

January 15, 2010

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	Phase 1 Wastewater System Improvements
Location	Choteau, Montana
Project Number	WPCSRF Project # C304160 DOC-TSEP Project # MT-TSEP-CG-10-479
Total Cost	\$1,043,730 (Phase 1 only)

From the 2008 Wastewater System Preliminary Engineering Report (PER), it is recommended that improvements be made to the wastewater collection system to reduce groundwater infiltration, that a disinfection system be added to the City's treatment system to meet the bacterial limits in the facility's discharge permit, and that the existing wastewater treatment system be replaced with a mechanical treatment plant.

Based on the priority of the needed improvements and the desire of the City to spread out the capital outlays necessary to construct the required facilities, the wastewater treatment system improvements will be implemented in two phases. Phase 1 improvements include the following: sliplining 2,800 linear feet of existing 9-inch clay tile pipe on the main located between Main Avenue and First Avenue to eliminate a significant source of infiltration; the replacement of several service connections using traditional excavation in the northwest section of the City to eliminate infiltration; and the construction of a new ultraviolet light disinfection system on property adjacent to the existing lagoon to meet future discharge permit limits. Phase 2 improvements will include replacement of the existing treatment process and is not scheduled for implementation until 2013 at the earliest.

Environmentally sensitive characteristics such as threatened or endangered species, and historical sites will not be adversely impacted as a result of the proposed phase 1 project. Installation of the UV disinfection system will require wetland mitigation of approximately 0.4 acres under the guidance of the US Army Corps of Engineers and a floodplain permit from the County Floodplain Coordinator. An environmental assessment (EA), which describes the project and analyzes the impacts in more detail, is available for public scrutiny at the following locations:

Department of Environmental Quality
1520 East Sixth Avenue
P.O. Box 200901
Helena, MT 59620-09011
mabrahamson@mt.gov

City of Choteau
38 1st Avenue NW
P.O. Box 619
Choteau, MT 59422

Comments on the EA may be submitted to the Department of Environmental Quality at the above address. After evaluating substantive comments received, the department will revise the environmental assessment or determine if an environmental impact statement is necessary. If no substantive comments are received during the comment period, or if substantive comments are received and evaluated and the environmental impacts are still determined to be non-significant, the agency 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,

Todd Teegarden, Bureau Chief
Technical and Financial Assistance Bureau

CITY OF CHOTEAU
PHASE 1 WASTEWATER SYSTEM IMPROVEMENTS
ENVIRONMENTAL ASSESSMENT

I. COVER SHEET

A. PROJECT IDENTIFICATION

Applicant: City of Choteau
Address: 38 1st Avenue NW
P.O. Box 619
Choteau, MT 59422
Project Number: WPCSRF Project # C304160-01
DOC-TSEP Project # MT-TSEP-CG-10-479

B. CONTACT PERSON

Name: John Dunckel, Mayor
Address: P.O. Box 619
Choteau, MT 59422
Telephone: (406) 466-2510

C. ABSTRACT

The City of Choteau, through its 2008 Wastewater System Preliminary Engineering Report (PER), has identified the need for wastewater collection system improvements to reduce groundwater infiltration, and to add a disinfection system to the City's treatment system to meet bacterial limits in the facility's discharge permit. The City's original collection system was constructed in 1914 and consists of 8-foot lengths of clay tile pipe resulting in thousands of pipe joints throughout the city. These deteriorating joints, along with cracks in the aging pipe, allow a significant amount of infiltration into the sewer collection system from the relatively high and seasonally fluctuating groundwater table. Over the past 10 years, the City has implemented numerous collection system replacement and rehabilitation projects as a means of reducing groundwater infiltration into the collection system. While the improvements have significantly reduced infiltration, system flows still remain very high (up to 400% higher than the flow in a system that experiences minimal infiltration) indicating that infiltration is still a problem. Excessive inflow and infiltration (I&I) has also resulted in the hydraulic overloading of the treatment facility, which negatively impacts treatment and weakens the influent wastewater strength. This has resulted in the Department of Environmental Quality issuing a compliance schedule in the facility's current discharge permit (issued in 2005) requiring the City to address the excessive I&I or add additional treatment capacity. The

current discharge permit also contains year round permit limits for fecal coliform bacteria that go into effect on September 30, 2010. Based on past sampling data, the existing treatment facility will not be able to meet the bacterial limits without disinfection.

