the existing lagoon site. It has a lower inflow elevation, thus allowing access to treatment without lift stations for a larger area. It has lower groundwater elevations, thus eliminating groundwater construction constraints. And it also eliminates conflicts with utilizing the existing lagoons during construction of the new mechanical treatment plant. For that reason, a land exchange agreement with the property owner was executed in April of 2005. The new location of the proposed wastewater treatment facility is shown in Figure 3. The town has requested that their MPDES permit be modified to reflect this new discharge location.

6. ALTERNATIVES INCLUDING THE PROPOSED ACTION

Five (5) alternatives for addressing the District's wastewater treatment facilities' upgrades and expansions were addressed in the February 2004 PER Amendment.

Alternatives 1 through 4 would be designed for a population of 2,710 persons and an average daily flow of 371,000 gpd. Treated effluent would be discharged into Dita Ditch. Components common to these alternatives include a mechanical screening unit, a grit removal unit, a building to house blowers, sludge pumps, etc., ultra-violet (UV) disinfection, and influent and effluent flow measurement devices.

It should be noted that several lagoon-based options were evaluated in a separate document, WWTP Alternative Review for Manhattan, Montana, prepared in April, 2004, by Thomas, Dean and Hoskins, Inc. It was decided by the town that the mechanical treatment systems had greater advantage in the long term than lagoon systems due to the smaller footprint and subsequent smaller land requirement, greater flexibility, and more reliable nutrient removal capabilities. Additional analysis of lagoon treatment systems will not be discussed further in this assessment.

Another option that was briefly discussed in the February 2004 PER Amendment was the concept of piping the effluent two and one-half (2.5) miles to the Gallatin River in order to have more dilution in the larger receiving stream, thus possibly minimizing the requirement for ammonia removal. It was determined that, at the higher projected wastewater flows, there would be no appreciable gain by piping to the river. At the higher flow rates, effluent limits would be governed by Montana nondegradation rules, which would most likely require some sort of nutrient removal anyway at these higher flow rates.

6.1 ALTERNATIVE 1 - CONSTRUCTION OF A HYBRID LAGOON SYSTEM (BIOLAC)

This alternative consists of constructing a single reaction basin using a portion of the existing lagoon embankment, two (2) final clarifiers that are built into one (1) end of the basin, alum container and injection system, polymer storage and injection system, and a rotary drum sludge thickener. Mixing and aeration of the reaction basin are provided by diffusers that hang from slowly moving air laterals on the water surface. In this alternative, the waste activated sludge would be thickened with a rotary drum sludge thickener and then placed in an aerated sludge-holding pond. Sludge would be periodically pumped from the pond to the sludge drying beds or container filter for dewatering. After the sludge has been adequately dewatered, it would be either land applied to agricultural land at agronomic rates or disposed of in a licensed landfill. This alternative was not selected because of the cost for chemical addition (alum), which is necessary for phosphorous removal, the significant additional sludge produced from the addition of alum, and the relatively high capital and operation and maintenance (O&M) costs compared to other alternatives.

6.2 ALTERNATIVE 2 - CONSTRUCTION OF AN OXIDATION DITCH WITH AN ANAEROBIC SELECTOR FOR BIOLOGICAL NUTRIENT REMOVAL

This alternative consists of the construction of one (1) or two (2) oxidation ditch reactors, two (2) secondary clarifiers, two (2) aerobic digesters, and either sludge drying beds or a container filter dewatering

apparatus. The reactors contain different zones for biological removal of carbon, nitrogen, and phosphorous. Waste sludge would be digested, dewatered or dried, and then sent to a landfill for disposal. Treated effluent would be disinfected with UV radiation and discharged to Dita Ditch. This alternative was not selected due to its high capital and O&M costs.

6.3 ALTERNATIVE 3 - CONSTRUCTION OF SEQUENCING BATCH REACTORS

This alternative includes the construction of two (2) sequencing batch reactors (SBRs), an equalization basin, two aerobic digesters, and either sludge drying beds or a container filter dewatering apparatus. Waste sludge would be digested, dewatered or dried, and then sent to a landfill for disposal. Treated effluent would be disinfected with UV radiation and discharged to Dita Ditch. Although this alternative is very comparable in cost to the selected alternative, it was not selected due to the requirement for more operator time and attention, its reliance on a higher degree of automation, and its relatively short hydraulic detention time may make it more vulnerable to upsets.

6.4 ALTERNATIVE 4 - CONSTRUCTION OF AERATION WHEEL TREATMENT FACILITY

This alternative includes the construction of two (2) aeration wheel reactors and clarifier trains, two (2) aerobic digesters, and either sludge drying beds or a container filter for dewatering the sludge. Waste sludge would be digested, dewatered or dried, and then sent to a landfill for disposal. Treated effluent would be disinfected with UV radiation and discharged to Dita Ditch. This is the selected alternative based on a uniform cost comparison, lower power costs, ease of O&M, and expandability for future growth.

6.5 ALTERNATIVE 5 - NO ACTION ALTERNATIVE

This alternative would leave the wastewater treatment system as is, with no improvements. The system would remain hydraulically and organically overloaded and the lagoons would continue to leak into the local, shallow groundwater. The system would continue to experience MPDES permit violations that could lead to DEQ enforcement actions and fines. This alternative was not selected due to the existing problems with the system and the potential situation that the town might have to put a moratorium on any future development within town.

7. ALTERNATIVE COMPARISONS

7.1 COST COMPARISON FOR TREATMENT ALTERNATIVES: ANNUAL EQUIVALENT COST ANALYSIS

The annual equivalent cost analysis is a means of comparing alternatives by converting capital, O&M, and salvage values into annual costs. Interest rate for amortizing construction cost over a 20-year period is 6% annually. The salvage value is based on straight-line depreciation of concrete, buildings, piping and earthwork at 20 years after construction. These items are projected to have a 50-year design life. The analysis is used to determine the most cost-effective alternative. Table 1 provides a summary of the annual equivalent cost analysis of the wastewater treatment project alternatives.

Based on the cost analysis shown in Table 1, Alternative 4 (the Aeration Wheel Treatment Facility) has the lowest annual cost and is the most cost-effective alternative considering both capital and O&M costs. However, given the preliminary nature of these cost estimates, it should be noted that Alternative 3 (SBR) is essentially the same equivalent cost as Alternative 4.

TABLE 1

ITEM	ALT 1	ALT 2	ALT 3	ALT 4
	Biolac	Oxidation Ditch	SBRs	Aeration Wheel
Capital Costs	\$2,898,344	\$2,967,810	\$2,724,940	\$2,952,410
Annual O&M Costs	\$156,611	\$161,164	\$146,961	\$124,140
Salvage Values	\$984,600	\$1,014,000	\$921,600	\$970,800
ANNUAL EQUIVALENT COST	\$323,460	\$331,506	\$304,184	\$296,906

7.2 BASIS OF SELECTION OF THE PREFERRED ALTERNATIVE

Selection of the preferred alternative was based upon several criteria, both monetary and non-monetary. Ranking criteria are weighted in terms of relative importance as shown in Table 2.

TABLE 2

	Weight Factor	ALT 1 Biolac		ALT 2 Ox. Ditch		ALT 3 SBRs		ALT 4 Aeration Wheel	
		Rank*/Score	Rank*/Score	Rank*/Score	Rank*/Score	Rank*/Score	Rank*/Score		
Construction Cost(s)	2.0	8	16.0	8	16.0	10	20.0	9	18.0
O&M Cost(s)	1.5	7	10.5	7	10.5	8	12.0	10	15.0
Treatment Effectiveness	2.0	7	14.0	10	20.0	10	20.0	9	18.0
Equipment Reliability	1.0	7	7.0	10	10.0	8	8.0	10	10.0
Operational Ease	1.0	8	8.0	10	10.0	8	8.0	10	10.0
Ability to be Expanded	1.5	6	9.0	7	10.5	10	15.0	9	13.5
Energy Use	1.0	6	6.0	7	7.0	7	7.0	10	10.0
TOTALS			70.5		84.0		90.0		94.5

*Rank is rated between 1 and 10

Based upon the cost analyses and non-monetary concerns as shown in Table 2, Alternative 4, the Aeration Wheel Treatment Facility, is the recommended alternative. This alternative is most favorable for the following reasons:

- Capital costs are reasonably low
- The O&M costs are the lowest of the alternatives
- It is capable of meeting permit limits now and in the future
- This alternative is relatively easy to operate and reliable
- It is easily expandable
- Energy use is low relative to other alternatives

7.3 COMPARISON OF ENVIRONMENTAL IMPACTS

All of the treatment alternatives evaluated should have positive environmental impacts with regard to water quality. As shown in Table 2, the energy use of the alternatives will vary to some degree, but all alternatives will require more energy than the current facility. Because all of the alternatives will employ the use of mechanical motors and/or blowers, there is expected to be an increase in the noise level at the facility, but no difference between alternatives. None of the alternatives will require more land. There should be no significant impacts to cultural resources, air quality, wetlands, vegetation, wildlife, or transportation from any of the alternatives nor should there be any difference in impact between the alternatives.

7.4 SELECTED ALTERNATIVE

As described above, Alternative 4, the Aeration Wheel Treatment Facility is the recommended alternative for the Town of Manhattan. A tentative schedule of milestone dates for the proposed project follows:

Plans and Specifications	July 1 – Nov. 15, 2005
DEQ Review	Aug. 22 – Nov. 15, 2005
Bidding and Award of Contract	Nov. 15 – Jan. 30, 2006
Construction	Feb. 1 – Sept. 30, 2006
Project Close Out	Sept. 30 – Dec. 31, 2006

Design criteria for the proposed project are:

Design year	2025
Design population	2,710
Design average daily flow, gpd	371,000
Design peak day flow, gpd	606,500
Design peak hourly flow, gpd	1,143,400

The estimated project budget, as outlined in the July 2005 PER Amendment, is \$4,223,263 as shown in Table 3 below.

TABLE 3

ESTIMATED PHASE II IMPROVEMENTS COSTS	
ITEM	ESTIMATED COSTS
Preliminary Geotechnical I/I	\$10,500
Monitoring Sewage Flow	\$2,190
Monitoring Stream Flow	\$4,000
Land Acquisition	\$85,000
Facility Plan Amendment	\$16,125
Engineering Design	\$254,500
Engineering Inspection	\$113,000
Construction	\$3,194,360
O&M Manual	\$15,000
Administration	\$11,207
Misc. (Legal, Audit)	\$12,863
SUBTOTAL	\$3,718,745
Contingency (10%)	\$356,755
SUBTOTAL	\$4,075,500
Financial Costs	\$19,025
SUBTOTAL	\$4,094,525
Reserve	\$128,738
TOTAL ESTIMATED COSTS	\$4,223,263

Funding sources for the project are shown in Table 4 below.

TABLE 4

FUNDING SOURCE	DOLLAR AMOUNT	PERCENT OF TOTAL
Community Development Block Grant (federal grant)	\$500,000	11.8%
Treasure State Endowment Program (state grant)	\$418,435	9.9%
DNRC Renewable Resources Grant (state grant)	\$109,322	2.6%
EPA State and Tribal Assistance Grant (federal grant)	\$337,500	8%
Montana WPCSRF Loan	\$1,416,121	33.5%
COE Water Resources Development Act (federal grant)	\$1,300,000	30.8%
Manhattan Reserve	\$141,885	3.4%
TOTAL	\$4,223,263	100%

The Town of Manhattan has obtained grants from the following programs: DNRC Renewable Resources Grant and Loan, Community Development Block Grant, Treasure State Endowment, EPA State and Tribal Assistance Grant, and U.S. Army Corp of Engineers Water Resources Development Act (WRDA) Grant. The remaining cost of the project will be funded using the town's reserve and a low-interest loan from the Water Pollution Control State Revolving Fund program. Sewer rates will be approximately \$45.20/month. The economic impacts of the proposed project on the current ratepayers of the town are summarized in Table 5.

TABLE 5

	CURRENT	PROJECTED
Annual O&M Costs	\$118,436	\$219,000
Annual Debt Service, including coverage	\$65,213	\$192,597
Total Annual Costs	\$183,649	\$411,597
Total System Annual Revenue	\$259,099	\$417,648
Total System Equivalent Dwelling Units	752	770
Total Residential Equivalent Dwelling Units	700	711
Average Monthly Residential User Rate	\$30.20	\$45.20
Total Annual Revenue from Residential	\$253,680	\$385,646
Percent of Total Annual Revenue from Residential	93%	92%

8. AFFECTED ENVIRONMENT

Wastewater services for the Town of Manhattan are provided within the town boundary (shown in Figure 4); and also include Woodenshoe Lane, which is part of the planning area (shown in Figure 5). The community is located about 2 miles south of the Gallatin River in a mostly rural farming area. The town was legally incorporated on May 22, 1911, and in 1916 a basic wastewater treatment system was constructed. The present wastewater system has 701 sewer connections with no significant commercial or industrial users. The town's economy is based mostly on agriculture. The service area for wastewater system improvements for the 20-year planning period includes the incorporated town and adjacent areas likely to be developed during the project planning period (see Figure 6).

8.1 CLIMATE

Average annual precipitation is 13-15 inches and the average annual temperature is 42° F. There are 95-115 frost-free days and freezes can arrive as early as the last week of August or as late as the end of September.

8.2 GEOLOGY/TOPOGRAPHY

Much of the area in the immediate vicinity of Manhattan is valley land with low, rolling hills. Interstate 90 runs just south of town and is a major route for both locals and tourists. Manhattan is located in the central part of the Gallatin Valley, a broad, intermontane valley. The elevation is 4,250 feet above sea level. The geotechnical evaluation performed at the proposed site indicates a subsurface profile of silty gravel with sand, indicating the presence of alluvium and decomposed bedrock.

8.3 AIR QUALITY/NOISE

The air quality program in Montana is managed by DEQ's Air Resource Management Bureau. Its goal is to achieve and maintain reasonable levels of air quality to protect human health, safety, and welfare and to meet the National Ambient Air Quality Standards (NAAQS) through the Clean Air Act. Monitoring is done in areas of potentially high levels of particulate matter, ozone, sulfur dioxide, nitrogen dioxide, lead, and carbon monoxide, as listed in NAAQS. Air pollution that exceeds the standards causes public health

hazards, nuisance, annoyance damage to buildings, property, animals, plants, forests, crops, and exposed metals, and may interfere with the enjoyment of life and/or property.

The nearest air quality monitoring station is in Belgrade, 10 miles downwind from the town of Manhattan. Recordings at Belgrade are below the standards of concern for particulate matter.

8.4 WATER RESOURCES

MPDES is managed by DEQ's Water Protection Bureau. The DEQ issues MPDES permits to point sources that discharge into state waters. These permits contain effluent limitations and requirements for sampling and reporting of discharges. The effluent limitations incorporate both technology-based and water-quality-based limitations. The water-quality-based limitations are designed to protect the water-quality standards of the receiving streams. These standards are designed to support specific designated uses such as coldwater fisheries, drinking water sources, and/or recreational activities.

The town's receiving stream, Dita Ditch, is classified as a B-1 water body. Waters classified as such are to be maintained suitable for drinking, culinary and food processing purposes, after conventional treatment; bathing, swimming and recreation; growth and propagation of salmonid fishes and associated aquatic life, waterfowl and furbearers; and agricultural and industrial water supply.

8.4.1 Wetlands

The presence of the Gallatin River and Baker and Camp creeks, as well as high groundwater levels, make wetlands common in the low-lying and drainage areas north of the Manhattan area near the rivers. Wetlands are present within the drainage area proximal to the project location.

8.4.2 Surface Water(s)

Major surface water features in the vicinity include the West and East Forks of the Gallatin River, which join approximately two and one-half (2.5) miles north of Manhattan. The smaller streams, Baker and Camp Creeks, located west of Manhattan, flow northward into the West Fork of the Gallatin River. Additionally, many sloughs are located along the roadways and abandoned railroad grades, and irrigation canals are found throughout the area.

8.4.3 Groundwater

The water table in the Manhattan area has a minimum depth of less than 10 feet and typically is not greater than 35 feet in depth. Groundwater is recharged in the upland areas by percolation of snowmelt, rainfall and irrigation waters into the valley till. It is also recharged near the side of the valley by water lost from streams where they flow onto valley till from the surrounding mountains and some water enters the bottom of the valley till deposits by upward movement of groundwater along fractures in the older rocks below. Sources of groundwater also include seepage from irrigation canals and associated irrigation from the West Fork of the Gallatin River along with Baker and Camp Creeks.

8.4.4 Floodplain

The proposed facility is located approximately one-half (.5) mile south of the mapped 100-year floodplain.

8.5 SOCIOECONOMICS

The entire Gallatin Valley has experienced rapid growth in the past two (2) decades, and Manhattan is a desirable place to live due to its rural nature and close proximity to Bozeman. Detailed census data for 1990 indicated that 1,034 people resided in the Town of Manhattan. As of July 1996, the Census and Economic Information Center of the Montana Department of Commerce estimated a population of 1,380. Population projections for the 20-year planning period are based upon input from the Manhattan Steering Committee, historical population data, U.S. Census of Population data, the Manhattan Planning Board recommendations, the 1998 Town of Manhattan Master Plan Update, and recommendations from the town's contracted planner. According to the Department of Commerce population data, the historical growth over the past decade is approximately 3% per year. This is similar to the projected growth rate of 45% per decade over the 20-year planning period. The town's economy is based mostly on agriculture.

8.6 LAND USE

Land use within the town of Manhattan limits is dominated by residential homes (451 single and 52 multi-family) with some non-residential users (48 commercial, 11 commercial/residential, 52 manufacture/modular, and 14 other). In addition, there are 67 users along Woodenshoe Lane that are located outside of the town limits but receive wastewater services.

Land use in the immediate vicinity surrounding the Manhattan town boundaries is agricultural, light industry and commerce, residential, and recreational in nature. Agricultural uses include irrigated pastures and croplands, feedlots and dairy operations. Land use within the planning area is expected to change significantly in the future. Four (4) large subdivisions in the area to the north, west and east of Manhattan have been proposed. The proposed wastewater treatment facility would offer treatment of the residential wastewater generated from these proposed subdivisions.

8.7 CULTURAL RESOURCES

The Montana State Historic Preservation Office (SHPO) responded to a request for information and comments regarding the proposed project in a letter dated May 13, 2005. According to their records, there have been no previously recorded historical or archaeological sites within the designated search locales. SHPO felt that there is a low likelihood that cultural properties will be impacted from this project and, as such, felt a cultural resource inventory is unwarranted at this time. However, if cultural materials are discovered during the project, SHPO asked that their office be contacted and the site investigated.

8.8 THREATENED AND ENDANGERED SPECIES

A letter, dated May 27, 2005, was sent to the U.S. Fish and Wildlife Service (USFWS) requesting information and comments regarding the proposed project. The USFWS responded with a letter, dated June 10, 2005, stating that it does not anticipate adverse impacts to any federally listed threatened, endangered, candidate or proposed species. Therefore, listed threatened and endangered species is not discussed further in this document.

8.9 FISH AND WILDLIFE

The Gallatin River, Baker and Camp Creeks, and unnamed tributaries contain a variety of game and non-game fish. The primary game fish species include rainbow trout, brown trout, and mountain whitefish. There are also brook trout and cutthroat trout in smaller numbers. Non-game fish include the mottled sculpin, longnose dace, white sucker, and longnose sucker. These waters are destination areas for fisherman because of the high quality of fishing.

A variety of wildlife is present in and around the Manhattan area because of its close proximity to the Gallatin River. Whitetail deer are the most abundant of the 30-40 species of mammals present. Other mammals present include the shrew, deer mouse, meadow mouse, raccoon, skunk, red fox, and coyote. Common reptile and amphibian species include the western terrestrial garter snake and boreal toad.

Bird species are also abundant in the area. Of the 144 neotropical bird species, 98 (68%) occur in the riparian habitats surrounding Manhattan. Canada geese are abundant year-round, both as migrants and residents. The bald eagle is present year-round, but no breeding pairs are known to reside in the vicinity. The peregrine falcon is a spring and fall migrant, as are a variety of waterfowl. Great horned owls and osprey nest in the area also.

8.10 VEGETATION

The proposed project would occur on an old hay field that was recently purchased for development. No native vegetation occurs within the proposed project area.

Native vegetation within the Manhattan area has generally been altered for agricultural purposes. The exception is within the Gallatin River riparian areas. Lands used for grain production have been cultivated for barley and wheat. Permanent pasturelands have been seeded with smooth brome, wheat grasses, foxtail and introduced grasses and forbs. Vegetation has been severely impacted in areas occupied by feedlots and dairy operation, east and north of the current sewage lagoons.

8.11 SOILS/PRIME FARMLAND

Prime farmlands exist within much of the area surrounding Manhattan, provided that adequate irrigation is available eight (8) out of ten (10) years. Some residential development also exists in the immediate vicinity of Manhattan. A majority of the lands in the locale have been disturbed by cultivation. Some lands have been placed into cultivation, others into permanent pasture, while some have been converted into feedlots and dairy operations.

An inquiry was made to the Natural Resource Conservation Service (NRCS) regarding the proposed project. The NRCS responded with a letter, dated June 3, 2005, that stated that all of the soils in the project area have an "important farmland classification", to include farmland of local importance, statewide importance, and prime farmland if irrigated. These soils are described as Amesha Cobbly Loam, 2 to 8 percent slopes, Amesha Loam, 0 to 4 and 4 to 8 percent slopes.

9. ENVIRONMENTAL CONSEQUENCES

9.1 CLIMATE

Due to the size of the proposed project, it is not likely to adversely affect the climate of the area.

9.2 GEOLOGY/TOPOGRAPHY

The proposed project would slightly alter the topography in the area, but not to an extent that would be considered noticeable. Therefore, the proposed project is not likely to adversely affect the geology/physiography of this region.

9.3 AIR QUALITY/NOISE

Short-term negative impacts on the air quality will occur from heavy equipment dust and exhaust fumes during project construction. Proper construction practices and dust abatement measures will be taken during construction to control dust, thus minimizing this problem. As with all mechanical wastewater treatment systems, odors will be generated and may be detectable in areas proximal to the facility. However, this odor should be minimized if proper O&M practices are followed.

Short-term impacts from excessive noise levels may occur during construction of the proposed project improvements. Construction activities are anticipated to last approximately seven (7) months during the winter of 2005 and the spring of 2006. Construction will occur only during normal working hours. The operation of the wastewater treatment facilities will produce some noise associated with the mechanical equipment (blowers, pumps, motors, etc.).

9.4 WATER RESOURCES

9.4.1 Wetlands

Wetlands are present within the drainage area proximal to the project location. However, no wetlands are present at the proposed project location and as such, will not be impacted by the construction of a new wastewater treatment facility. There may be impacts to wetlands, however, associated with growth in and around the community as a result of this project. ~~Before dredged or fill material can be discharged or placed into waters of the United States, including wetlands, a 404 permit must first be obtained from the U.S. Army Corps of Engineers. Before issuing this permit, any potential, future impacts to wetlands will be addressed.~~

9.4.2 Surface Waters

The existing and proposed wastewater treatment facility will discharge to surface water (Dita Ditch to the Gallatin River). The proposed site is located away from any year-round surface water sources and no impacts to surface water are anticipated during construction, as erosion control measures will be utilized. Disturbed areas will be reseeded following work. The proposed improvements will reduce groundwater pollution, thereby indirectly improving surface water quality.