To address I&I problems, the City conducted video inspections of the collection system to identify additional sources of infiltration. These inspections identified that the sewer pipe located between Main Avenue and 1st Avenue is a significant source of infiltration. The physical condition of the pipe will enable the pipe to be rehabilitated through sliplining. The City has also noticed elevated flows are still occurring from a section located in the northwest quadrant of the city (between Seventh Ave NW and Tenth Ave NW) where the pipes have been recently rehabilitated through sliplining. It is believed that service connections in the area are the source of infiltration and the City will video inspect those lines and identify which connections need to be dug up and replaced with a watertight service saddle on the main. To meet the bacterial limits in the facility's discharge permit, an ultraviolet (UV) disinfection system will be added to the treatment system. The proposed project should enable the City to come into compliance with the requirements in its discharge permit. Eliminating I&I will improve treatment performance and is an important first step as cost effective and appropriate treatment system upgrades for future phase 2 treatment system improvements are developed. All proposed improvements would be designed to meet state design standards in accordance with MDEQ Circular DEQ-2.

Federal and State grant/loan programs will fund the project. The proposed improvements are estimated to cost approximately \$1,240,200. It is anticipated that the project will be funded through a low interest loan (3.75%) obtained from the Water Pollution Control State Revolving Fund (WPCSRF) loan program, and grants from the Department of Natural Resources and Conservation (DNRC) and the Treasure State Endowment Program (TSEP).

Environmentally sensitive characteristics such as wetlands, floodplains, threatened or endangered species, and historical sites were evaluated. Where adverse impacts are identified, appropriate mitigation efforts will be required and implemented. Additional environmental impacts related to land use, water quality, air quality, public health, energy, noise, and growth, were also assessed. No significant long-term environmental impacts were identified.

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

The DEQ, Technical and Financial Assistance Bureau, has prepared this Environmental Assessment to satisfy the requirements of the Montana Environmental Policy Act (MEPA) and the National Environmental Policy Act (NEPA). The Montana Department of Commerce -TSEP has also reviewed this EA for purposes of MEPA compliance.

D. COMMENT PERIOD

Thirty (30) calendar days

II. PURPOSE OF AND NEED FOR ACTION

The City's original collection system was constructed in 1914 and consists of 8-foot lengths of clay tile pipe resulting in thousands of pipe joints throughout the city. These deteriorating joints, along with cracks in the aging pipe, allow a significant amount of infiltration into the sewer collection system from the relatively high and seasonally fluctuating groundwater table. Excessive inflow and infiltration (I&I) has resulted in the hydraulic overloading of the treatment facility which negatively impacts treatment and weakens the influent wastewater strength. The Department of Environmental Quality has issued a compliance schedule in the facility's current discharge permit (issued in 2005) requiring the City to eliminate excessive I&I or add additional treatment capacity. The current discharge permit also contains year round limits for fecal coliform bacteria that go into effect on September 30, 2010. Based on past sampling data, the existing facility will not be able to meet the bacterial limits without the addition of a disinfection system.

In order to meet the terms of the compliance schedules and directives included in the City's discharge permit, the City will rehabilitate and/or replace portions of the collection system identified as significant sources of infiltration, and will add a UV disinfection system to the existing treatment system.

III. ALTERNATIVES INCLUDING THE PROPOSED ACTION

A. Four alternatives for addressing Choteau's wastewater collection system needs were evaluated. These include:

- C-1. No Action
- C-2. Pipe Replacement
- C-3. Sliplining Rehabilitation
- C-4. Pipe Bursting

C-1. NO ACTION - The no-action alternative would involve making no improvements to the existing wastewater collection system. The City's collection system receives a large amount of groundwater, and while this does not result in surcharging or backed up sewer service lines, the infiltration does prevent adequate detention time at the wastewater treatment facility and greatly reduces treatment efficiencies. This alternative would result in continued problems achieving percent removal requirements for BOD and TSS in their discharge permit and would not address the compliance directive issued by the DEQ to reduce I&I and improve treatment. Therefore, the no-action alternative was not considered to be a viable option and was not given further consideration.