9.4.3 Groundwater

The existing lagoon system has been documented to leak excessively, thus presenting a significant source of groundwater pollution and a public health risk. Consequently, the recommended wastewater system improvements would eliminate the existing groundwater pollution and public health risk, thereby directly improving the groundwater in the immediate area.

9.4.4 Floodplain

As the proposed project is located outside of the 100-year floodplain, no impacts are anticipated and a floodplain development permit is not required.

9.5 SOCIOECONOMICS

This project will eliminate an existing lagoon that is presently leaking excessive amounts of marginally treated wastewater to groundwater and eventually to surface water resources. Local rural residents use groundwater in this area as their primary drinking water source. The new mechanical

wastewater treatment system will treat wastewater to an acceptable level before being discharged to surface water. Threats to groundwater will be eliminated, as the present facultative ponds will be de-commissioned once the new wastewater treatment facility is constructed. The older, problem portions of the collection system that have high groundwater infiltration may be repaired or replaced as part of the project, thereby eliminating the threat to public health.

During construction of the proposed project, energy will be consumed causing a direct short-term impact on this resource. On a long-term basis, additional energy will be required due to the mechanical nature of this wastewater treatment facility. This additional energy demand cannot be avoided; however, it is relatively minimal relative to regional demands.

This project may result in increased growth in and around the community. Such growth can contribute to secondary impacts such as increased traffic, loss of agricultural land, increased demand on local governmental services, etc.

9.6 LAND USE

A developer recently purchased the land to be subdivided for residential use. Therefore, historical land use of the property would change from farming to urban. Land uses surrounding Manhattan would continue to be agricultural, light industry and commerce, residential, and recreational in nature.

The selected alternative will most likely affect the growth of the community, because the wastewater system improvements will be designed to allow treatment of additional wastewater from an increased population and service area. Collection system upgrades mostly utilize the existing pipeline trench in the affected streets. There would be no change in future land uses in the immediately affected area from existing collection system upgrades. However, new collection systems would be installed should the proposed subdivisions connect to the Town's wastewater system.

9.7 CULTURAL RESOURCES

Although there are no cultural properties recorded in the vicinity of the proposed project, construction activities will require immediate reporting to the SHPO should any artifacts be uncovered. Research by the SHPO noted that a cultural resource inventory is "unwarranted."

9.8 FISH AND WILDLIFE

The proposed project is not likely to adversely affect wildlife within or near the project area. Because the proposed project is located in a previously farmed area and is considered low quality habitat, fish and wildlife would not be adversely impacted by project implementation.

9.9 VEGETATION

Vegetation in the excavation areas would be affected; however, all of these species are common and plentiful in the area. After the project is complete, the area would be reseeded with native vegetation to replace what was lost. Therefore, the proposed project is not likely to adversely affect vegetation.

9.10 SOILS/PRIME FARMLAND

The proposed project will affect soils/prime farmland where excavation occurs. In addition, this project will likely result in increased growth in and around the community. As such, prime farmland may be lost by the proposed subdivisions. Currently, over 500 acres have been proposed to be subdivided.

9.11 CUMULATIVE EFFECTS

No significant adverse impacts are anticipated. Increased development in the area could ultimately result in increased nutrient loading to Dita Ditch. However, Montana's Nondegradation Law would limit this increased loading. Increased traffic in the area is also possible. Increasing the capacity of the wastewater treatment facility may allow for more growth in the planning area and may concentrate development nearer Manhattan as opposed to more sprawling development.

There are no significant commercial or industrial wastewater contributors to the Manhattan wastewater treatment facility. There are no known plans for significant economic development, such as mines, public facilities, manufacturing or commercial facilities that would significantly increase the population of Manhattan. However, there is one (1) large development that has requested annexation, which consists of approximately 35 single-family lots and 14 business or light industrial lots. In addition, there are four (4) large subdivisions planned for the area to the north, west and east of Manhattan. These developments are included in both the population projections and design wastewater flows.

Collection system upgrades mostly utilize the existing pipeline trench in the affected streets. There would be no change in future land uses in the immediately affected area from the existing collection system upgrades. However, should the proposed subdivisions connect to the town's wastewater system, new collection systems would need to be installed. The land use in and around the proposed subdivisions would change from farming to urban.

10. PUBLIC PARTICIPATION

A high level of community involvement took place during the facility planning process. A steering committee consisting of a wide range of community members was formed to further involve the public. Five (5) public meetings were held with the steering committee to discuss population projections, treatment alternatives, sewer rates, and ways to stimulate community input, and provide review input to the engineers. In addition, the steering committee developed a community awareness fact sheet, which was distributed to all sewer users. The fact sheet explained the existing wastewater system deficiencies, gave notice that wastewater fees would be increased again for the second time in a year, and invited public participation and feed back. A community needs assessment relative to how the community would like to see development occur, what services need to be improved, and information on user rate increases, was created to solicit community input.

In addition, several public meetings were held to discuss the proposed mechanical wastewater treatment facility alternatives and various plant locations. Surrounding landowners directly adjacent to the plant were contacted and are generally in support of the new plant location. The community and the Town Council are in agreement that an upgrade to the Town's wastewater treatment facility is necessary. Overall, there is public support for the proposed project.

11. AGENCIES CONSULTED

The following agencies have been contacted concerning the proposed construction of this project. Included is a summary of each agency's comments concerning any adverse environmental impacts that should be considered.

The Montana Department of Fish, Wildlife and Parks (MFWP) reviewed the proposed project and had comments concerning the cumulative impacts on local waterways, but had no major comments directed at the proposed facility. MFWP recommended avoiding any construction activity near surface waters that might destabilize the existing channel configurations, or disturb riparian or wetland vegetation. Additionally, MFWP recommended that actions be taken to prevent localized stream disturbances during actual construction. MFWP commented that drainage within and through the facility is critical to avoid increased sediment and other contaminants from entering waterways.

The Montana SHPO considered the impacts of the proposed project on local historical sites and cultural resources. According to its records, there have been no previously recorded historical or archaeological sites within the designated search locales. SHPO felt that there is a low likelihood cultural properties will be impacted and, as such, felt a cultural resource inventory is unwarranted at this time. However, if cultural materials are inadvertently discovered during the project, SHPO asked that its office be contacted and the site investigated.

The Montana DEQ reviewed the proposed project and had comments concerning required water quality permits for construction-related activities. In addition, DEQ stated that the town would be required to amend its wastewater discharge permit to reflect the proposed changes in the wastewater treatment facility and discharge location.

The USFWS reviewed the proposed project and commented that it did not anticipate adverse impacts to any federally listed threatened, endangered, candidate or proposed species. In addition, USFWS stated that Corp of Engineers Section 404 permits may be required if wetlands are impacted by the project.

The NRCS reviewed the proposed project and determined that all of the soils in the proposed site have an "important farmland classification", to include farmland of local importance, statewide importance, and prime farmland if irrigated. If requested by the local landowner, this land qualifies for protection under the Farmland Protection Act.

The U.S. Army Corps of Engineers was contacted regarding the proposed project, and is responsible for administering Section 404 of the Clean Water Act, which regulates the excavation or placement of dredged or fill material below the ordinary high water mark of our nation's rivers, streams, lakes, or in wetlands. To date, no written comments have been received. Because WRDA grant money will be used for this project, the Corp of Engineers contributed to the development of this EA.

The Montana Department of Natural Resources and Conservation was contacted regarding the proposed project. To date, no written comments have been received.

12. APPLICABLE REGULATIONS AND PERMITTING AUTHORITIES

No additional permits will be required from the State Revolving Fund section of DEQ for this project after review and approval of the submitted plans and specifications. However, coverage under the stormwater general discharge permit for construction activities is required from the DEQ Water Protection Bureau prior to the beginning of construction. Additionally, the Town's MPDES permit must be modified to reflect the new discharge location prior to putting the new system online. A construction dewatering

permit from the DEQ Water Protection Bureau may also be required if groundwater is encountered during construction of the new wastewater treatment plant and dewatering activities are necessary.

13. RECOMMENDATION FOR FURTHER ENVIRONMENTAL ANALYSIS

EIS

More Detailed EA

No Further Analysis

Rationale for Recommendation: Through this EA, EPA has made a preliminary determination that none of the adverse impacts of the proposed Manhattan wastewater treatment facility project are significant. Therefore, an EA is the appropriate level of analysis and an environmental impact statement (EIS) is not required.

14. 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:

Wastewater Facility Plan (Preliminary Engineering Report) Town of Manhattan, May 2000. Prepared by Stahly Engineering & Associates.

Amendment to Town of Manhattan May 2000 Wastewater Facility Plan (Preliminary Engineering Report), February 2004. Prepared by Stahly Engineering & Associates.

Wastewater Treatment Plant Alternative Review for Manhattan, Montana, April 2004. Prepared by Thomas, Dean, & Hoskins, Inc.

2nd Amendment to Town of Manhattan May 2000 Wastewater Facility Plan (Preliminary Engineering Report), July 2005. Prepared by Stahly Engineering & Associates.

Uniform Application Form for Montana Public Facility Projects for the Manhattan Wastewater Treatment Facility Upgrade, August 2000 and subsequent updates. Prepared by Stahly Engineering & Associates.

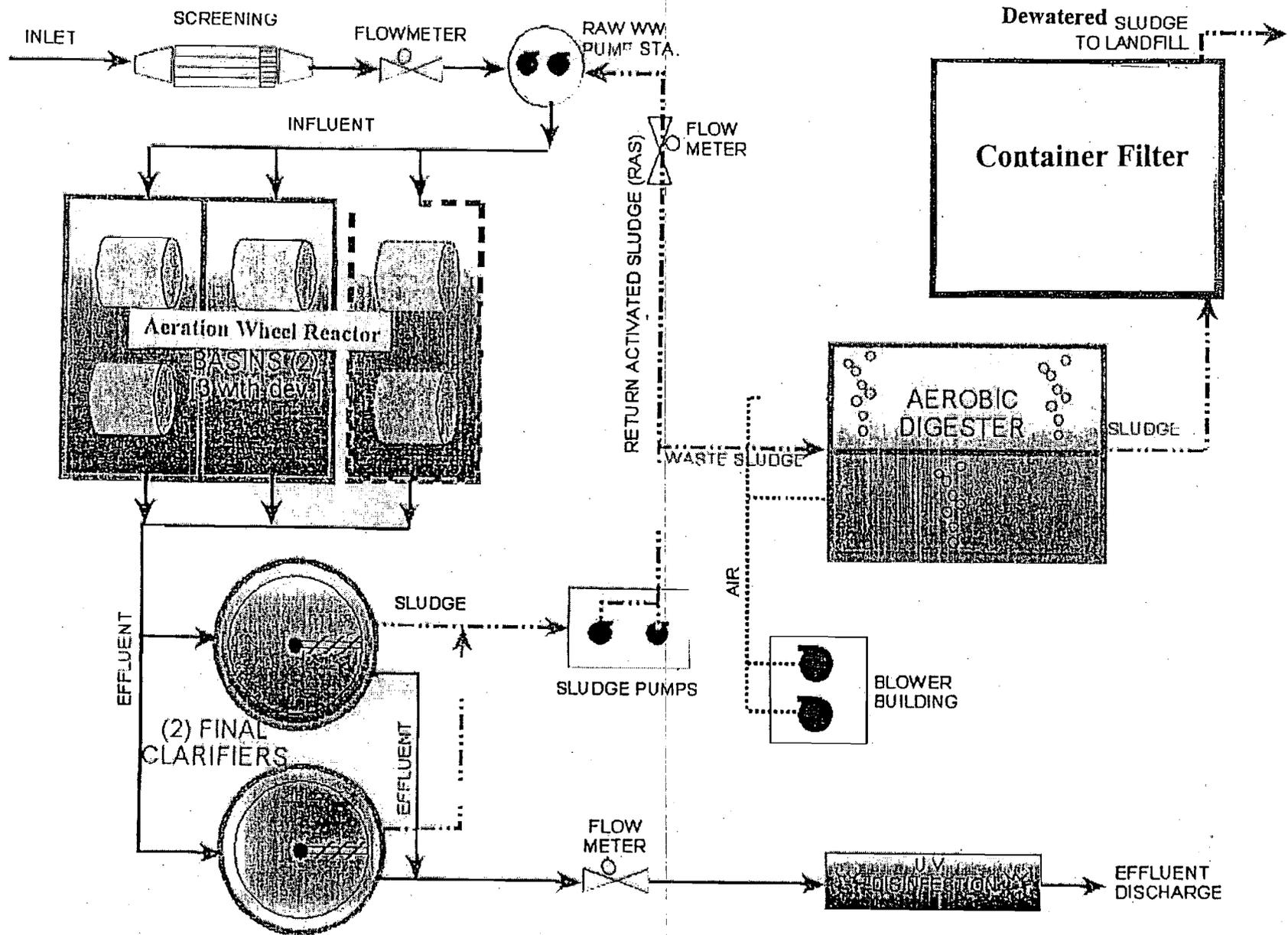


Figure 2. Aeration Wheel Treatment Plant Schematic

Figure 4. Town Boundary Map

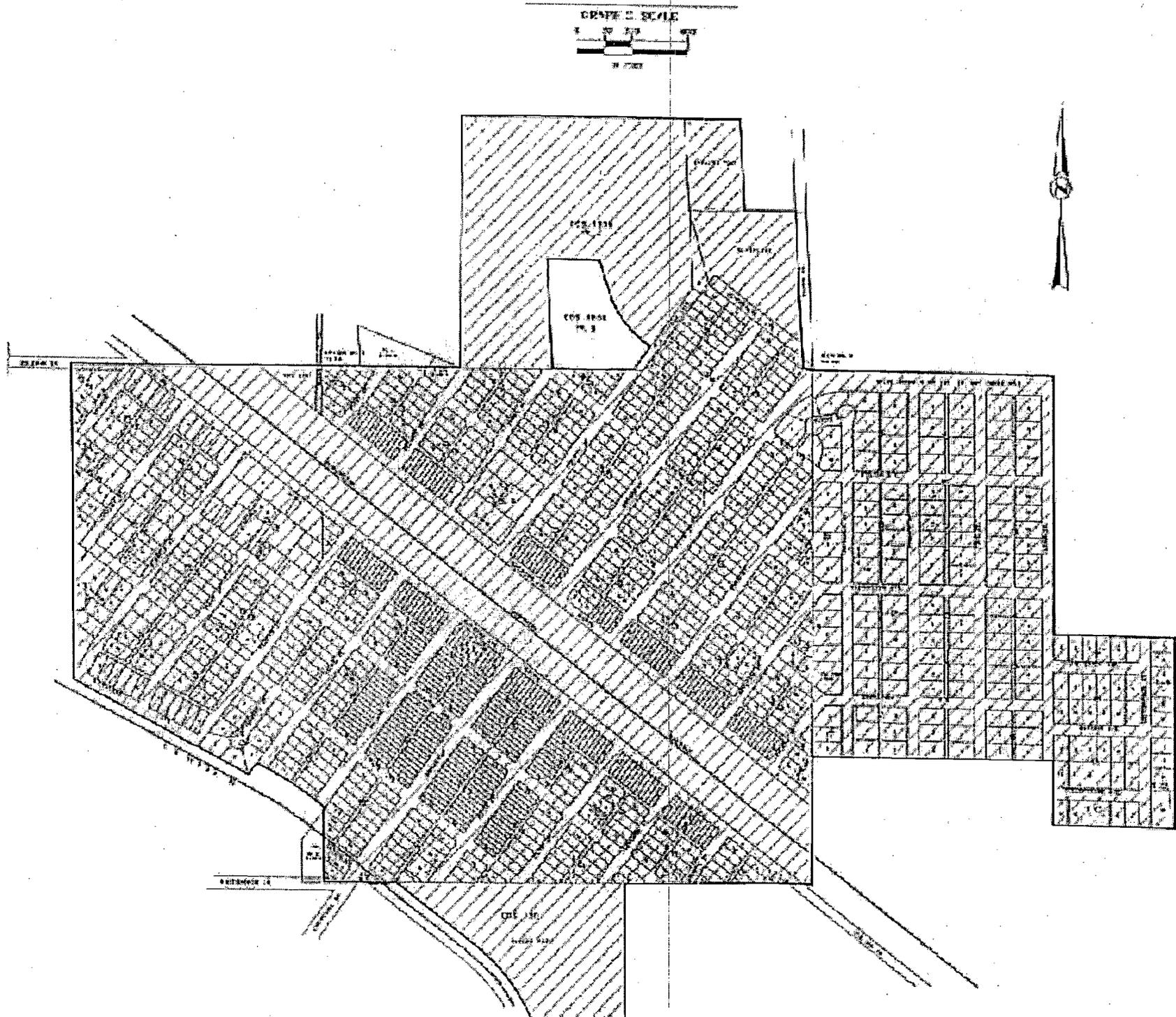
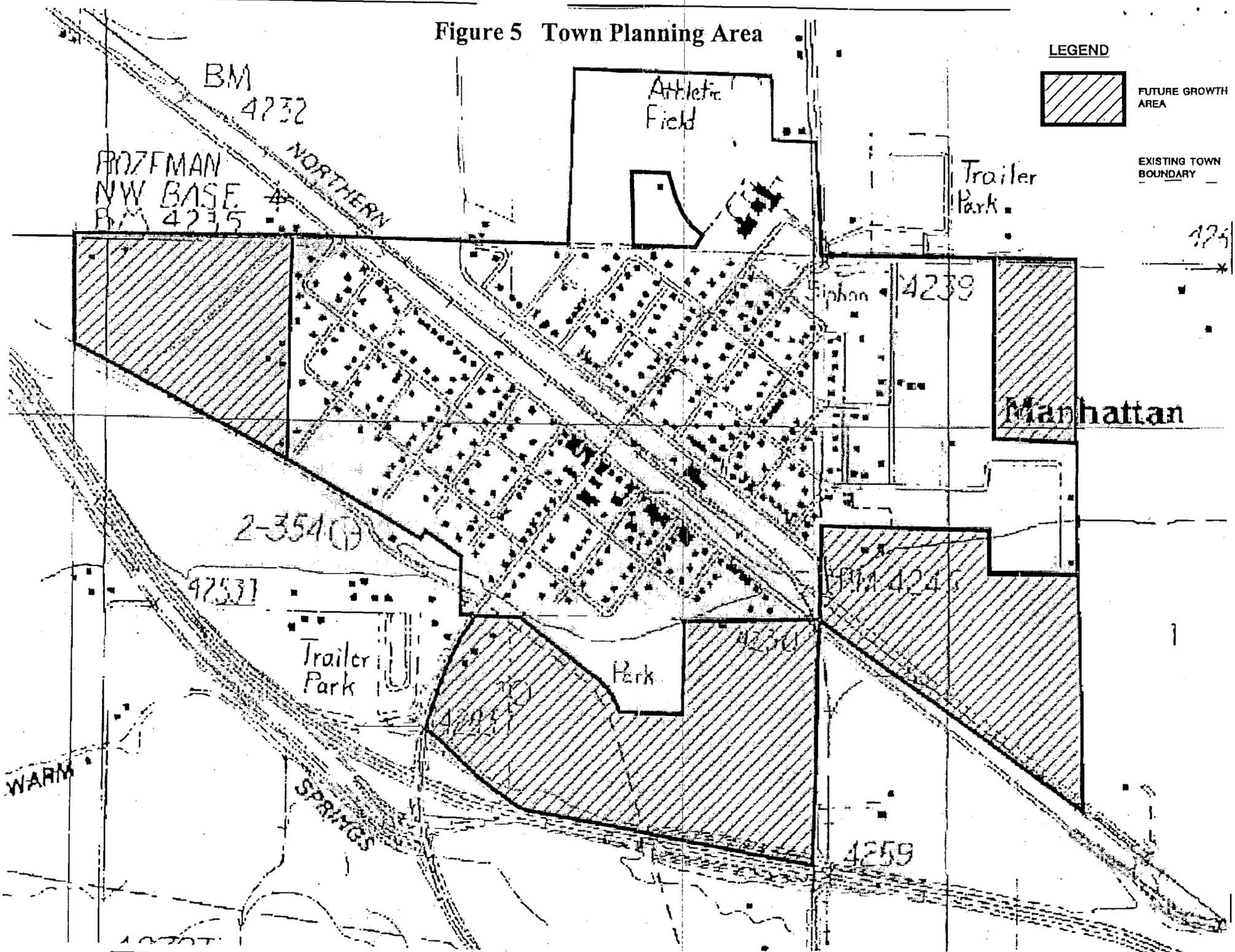


Figure 5 Town Planning Area



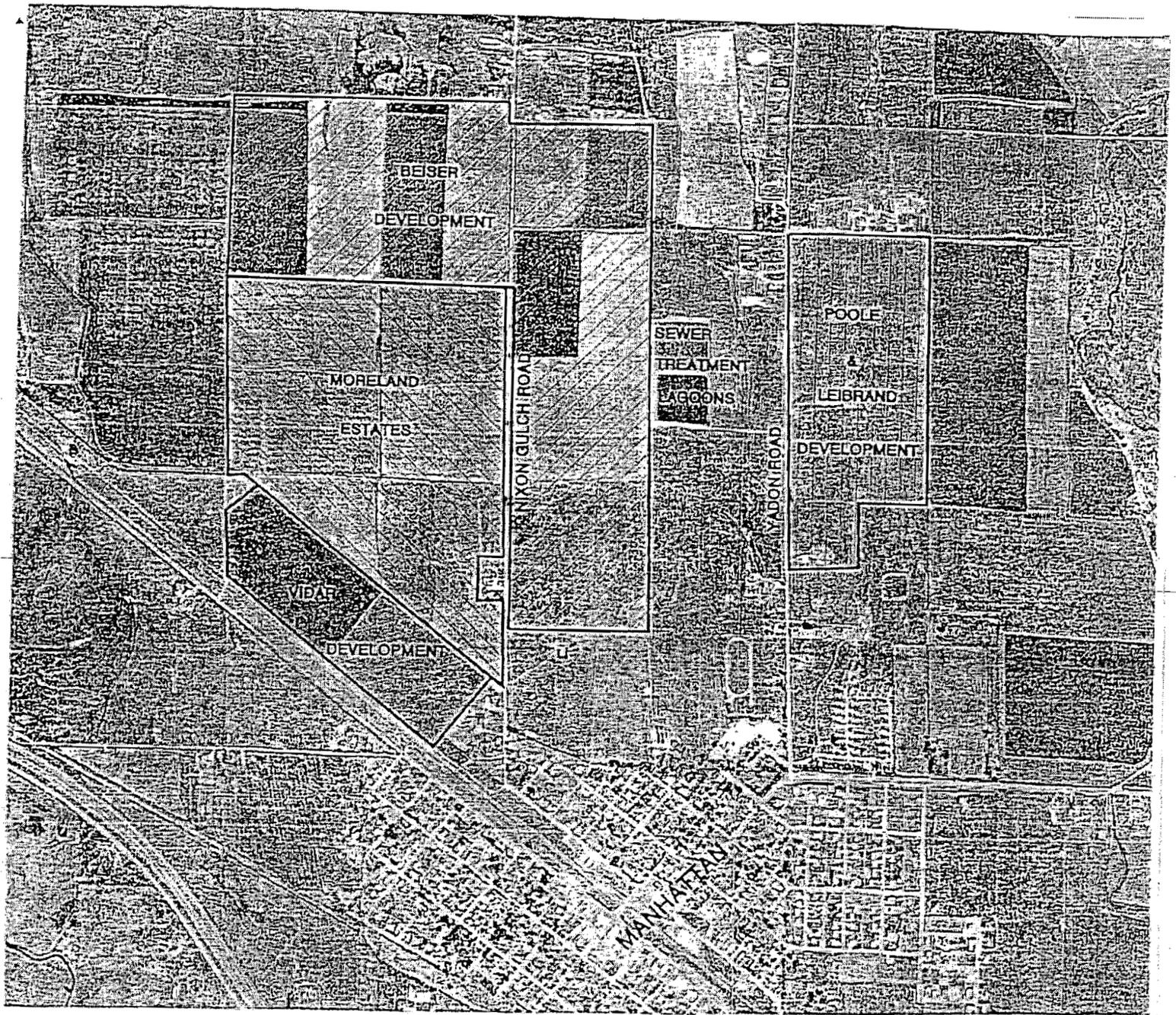


Figure 6. Areas of Potential Future Development

United States Department of Agriculture



Natural Resources Conservation Service
3710 Fallon Street, #B
Bozeman, MT 59718

RECE

JU

Phone: (406)522-4000
Fax: (406)585-1272

Subject: Manhattan Wastewater Treatment Facility

Date: June 3, 2005

To: Murray Strong, Environmental Specialist
Stahly Engineering & Associates

File Code:

This memo is in response to your inquiry concerning the development of the Manhattan Wastewater Treatment Facility and potential impacts to important farmland soils on the proposed site. I have enclosed a soil map with associated soil mapunits, and a soil report. All of the soils in this area have an "important farmland classification", to include farmland of local importance, statewide importance, and prime farmland if irrigated.