C-2. PIPE REPLACEMENT - This alternative involves excavating a trench

over the existing sewer main, removing the old pipe, and installing a new sewer main. This project would include replacing 2,800 linear feet of existing 9-inch clay tile pipe with approximately 2,800 linear feet of 8" PVC sewer pipe, and 8 new manholes located between Main Avenue and First Avenue. In addition, several sewer service connections (to be determined through video inspection) that are a significant source of infiltration will be dug up and replaced using new watertight connections. These improvements will occur on pipes that were recently rehabilitated through sliplining in the northwest section of the city. This alternative is practical in terms of environmental and regulatory considerations, and thus this alternative was given further consideration.

C-3. **SLIPLINING REHABILITATION** - This alternative is a trenchless technology for rehabilitating sewer mains. With this alternative the existing pipe is cleaned and a flexible liner is inserted into the existing pipe. Through either pressure or mechanical methods the liner is expanded to form a tight fit in the existing pipe and allowed to "cure" through heat (or cooling depending on the product) to form a hard, structurally sound pipe inside the old pipe. Once the new pipe has cured, service lines are reestablished internally through use of a remote cutting device which travels down the main to the previously recorded service locations. Although it involves significantly less excavation than pipe replacement, some excavation may be required for service line connections and in areas where the existing line has structural problems. A major advantage with this alternative is the final product results in is a seamless pipe between manholes eliminating pipe joints that can be a source of I&I as pipes age and settle. To address infiltration at service connections a relatively new technique where a new fitting (called a "top hat") is inserted up into the service line connection for a few inches and glued in place. This alternative would include the sliplining of 2,800 linear feet of existing 9-inch clay tile pipe on the main located between Main Avenue and First Avenue. This alternative is practical in terms of environmental and regulatory considerations, and thus this alternative was given further consideration.

C-4. **PIPE BURSTING** – This alternative utilizes a pneumatic pipe bursting tool that is pulled through the failing pipe. As the pipe bursting tool is pulled through the failing pipe, the old pipe fragments and surrounding soil is pushed out of the way making room for the new pipe. The new pipe is attached to the back of pipe bursting tool and follows the tool into the bore. This method is generally not cost competitive with either open-cut pipe replacement or other trenchless technologies and can disturb adjacent utilities or surface features and therefore is not considered to be a viable option for the Chouteau project.

B. Three alternatives for disinfection were evaluated. These included:

D-1. NO ACTION

D-2. CHLORINATION/DECHLORINATION

D-3. ULTRAVIOLET DISINFECTION

D-1. NO ACTION – To meet the reduced pathogen limit requirements of the discharge permit, disinfection will be required. Even with a more sophisticated treatment system the effluent would likely not meet the pathogen limits in the permit without subsequent disinfection. Therefore, the no action alternative is not a viable option and was not given further consideration.

D-2. CHLORINATION/DECHLORINATION - This alternative would involve the construction of a new disinfection system that will inject a chlorine compound into the wastewater, provide mixing and retention in a chlorine contact basin, and provide dechlorination for removal of the chlorine residual prior to discharge. A chlorine disinfection building for storage and feeding of a chlorine compound (e.g., chlorine gas, sodium hypochlorite, or calcium hypochlorite, etc.) would be needed, as well as a potable water supply. A covered serpentine chlorine contact basin, to allow for plug flow, would need to be constructed to provide the required detention time (typically 30 minutes) for reaction of the chlorine compound and pathogens in the water. Prior to the release of treated wastewater to the Teton River, use of a dechlorination compound (e.g., sulfur dioxide, sodium bisulfite, etc.) to neutralize the chlorine would be required to reduce in-stream toxicity associated with chlorine residuals. Additional chemical storage, feed equipment, mixing and detention time provisions would be required to allow for the dechlorination process. This alternative is practical in terms of environmental and regulatory considerations, and thus this alternative was given further consideration.