If you have any further questions, please call me at 522-4012

Sincerely,

A handwritten signature in cursive script that reads "Wendy Williams".

Wendy Williams, Resource Conservationist, Bozeman Field Office

Prime and other Important Farmlands

Gallatin County Area, Montana

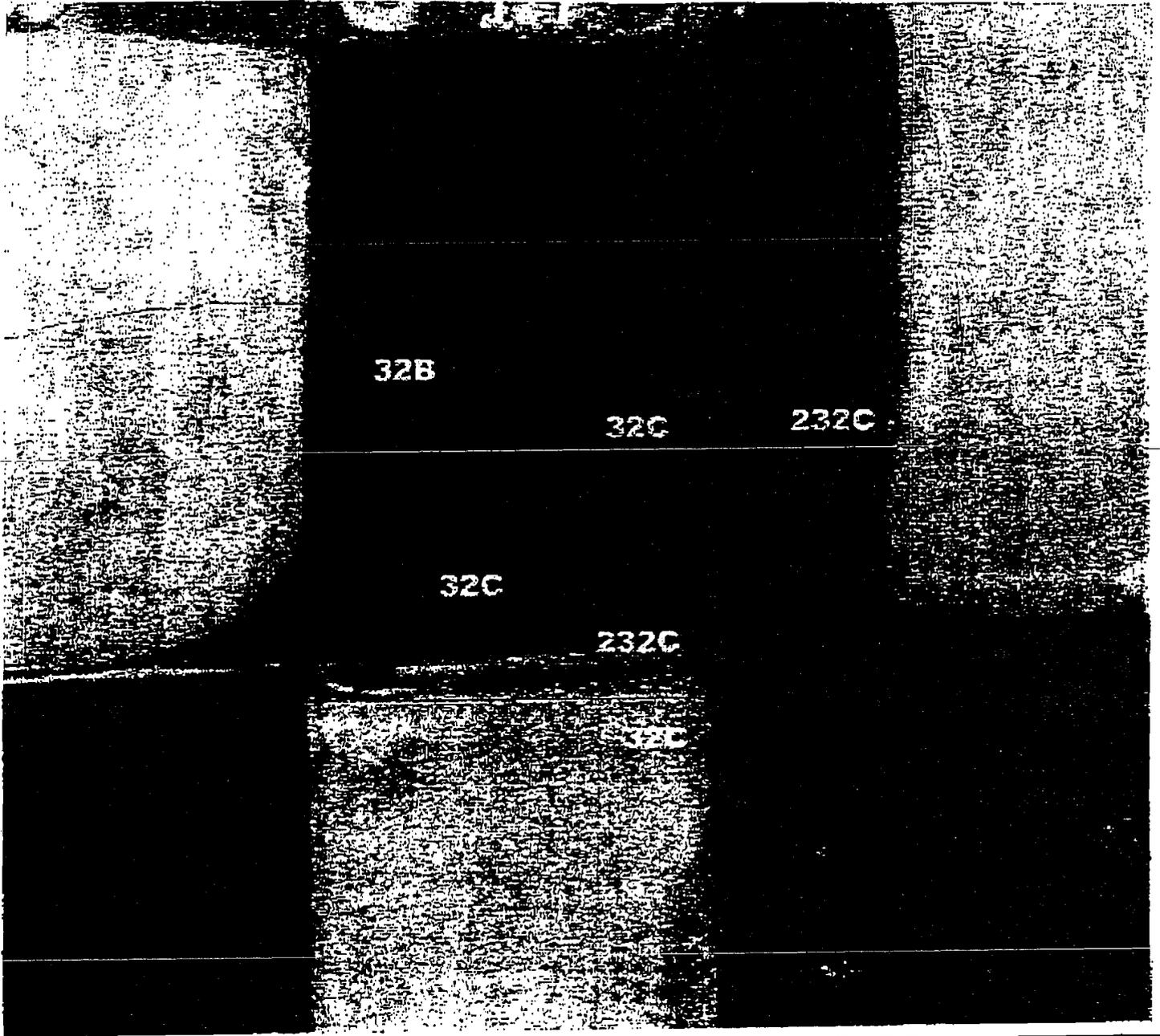
Map symbol	Map unit name	Farmland classification
232C	AMESHA COBBLY LOAM, 2 TO 3 PERCENT SLOPES	Farmland of local importance
32C	AMESHA LOAM, 4 TO 8 PERCENT SLOPES	Farmland of statewide importance
32B	AMESHA LOAM, 0 TO 4 PERCENT SLOPES	Prime farmland if irrigated



Soils Map

USDA-NRCS
Bozeman FO
Carli Lofing

Date: 06/27/2005



Legend

- Planned Land Units
- Section Locator
- Soil_a_mt622.shp

Scale: 1:2640
1"=220 ft





RECEIVED

MAY 16 2005

MONTANA HISTORICAL SOCIETY

225 North Roberts + P.O. Box 201201 + Helena, MT 59620-1201
+ (406) 444-2694 + FAX (406) 444-2696 + www.montanahistoricalsociety.org +

May 13, 2005

Murray Strong
SE&A
3530 Centennial Drive
Helena, MT 59601

RE: STAHLY ENGINEERING: MANHATTAN WASTEWATER TREATMENT
FACILITY. SHPO Project #: 2005051219

Dear Mr. Strong:

I have conducted a cultural resource file search for the above-cited project located in Section 34, T2N R3E. According to our records there have been no previously recorded historic or archaeological sites within the designated search locales. The absence of cultural properties in the area does not mean that they do not exist but rather may reflect the absence of any previous cultural resource inventory in the area, as our records indicated none.

We feel that there is a low likelihood cultural properties will be impacted. We, therefore, feel that a recommendation for a cultural resource inventory is unwarranted at this time. However, should cultural materials be inadvertently discovered during this project we would ask that our office be contacted and the site investigated. Thank you for consulting with us.

If you have any further questions or comments you may contact me at (406) 444-7767 or by e-mail at dmurdo@mt.gov.

Sincerely,

Damon Murdo
Cultural Records Manager

File: DEQ/AIR&WATER WASTE MNG/2005



United States Department of the Interior

RECEIVED

JUN 15 2005

FISH AND WILDLIFE SERVICE

ECOLOGICAL SERVICES
MONTANA FIELD OFFICE
100 N. PARK, SUITE 320
HELENA, MONTANA 59601
PHONE (406) 449-5225, FAX (406) 449-5339

File: M29 (I)

June 10, 2005

Murray Strong
Stahly Engineering and Associates, Inc.
3530 Centennial Drive
Helena, Montana 59601

Dear Mr. Strong:

This is in response to your May 27, 2005 request for information and comments regarding the Manhattan Wastewater Treatment Facility. We appreciate the opportunity to review this project proposal and provide comments. These comments have been prepared under the authority of and in accordance with the provisions of the Fish and Wildlife Coordination Act (16 U.S.C. 661 et. seq.) and the Endangered Species Act (16 U.S.C. 1531 et. seq.).

Considering the nature, scope and location of the project, the Service does not anticipate adverse impacts to any federally listed threatened, endangered, candidate or proposed species. There may be state species of concern in the vicinity of the project and we recommend contacting the Montana Department of Fish, Wildlife and Parks at 1420 East Sixth Ave., P.O. Box 200701, Helena, MT 59620-0701, 406-444-2535 or the Montana Natural Heritage Program, 1515 East 6th Avenue, Box 201800, Helena, MT 59620-1800, 406-444-5354.

If wetlands are impacted by this project, Corps of Engineers Section 404 permits may be required. The Service suggests any proposed or future project be designed to avoid and minimize impacts to wetland areas, stream channels and surrounding vegetation to the greatest extent possible. Direct, indirect and cumulative impacts, along with future activities required to maintain these improvements, should be analyzed.

The Service appreciates your efforts to incorporate fish and wildlife resource concerns, including threatened and endangered species, into your project planning. If you have questions or comments related to this issue, please contact Katrina Dixon at 406-449-5225 extension 222.

Sincerely,


R. Mark Wilson
Field Supervisor



Montana Fish, Wildlife & Parks

RECEIVED

JUN 07 2005

1400 South 19th Ave
Bozeman, MT 59718

June 6, 2005

Murray Strong, Environmental Specialist
Stahly Engineering
3530 Centennial Drive
Helena, MT 59601

Dear Mr. Strong,

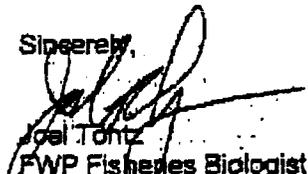
On May 27, 2005 I received a map from you showing the location of a proposed wastewater treatment facility to be constructed near Manhattan. Based on this map you asked that I provide comments concerning "impacts to formally classified lands, wetlands, biological resources, and water quality."

Without other information, my principle concerns are generic to this type of development and the potential to harm local waterways. Generally, you should plan to avoid any construction activity near surface waters that might destabilize existing channel configurations. You will want to avoid disturbing riparian or wetland vegetation. And you will want to avoid situations that might deliver pollutants to surface waters, as can happen for example when paved surfaces concentrate oil or other petroleum products later mobilized by rain or snowmelt. Drainage within and through the facility is a critical planning consideration to avoid increasing sediment or other contaminants that might be delivered to local waterways.

You will also want to prevent localized stream disturbances during actual construction. I anticipate that your construction plans will include actions to reduce or mitigate sediment delivery, and to prevent discharges of petroleum products or other harmful substances into nearby streams, ditches, or to lands capable of delivering these substances to nearby waterways. An important project goal should be to ensure that the completed facility poses no direct or persistent environmental threat to the local watershed.

I hope that my comments are useful to you at this time. I look forward to hearing how your project plans develop. Please contact me with any questions.

Sincerely,



Joel Tontz
FWP Fisheries Biologist
406-994-8938

RECEIVED
JUN 20 2005



Brian Schweitzer, Governor

June 17, 2005 P.O. Box 200901 • Helena, MT 59620-0901 • (406) 444-2544 • www.deq.mt.gov

Murray Strong
Stahley Engineering
3530 Centennial Drive
Helena, MT 59601

RE: Manhattan Wastewater Treatment Facility

Dear Mr. Strong:

The Department is in receipt of your May 26, 2005 letter to Steve Welsh, Permitting and Compliance Division Administrator requesting that the Department identify any permitting requirements or other issues that may be necessary for the above reference project. The City proposes to construct a new wastewater treatment plant.

Pursuant to Section 75-5-402 of the Montana Water Quality Act (WQA), the Department is required to examine plans and other information to determine whether a permit is necessary. In order for the Department to complete this review, the proponent must complete the applicable discharge permit application forms for the proposed activity, provide the information required by the applicable rule and submit the necessary application fees. Alternatively, the applicant may submit detailed plans and specifications on the proposed activity along with a description of the volume and nature of the wastes to be discharged. In accordance with ARM 17.30.201; the fee for review of plans and specifications is one-half of the application fee. Bureau staff are available to assist you in determining the appropriate application requirements.

Based on the information submitted, the Department is unable to determine what permits are necessary for the proposed project. For your convenience I have enclosed a fact sheet that describes water quality related permits for construction activities. Discharge of storm water from: industrial facilities as defined in ARM 17.30.1102(29) and (30); from construction activities as defined in ARM 17.30.1002(28); and from municipal separate storm sewer systems (MS4) as defined in ARM 17.30.1102(23), are subject to the permitting requirement of the Montana Pollutant Discharge Elimination System (MPDES).

In general, the Montana WQA prohibits the discharge of sewage, industrial or other wastes, including sediment, to state waters without a current permit from the Department. The definition of state waters includes any body of water on the surface or underground (ground water) and includes irrigation systems, ephemeral and intermittent drainage systems, lake, ponds or other waterways. Discharge of wastes to state surface water is regulated under the Montana Pollutant Discharge Elimination System (MPDES) program; a discharge, or potential discharge, to state ground water are regulated under the Montana Ground Water Pollution Control System. The WQA also prohibits the construction, operation or use of an outlet that is used to discharge waters to state water [75-5-605(2), MCA] without a current permit from the Department.

Mr. Murray Strong
June 17, 2005
Page 2 of 2

Pursuant to 75-5-605(2), MCA, the City must amend their wastewater discharge permit to reflect the proposed changes in the wastewater treatment facility.

Additional information on permitting requirements may be obtained by contacting the Water Protection Bureau at (406) 444-3080 or on the Department's Website at: www.deq.state.mt.us.

Sincerely,



Thomas D. Reid
Water Quality Permits Program Manager
Water Protection Bureau

File: General

cc Fact Sheet: Construction Related Water Quality Permits
Storm Water Requirements for Construction Activity

What is the Purpose of a Storm Water Pollution Prevention Plan (SWPPP)?

A SWPPP is developed and implemented by the permittee for three major purposes:

1. Assessing the characteristics of the site such as nearby surface waters, topography, and storm water runoff patterns;
2. To identify potential sources of pollutants such as sediment from disturbed areas, and stored wastes or fuels; and
3. To identify Best Management Practices (BMPs) which will be used to minimize or eliminate the potential for these pollutants to reach surface waters through storm water runoff.

BMPs at construction activity sites typically consist of various erosion and sediment control measures. Erosion and sediment control at construction sites is best accomplished with proper planning, installation, and maintenance of controls.

Most erosion and sediment controls require regular maintenance to operate correctly. Accumulated sediments should be removed frequently and materials should be checked periodically for wear. Regular inspections by qualified personnel should be performed after major storm or snowmelt events and as required in the General Permit.

What are the Fees?

Fees based on the number of discharges are determined by multiplying the appropriate fee amount by the number of named or potential surface waters (as shown on a USGS topographic map) which could receive storm water runoff from

the construction activity site. The NOI (application) fee amount per discharge for storm water associated with construction activity is \$450.00 for commercial or public projects, and \$250.00 for residential (single family dwelling) projects. The annual fee amount per discharge is \$450.00 (per calendar year) for commercial or public projects, and there is no annual fee for residential (single family dwelling) projects.

Where Can I Find More Information?

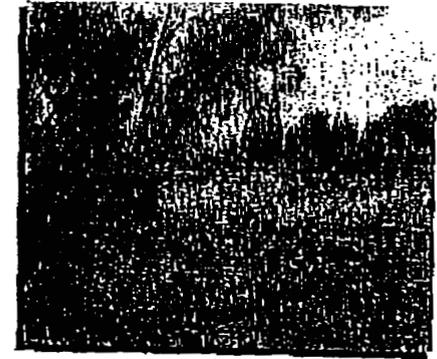
- I. MT Department of Environmental Quality
Water Pollution Bureau
Storm Water Program
P. O. Box 200001 • 1520 East Sixth Ave.
Helena, MT 59620-0001
1-406-444-3080
The following website contains the General Permit, fee information, the NOI form, the SWPPP form, and the NOT form:
<http://www.deq.state.mt.us/wq/rlr/MPDES/StormwaterConstruction.asp>
- II. MT Department of Environmental Quality
Small Business Assistance Program
P.O. Box 200001 • 1520 East Sixth Ave.
Helena, MT 59620-0001
1-800-433-8773
<http://www.deq.state.mt.us/ppa/2/index.asp>
- III. USEFUL GUIDANCE
EPA Menu of Construction BMPs Website (use "Fact Sheets")
at: http://cfpub.epa.gov/nrcs/whmsecst/menuofbmps/con_site.cfm

printed on
recycled paper

1.180 gallons of new polychlorinated water (produced in the recovery plant) of the 27th size category for a week of 2001.05, which includes 2001.05. The production and 21.15 for the production.

Montana Department of
ENVIRONMENTAL QUALITY
Small Business Assistance Program
P. O. Box 200001
Helena, MT 59620-0001

Storm Water Requirements for Construction Activity



April 2003

Storm Water Requirements for Construction Activity

April 2003

What is Montana's Storm Water Discharge Permit Program for Construction Activity?

The 1972 amendments to the Federal Water Pollution Control Act, later referred to as the Clean Water Act (CWA), prohibit the discharge of any pollutant to waters of the United States unless the discharge is authorized by a National Pollutant Discharge Elimination System (NPDES) permit.

In Montana, the Department of Environmental Quality (DEQ) is authorized to administer the NPDES Program through the Montana Pollutant Discharge Elimination System (MPDES) Program.

Traditionally, efforts to improve water quality under the NPDES program have focused on reducing pollutants in industrial process wastewater and municipal sewage treatment plant discharges. Over time, it became evident that more diffuse sources of water pollution, such as storm water runoff from construction sites, are also significant contributors to water quality problems.

Typically, sediment runoff rates from construction sites are 10 to 20 times greater than those from agricultural lands, and 1,000 to 2,000 times greater than those of forestlands. During a short period of time, construction activity can contribute more

sediment to streams than is naturally deposited over several decades. This accelerated deposition causes both physical and biological harm to Montana's surface waters.

In 1990, the Federal Environmental Protection Agency (EPA) promulgated rules establishing Phase I of the NPDES storm water program. Phase I addressed, among other discharges, discharges from larger construction activities disturbing 5 acres or more of land. In Montana, since 1992 the DEQ has been permitting these storm water discharges from larger construction projects through the NPDES Program.

Phase II of the NPDES storm water program covers smaller construction activities disturbing between 1 and 5 acres. Phase II became final on December 8, 1999 with smaller construction activity permitting to initiate on March 10, 2003. Montana has incorporated these new NPDES Phase II storm water requirements, as well as existing Phase I requirements, into the Administrative Rules of Montana (ARM), Title 17, Chapter 30, Subchapters 11, 12, and 13.

Who Requires Storm Water Discharge Permit Coverage Under Montana Rules?

Effective March 10, 2003, construction activity which results in the "disturbance" of equal to or greater than 1 acre of total land area will need to obtain permit coverage under the General Permit for Storm Water Discharges Associated with Construction Activity (called "General Permit"). Construction activity includes the disturbance of less than 1 acre of total land area that is part of a larger common plan of development or sale if the larger

common plan will ultimately disturb 1 acre or more (such as subdivisions with phased work over years).

What is the Definition of "Disturbance" of a Construction Site?

"Disturbance" (related to construction activity) means areas that are subject to clearing, excavating, grading, stockpiling earth materials, and placement/removal of earth material performed during construction projects. For construction activities that result in disturbances of less than five acres of total land area, the scope of disturbance does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the facility.

What is the Definition of an "Operator" of a Construction Site?

"Operator" is the term which is used for permittees, when permitting storm water discharges associated with construction activity. The term is defined in Part V.T.8. of the General Permit. Operators would typically be both the owner and contractor of a construction project, but may also include other parties if they meet the definition of operator.

How do "Operators" Obtain General Permit Coverage?

"Operators" requiring coverage under the General Permit for their storm water discharges associated with construction activity obtain this permit coverage by the DEQ's Storm Water Program receiving the following Notice of Intent (NOI) Package items by the proposed construction start date:

NOI form with all requested items completed;

- Storm Water Pollution Prevention Plan (SWPPP) addressing all requested items in the General Permit (a form has been developed for optional use if desired); and
- Application fee and first year annual fee based on the number of discharges (see below) and type of construction project (either residential (single family dwelling), or commercial/public).

Applicants must read and be familiar with the General Permit to assist in the completion of the forms and submittal of the NOI Package.

Permit transfers are not allowed. Signatory requirements in rule and the General Permit allow only certain qualified people to sign NOI forms and other reports.

All NOIs require a Notice of Termination (NOT) form to be submitted when the construction activity is complete and the site has achieved "final stabilization" or if the "operator" changes. "Final stabilization" means the time at which all soil-disturbing activities at a site have been completed and a vegetative cover has been established with a density of at least 70% of the pre-disturbance levels, or equivalent permanent, physical erosion reduction methods have been employed. Final stabilization using vegetation must be accomplished using seeding mixtures or forbs, grasses, and shrubs that are adapted to the conditions of the site. Establishment of a vegetative cover capable of providing erosion control equivalent to pre-existing conditions at the site will be considered final stabilization.

Fact Sheet
Water Quality Permits for Construction Related Activities
Water Protection Bureau
Montana Department of Environmental Quality

MPDES Storm Water Permit: Construction related activities that result in greater than one acre of disturbance and may generate storm water runoff from the construction site during the life of the project must obtain authorization prior to initiation of the construction activity. For purposes of this regulation, construction activities include clearing, grading, excavation, and stockpiling or placement of earthen materials. Routine maintenance activities that disturb less than 5 acres and do not change the original configuration of the site are not subject to this regulation. The owner or operator is required to develop a Storm Water Pollution Prevention Plan (SWPPP). These discharges are covered under a general permit (MTR10000). Coverage under the general permit is effective upon receipt of a completed NOI package (application, storm water pollution prevention plan, and fee).

MPDES Construction Dewatering: Non-storm water discharges of sediment laden water from coffer dams, trenches, pipeline construction, excavation pits, borrow areas, well development or other activities that is discharged to state waters, including irrigation canals, drainage ditches and wetlands, are prohibited unless authorized by the Department. Typically, these activities are authorized under the Department's general permit for construction dewatering (MTG070000). Under most conditions the permittee is required to construct and operate some form of treatment to remove turbidity and sediment to meet state water quality standards. The discharge of ground water that contains petroleum contaminants or other wastes must be authorized and comply with the requirements of the Department's petroleum clean up general permit (MTG790000 or MTX30000) prior to discharge to state surface or ground water. These permits are typically issued within 30 days of receipt of a completed application.

Short-term water quality standard for turbidity (318): Montana water quality standards prohibit the increase in sediment or turbidity above specific amounts in state surface waters. A Section 318 authorization provides a short-term turbidity standard for activities that are conducted in state waters and may cause disturbance of the stream bed sediments. A 318 authorization is typically processed in 7 to 21 days but may require longer review for complexity or environmentally sensitive areas.

401 Certification: Section 404 of the federal Clean Water Act is administered by the US Army Corps of Engineers; these permits are for dredge and fill in waters of the US, including wetlands. Please contact the Corps at (406) 441-1375. The Department provides CWA 401 certification of 404 projects and works directly with the Corps on these issues. A joint application form is used.

General Information

Fees: All of the above permits require the applicant to pay a fee prior to Department review of the application. The fee varies depending on the type of permit and complexity of the project. A fee schedule is available upon request at (406) 444-3080, or on the Department's website at:

www.deq.state.mt.us

EXHIBIT 2-N

COMBINED NOTICE
FINDING OF NO SIGNIFICANT IMPACT and
NOTICE TO PUBLIC OF REQUEST FOR RELEASE OF FUNDS
(FONSI/NOI/RROF)

February 19, 2006

Town of Manhattan

City, Town or County

120 W. Main, PO Box 96

Mailing Address

Manhattan, MT 59718

City, State, Zip Code

(406) 284-3235

Telephone

TO ALL INTERESTED AGENCIES, GROUPS AND PERSONS:

~~On or about March 6, 2006 the above-named town will request the Montana Department of Commerce (DOC) to release Community Development Block Grant (CDBG) funds provided under Title I of the Housing and Community Development Act of 1974, as amended (PL 93-383) for the following project:~~

Manhattan Wastewater Treatment Improvements

The purpose of this project is to: 1) provide a long-term solution to Montana Pollutant Discharge Elimination System (MPDES) permit compliance, 2) meet a compliance schedule incorporated in the town's renewed MPDES permit, 3) meet the domestic capacity needs of the community, 4) eliminate excessive leakage to groundwater from the town's current wastewater treatment lagoons, and 5) reduce the amount of inflow and infiltration (I/I) into the town's collection system.

Manhattan, Montana

Finding of No Significant Impact

It has been determined that such request for release of funds will not constitute an action significantly affecting the quality of the human environment and accordingly the above named town has decided not to prepare an Environmental Impact Statement under the National Environmental Policy Act of 1969 (PL 91-190).

The reasons for the decision not to prepare such Statement are as follows:

The project will provide improvements to the environment by eliminating MPDES permit violating discharges. The new system will ultimately reduce safety, health, and environmental hazards.

Environmentally sensitive characteristics such as vegetation, wetlands, floodplains, cultural resources, air quality, water quality, wildlife, and threatened or endangered species are not expected to be adversely impacted as a result of the proposed project. No significant negative long-term environmental impacts were identified.

An Environmental Review Record documenting review of all project activities in respect to impacts on the environment has been made by the above-named town. This Environmental Review Record is on file at the above address and is available for public examination and copying upon request between the hours of 8:30 a.m. and 5:00 p.m.

No further environmental review of such project is proposed to be conducted prior to the request for release of CDBG project funds.

Public Comments on Findings

All interested agencies, groups and persons disagreeing with this decision are invited to submit written comments for consideration by the town of Manhattan to the Manhattan City Hall on or before March 23, 2006. All such comments so received will be considered and the town of Manhattan will not request release of funds or take any administrative action on the project prior to the date specified in the preceding sentence.

Release of Funds

The town of Manhattan will undertake the project described above with CDBG funds provided by DOC under Title I of the Housing and Community Development Act of 1974, as amended. The town of Manhattan is certifying to DOC that Manhattan and chief executive officer, Tony Haag, in his official capacity as Mayor consents to accept the jurisdiction of the Federal courts if an action is brought to enforce responsibilities in relation to environmental reviews, decision-making, and action; and that these responsibilities have been satisfied. The legal effect on the certification is that upon its approval, the town of Manhattan may use the CDBG funds and DOC will have satisfied its responsibilities under the National Environmental Policy Act of 1969.

Objections to State Release of Funds

The Department of Commerce will accept an objection to its approval of the release of funds and acceptance of the certification only if it is on one of the following bases:

- (a) that the certification was not in fact executed by the chief executive officer or other officer approved by the Department of Commerce;

(b) that the applicant's environmental review record for the project indicates omission of a required decision, finding, or step applicable to the project in the environmental review process;

(c) the grant recipient has committed funds or incurred costs not authorized by 24 CFR Part 58 before approval of a release of funds by DOC; or

(d) another Federal agency acting pursuant to 40 CFR Part 1504 has submitted a written finding that the project is unsatisfactory from the standpoint of environmental design.

Objections must be prepared and submitted in accordance with the required procedures (24 CFR Part 58) and may be addressed to: Department of Commerce, Community Development Division, 301 S. Park Avenue, P.O. Box 200523, Helena, Montana 59620.

Objections to the release of funds on bases other than those stated above will not be considered by DOC. No objection received after March 23, 2006 will be considered by DOC.

Name of Environmental Certifying
Officer or Chief Elected Official

Date

120 W. Main
Street Address

Manhattan, MT 59718
City, County, State, Zip Code

EXHIBIT 2-M

MONTANA COMMUNITY DEVELOPMENT BLOCK GRANT (CDBG) PROGRAM CONSOLIDATED ENVIRONMENTAL ASSESSMENT FORM

Introduction

The following form is for the use of Community Development Block Grant (CDBG) recipients who must prepare an Environmental Assessment (EA) as required by HUD Environmental Review procedures for the CDBG program (24 CFR 58.36). Satisfactory completion of this form will meet the requirements of the federal housing and Community Development Act as well as the national Environmental Policy Act (NEPA).

CDBG recipients must also demonstrate compliance with the environmental requirements of the other related federal environmental laws and regulations listed in the HUD Statutory Checklist (24 CFR 58.5). For this reason, the Statutory Checklist requirements have been combined into this single consolidated form. An index of the applicable federal statutes and regulations is found at the end of this form. Where noted, the numbers that appear to the right of the environmental subject areas listed in the checklist correspond to the listing of statutes found in the index.

The requirements of the Montana Environmental Policy Act (MEPA) and the uniform State administrative rules adopted pursuant to the Act have also been integrated into the consolidated form.

Project identification

Recipient: **Town of Manhattan**

Chief Elected Official: **Tony Haag, Mayor**

Environmental Certifying Officer: **Tony Haag**

CDBG Contract #: **MT-CDBG-03PF-08**

Project Name: **Manhattan Wastewater Treatment Improvements**

Person Preparing this Environmental Assessment:
Moriah Peck
Environmental Engineering Specialist
Water Pollution Control State Revolving Fund Section
Montana Department of Environmental Quality

Phone Number: **(406) 444-6776**

Instructions for Completing this Form

The following instructions should be presented and evaluated in a level of detail which is appropriate to the following considerations:

- (a) the complexity of the proposed action;
- (b) the environmental sensitivity of the area affected by the proposed action;
- (c) the degree of uncertainty that the proposed action will have a significant impact on the quality of the human environment;
- (d) the need for and complexity of mitigation required to avoid significant environmental impacts.

In all cases, the CDBG grant recipient should reference and attach additional narrative providing the specific information requested or documentation supporting the evaluation of the impact of the proposed project or activity as it relates to each environmental subject area. The narrative should also note, where applicable, the source of the evaluation, including date of contact, page reference to pertinent source documents, and the name and title or persons contacted, along with the name of the specific organization or agency.

Environmental information and assistance in preparing an environmental assessment can be obtained from a wide variety of sources. Possible sources of information include existing plans and studies, knowledgeable local residents and officials such as the county sanitarian, city or county planning board or department, local officials with the U.S. Soil and Conservation Service (SCS) or local conservation district, as well as local representatives of the State Fish, Wildlife & Parks Department, to list just a few examples. Grant recipients may also contact the State and federal agencies listed in **Exhibit 2-O** for information and assistance.

The Department of Commerce Community Development Bureau maintains copies of environmental assessments prepared on previous projects that may be useful to grant recipients, as well as full copies of applicable federal and State environmental statutes and related information. Copies of the HUD publication, *Environmental Review Guide for Community Development Block Grant (CDBG) Programs*, can be requested from the CDBG program specialist assigned to your project.

Evaluation of Environmental Impact

Provide the information requested below and attach additional narrative as appropriate.

1. Describe the proposed action or activity, including construction and end-product (attach maps and graphics as necessary).

The Town of Manhattan, through its Preliminary Engineering Report and amendments, has identified the need to upgrade its wastewater treatment and collection systems. Replacing portions of the town's collection system subject to excessive inflow and infiltration and constructing a mechanical wastewater treatment facility utilizing aeration wheels, which is capable of meeting effluent limitations for current and future populations is proposed.

2. Describe the project site and surrounding area(s), including existing site use and environmental conditions (attach map as applicable).

The proposed site is located on four acres adjacent to the Manhattan Meadow subdivision (se ¼ sec 34 T2N R3E), one-mile north of town and one-half mile north of the present sewage lagoons.

Manhattan is located in the Gallatin Valley, 18 miles west of Bozeman. Manhattan's 1996 population was estimated at 1,380. Wastewater services are included within the town boundary and also include Woodenshoe Lane. The present wastewater system has 701 sewer connections with no significant commercial or industrial users.

The community is located about 2 miles south of the Gallatin River in a mostly rural farming area. Land uses surrounding Manhattan is agricultural, light industry and commerce, residential, and recreational in nature. The town's economy is based mostly on agriculture.

Prime farmlands exist within much of the area surrounding Manhattan provided that adequate irrigation is available. The majority of the lands in the locale have been disturbed by cultivation, others permanent pasture, feedlots and dairy operations.

Much of the area in the immediate vicinity of Manhattan is valley land with low, rolling hills. Interstate 90 runs just south of town and it is a major route for both locals and tourists. The elevation is 4,250 feet above sea level. Average annual precipitation is 13-15 inches and the average annual temperature is 42° F. There are 95-115 frost-free days and freezes can arrive as early as the last week of August or as late as the end of September.

The water table in the Manhattan area is 10 to 35 feet in depth. Groundwater is recharged by percolation of snowmelt, rainfall and irrigation waters. It is also recharged near the side of the valley by water lost from streams. Sources of groundwater also include seepage from irrigation canals and associated irrigation from the West Fork of the Gallatin River along with Baker and Camp Creeks.

Major surface water features in the vicinity include the West and East Forks of the Gallatin River, which join approximately two and one-half miles north of Manhattan. The smaller streams, Baker and Camp Creeks, located west of Manhattan, flow northward into the West Fork of the Gallatin River. Additionally, many sloughs are located along the roadways and abandoned railroad grades and irrigation canals are found throughout the area.

3. Describe the benefits and purpose of the proposed action.

New collection lines will decrease infiltration and subsequent overloading of the treatment facility, while the new mechanical wastewater treatment facility will be designed to meet state standards. Due to overloading, excessive sludge buildup, and treatment limitations of existing facultative lagoon systems, the town has experienced numerous effluent violations of its Montana Pollutant Discharge Elimination System (MPDES) permit. In addition to effluent violations, excessive leakage from the town's lagoons has been considered an un-permitted discharge. As such, a compliance schedule has been incorporated into the town's renewed MPDES permit.

The proposed action incorporates existing, proposed and foreseen residential and commercial development in the Manhattan area.

4. Describe all sources of project funding:

Federal and State grant/loan programs will fund the project.

The Town of Manhattan has obtained grants from the DNRC Renewal Resources Grant and Loan program, the Community Development Block Grant program, the Treasure State Endowment Program, the EPA State and Tribal Assistance Grants program, and U.S. Army Corp of Engineers 195 grant program. The remaining cost of the project will be funded using the town's reserve and a low-interest loan from the Water Pollution Control State Revolving Fund loan program.

5. Describe any project plans or studies which are relevant to the project.

- a. **Wastewater Facility Plan (Preliminary Engineering Report) Town of Manhattan, May 2000, prepared by Stahly Engineering & Associates.**
- b. **Amendment to Town of Manhattan May 2000 Wastewater Facility Plan (Preliminary Engineering Report), February 2004, prepared by Stahly Engineering & Associates.**
- c. **Wastewater Treatment Plant Alternative Review for Manhattan, Montana, April 2004, prepared by Thomas, Dean, & Hoskins, Inc.**
- d. **2nd Amendment to Town of Manhattan May 2000 Wastewater Facility Plan (Preliminary Engineering Report), July 2005, prepared by Stahly Engineering & Associates.**
- e. **Uniform Application Form for Montana Public Facility Projects for the Manhattan Wastewater Treatment Facility Upgrade , August 2000 and subsequent updates, prepared by Stahly Engineering & Associates.**

6. Proposed implementation schedule.

Completion of construction and/or repair of a treatment works capable of meeting permit requirements by no later than August 31, 2006.

Preliminary Plans and Specifications	July 1 – Aug. 19, 2005
DEQ Review	Aug. 22 – Nov. 1, 2005
Final Plans and Specifications	Nov. 1 – Jan. 1, 2006
Final DEQ Review	Jan. 1 – Jan. 15, 2006
Bidding and Award of Contract	Jan. 15 – Mar. 1, 2006
Construction	Mar. 1 – Oct. 1, 2006

7. Compliance with any applicable local plans, ordinances, or regulations:

Project is in Compliance

Yes **No** **Not Applicable**

Local Comprehensive (Growth Management) Plans including housing, land use and public facilities elements:

1998 Town of Manhattan Master Plan Update

Local zoning ordinances or land use regulations, such as permit systems or soil conservation district requirements

The Natural Resources Conservation Service (NRCS) reviewed the proposed project and determined that all of the soils in the proposed site have an “important farmland classification”, to include farmland of local importance, statewide importance, and prime farmland if irrigated. If irrigated, the land would be listed as prime farmland and the Farmland Protection Policy Act would apply.

8. Evaluation of impact, including cumulative and secondary impacts, on the **Physical Environment:**

Please complete the following checklist. Attach narrative containing more detailed analysis of topics and impacts that are potentially significant.

Key Letter: N - No Impact/Not Applicable; **B** - Potentially Beneficial; **A** - Potentially Adverse; **P** - Approval/Permits Required; **M** - Mitigation Required

KEY	Impact Categories-- PHYSICAL ENVIRONMENT	Source of Documentation Note date of each contact or page reference. Attach additional material as applicable. Where appropriate, please fully explain in attached materials.
N		Page 16 and 22 of EA.

	Soil Suitability, Topographic and/or Geologic Constraints	
A	HUD Environmental Criteria--24 CFR Part 51: 51(b) Noise--Suitable Separation Between Housing & Other Noise Sensitive Activities & Major Noise Sources (Aircraft, Highways & Railroads) ⁸ *	Pages 19 and 20 of EA.
N	51(c) Hazardous Facilities— Acceptable Separation Distance from Explosive and Flammable Hazards (Chemical/ Petrochemical Storage Tanks & Facilities--ex., Natural Gas Storage Facilities & Propane Storage Tanks) ⁷ *	None proximal.
N	51(d) Airport Runway Clear Zones-- Avoidance of Incompatible Land Use in Airport Runway Clear Zones ^{7*}	None proximal.
N	EPA Hazardous Waste Sites, or Other Hazards or Nuisances Not Covered Above	DEQ website query.
N	Effects of Project on Surrounding Air Quality or Any Effects of Existing Air Quality on Project ¹ *	Pages 10 and 19 of EA.
B	Groundwater Resources & Aquifer ¹⁰ *	Pages 17 and 20 of EA.
N	Surface Water/Water Quality, Quantity & Distribution ^{10,*}	Pages 10, 16, 17 and 20 of EA.
N	Floodplains & Floodplain Management ⁵ **	Pages 17 and 20 of EA.
N	Wetlands Protection ¹¹	Pages 16 and 20 of EA.
A	Agricultural Lands, Production, & Farmland Protection ³ *	Pages 15, 19, 21 and 22 of EA.
N	Vegetation & Wildlife Species & Habitats, Including Fish ⁴ *	Pages 15, 16, 18, 19, 21 and 22 of EA.
N	Unique, Endangered, Fragile, or Limited Environmental Resources, Including Endangered Species ² *	Pages 18, 19, 20 and 23 of EA.
N	Unique Natural Features	Pages 16, 17 and 18 of EA.
N	Access to and Quality of Recreational & Wilderness Activities, and Public Lands, Including Federally Designated Wild & Scenic Rivers ¹² *	

^a Including Sole Source Aquifer. Contact DOC for further information regarding Missoula-area projects.

9. Evaluation of impact, including cumulative and secondary impacts, on the **Human Population** in the area to be affected by the proposed action:

Please complete the following checklist. Attach narrative containing more detailed analysis

of topics and impacts that are potentially significant.

Key Letter: **N** - No Impact/Not Applicable; **B** - Potentially Beneficial; **A** - Potentially Adverse; **P** - Approval/Permits Required; **M** - Mitigation Required

KEY	Impact Categories-- Human Population	Source of Documentation Note date of each contact or page reference. Attach additional material as applicable. Where appropriate, please fully explain in attached materials.
N	Visual Quality--Coherence, Diversity, Compatible Use, and Scale Aesthetics	Landscape plan based on land exchanged agreement. Page 15 of EA.
N	Historic Properties, Cultural, and Archaeological Resources*	Pages 18, 21 and 23 of EA.
A	Changes in Demographic (Population) Characteristics	Pages 6, 15, 17 and 20 of EA.
N	Environmental Justice ¹³ *	Page 6 of EA.
N	General Housing Conditions-- Quality & Quantity	Pages 6, 17, 20, 21 and 22 of EA.
N	Displacement or Relocating of Businesses or Residents	Page 6, 17 and 21 of EA.
B	Human Health	Pages 5 to 9 and 20 of EA.
B	Local Employment & Income Patterns-- Quantity and Distribution of Employment	Construction of facility and homes.
A	Local and State Tax Base & Revenues	Page 15 of EA.
N	Educational Facilities	
N	Commercial and Industrial Facilities, Production & Activity	Pages 15 and 17 of EA.
N	Health Care	
N	Social Services	
N	Social Structures & Mores (Standards of Social Conduct/Social Conventions)	
B	Land Use Compatibility	Pages 15 and 17 of EA.
N	Energy Consumption	Page 10 of EA.
N	Solid Waste Disposals*	

B	Waste Water--Sewage System	Pages 5-11 of EA.
N	Storm Water	
N	Community Water Supply	
N	Public Safety: Police	
N	Fire	
N	Emergency Medical	
N	Parks, Playgrounds, & Open Space	
N	Cultural Facilities, Cultural Uniqueness, & Diversity	
N	Transportation--Air, Rail & Auto (Including Local Traffic)	
B	Consistency with Other State Statutes or Local Ordinances, Resolutions, or Plans (<i>to be added by local community</i>)	Page 4 of EA.

10. Describe and analyze reasonable alternatives to the proposed activity whenever alternatives are reasonably available and prudent to consider, and discuss how the alternatives could be implemented, if applicable.

See attached Environmental Assessment.

11. Where applicable, list and evaluate mitigation actions, stipulations, and other controls which will be enforced by the local government or another governmental agency.
12. Is the proposed project in compliance with all applicable Federal, State, and local laws and regulations?

Yes No

LEVEL OF CLEARANCE FINDING:

Based on the foregoing environmental review, it is concluded that:

[X] FINDING: A request to the Montana Department of Commerce for release of funds for the within project **is not** an action significantly affecting the quality of the human environment, and no EIS is required. A Finding of No Significant Impact (FONSI) can be made.

OR

[] FINDING: A request to the Montana Department of Commerce for release of funds for the within project **is** an action significantly affecting the quality of the human environment, and an EIS is required.

Finding Executed by:

Name (Typewritten): **Tony Haag, Mayor**

Title: **Environmental Certifying Officer**

Signature:

Date:

INDEX OF APPLICABLE FEDERAL STATUTES AND REGULATIONS INCLUDED IN THE CHECKLIST

1. Air Quality

- a. Clean Air Act (42 U.S.C. 7401 et seq.) as amended; particularly section 17(c) and (d) (42 U.S.C. 7506(c) and (d)).
- b. Determining Conformity of Federal Actions to State or Federal Implementation Plans (Environmental Protection Agency-- 40 CFR parts 6, 51, and 93).

2. Endangered Species

- a. The Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.) as amended; particularly section 7 (16 U.S.C. 1536).

3. Farmlands

- a. Farmland Protection Policy Act of 1981 (7 U.S.C. 4201 et seq.) particularly sections 1540(b) and 1541 (7 U.S.C. 4201(b) and 4202).
- b. Farmland Protection Policy (U.S. Department of Agriculture 7 CFR Part 658).

4. Fish and Wildlife

- b. Fish and Wildlife Coordination Act (16 U.S.C. 661-666c).

5. Floodplain

- a. Executive Order 11988, Floodplain Management, May 24 1977 (42 FR 26951, 3 CFR, 1977 Comp., as interpreted in HUD regulations at 24 CFR Part 55).
- b. Flood Disaster Protection Act of 1973, as amended (42 U.S.C. 4001-4128).
- c. National Flood Insurance Program (44 CFR 59-79).

6. Historic Properties

- a. The National Historic Preservation Act of 1966, as amended (16 U.S.C. 470 et seq.), particularly sections 106 and 110 (16 U.S.C. 470 and 470h-2), except as provided in §58.17 for Section 17 projects.
- b. Executive Order 11593 - Protection and Enhancement of the Cultural Environment, May 13, 1971 (36 FR 8921), 3 CFR 1971-1975 Comp., particularly section 2(c).
- c. 36 CFR Part 800 with respect to HUD programs other than Urban Development Grants (UDAG)

d. The Reservoir Salvage Act of 1960 as amended by the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. 469 et seq.), particularly section 3 (16 U.S.C 469a-1).

7. Man-made Hazards

a. Siting of HUD-Assisted Projects Near Hazardous Operations Handling Conventional Fuels or Chemicals of an Explosive or Flammable Nature, 24 CFR Part 51, Subpart C, (49 FR 5103, 2/10/84).

b. HUD Notice 79-33, Policy Guidance to Address the Problems Posed by Toxic Chemicals and Radioactive Materials, 9/10/79.

c. Siting of HUD Assisted Projects in Runway Clear Zones at Civil Airports and Clear Zones and Accident Potential Zones at Military Airfields, 24 CFR Part 51, Subpart D (49 FR 880, 1/6/84)

8. Noise

a. Noise Abatement and Control, 24 CFR Part 51, Subpart B, (44 FR 40861, 7/12/79, as amended at 61 FR 13333, 3/26/96).

9. Solid Waste Disposal

a. Solid Waste Disposal Act as amended by the Resource Conservation and Recovery Act of 1976 (42 U.S.C. 6901-6987).

b. U.S. Environmental Protection Agency (EPA) Implementing Regulations 40 CFR Parts 240-265.

10. Water Quality

a. Federal Water Pollution Control Act, as amended (33 U.S.C. 1251-1376).

b. The Safe Drinking Water Act of 1974, as amended (42 U.S.C. 69-01-6978, 300f-300j-10).

c. U.S. Environmental Protection Agency (EPA) Implementing Regulations 40 CFR Parts 100-149.

d. Missoula, Montana Sole Source Aquifer, in accordance with Section 1424 (e) of the Safe Drinking Water Act, 42 U.S.C. Section 300h-3 (1982).

11. Wetlands

a. Executive Order 11990, Protection of Wetlands, May 24, 1977 (42 FR 26961), 3 CFR, 1977 Comp., particularly sections 2 and 5; and Applicable State Legislation or Regulations.

12. Wild and Scenic Rivers

a. Wild and Scenic Rivers Act of 1968 (16 U.S.C. 1271 et. seq.) as amended, particularly section 7(b) and (c), (16 U.S.C. 1278 (b) and (c)).

Note: *In Montana, this act applies to the North Fork of the Flathead River from the Canadian border downstream to its confluence with the Middle Fork; the Middle Fork from its headwaters to its confluence with the South Fork; and the South Fork from its origin to Hungry Horse Reservoir; and, the Missouri River consisting of the segment from Fort Benton, one hundred and forty-nine miles downstream to Fred Robinson Bridge.*

13. Environmental Justice

a. Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, February 11, 1994 (59 FR 7629), 3 CFR, 1994 Comp. P. 859. (24 CFR Part 58.5, April 30, 1996)