D-3. ULTRAVIOLET (UV) DISINFECTION - This alternative would consist of constructing a new UV light disinfection system. UV disinfection is a physical disinfection process involving electromagnetic radiation which penetrates the cell wall of bacteria, altering the genetic material and destroying its ability to reproduce. A UV disinfection system uses mercury arc lamps to provide the electromagnetic radiation and does not require the addition of chemicals that must be subsequently removed from the water. This alternative would consist of the installation of two stainless steel channels with two UV banks in series in each channel to provide disinfection reliability, and to ensure uninterrupted service during tube cleaning and maintenance. The equipment and control panel would be housed in a structure to protect it from the weather and vandalism. The UV system will be designed to treat 415 gallons per minute and meet the bacterial limits established in the discharge permit. This alternative is practical in terms of environmental and regulatory considerations, and thus this alternative was given further consideration.

C. BASIS OF SELECTION OF PREFERRED ALTERNATIVE

Depending on the condition of the existing sewer pipe, replacement or rehabilitation of the sewer main are both viable options. Based on video

inspections, it was determined that the sewer main located between Main Avenue and First Avenue can be effectively rehabilitated through sliplining. Sliplining in comparison to traditional open-cut excavation will result in lower construction costs since adjacent utilities will not be impacted and surface restoration will not be required. It was also determined that replacement of several service connections using traditional excavation methods was the most effective means of eliminating infiltration in the northwest section of the city. The “top hat” technique was dismissed since it is relatively new and its longevity is yet to be determined. In addition the cost for either method is very similar. Thus the proposed phase 1 project will utilize both Alternatives C-2 and C-3 for sewer main improvements. Of the disinfection alternatives considered, ultraviolet (UV) disinfection was determined to be more efficient and less expensive (capital, operation and maintenance costs) than a chlorination system. In addition, the UV disinfection requires a smaller footprint than chlorination systems and eliminates the safety concerns associated with chlorine gas and the handling problems of hypochlorite solutions. Thus, the proposed phase 1 project will utilize Alternative D-3 to meet future disinfection requirements.

D. PHASE 1 PROJECT COST

The phase 1 project includes rehabilitation of approximately 2,800 lineal feet of 9-inch clay tile pipe, replacement of several sewer service connections in the northwest section of the City and installation of a new UV disinfection system at the discharge outfall from the treatment facility. Table 1 provides a summary of the project costs of the alternatives considered.

TABLE 1 – PHASE 1 ESTIMATED TOTAL PROJECT COSTS

Item	Estimated Cost	Annual O&M Increase
Sewer Main Improvements	\$367,400	-
UV Disinfection System	\$343,100	\$8,970
Engineering, Legal, & Administration	\$333,230	-
Total Project Cost	\$1,043,730	

The estimated administration, design and construction cost for the recommended alternatives is \$1,043,730. The City has received a \$500,000 TSEP grant, a \$100,000 DNRC grant and will take out a \$443,730 State Revolving Fund (SRF) loan at 3.75% interest rate for 20 years to complete the project.

The financial impact of this project on the system users is shown in Table 2. Based on the EPA guidance for project affordability, the proposed project will result in a monthly cost per household that is 1.10% of the monthly median household income and therefore is expected to impose a slight to moderate economic hardship on household income. The total combined water and sewer cost after completion of the proposed project is estimated to be \$58.21 per month. This combined rate is 118% of the Montana Department of Commerce’s

target rate for the City of Choteau.

Table 2
PROJECT AFFORDABILITY

Existing Monthly sewer rate	\$18.62
New monthly debt service and O&M increase	\$ 4.95
Total monthly user cost ¹	\$23.57
Monthly median household income (mMHI) ²	\$2,142.33
User rate as a percentage of mMHI	1.10 %

¹ City of Choteau Preliminary Engineering Report

² Based on 2000 census data

IV. AFFECTED ENVIRONMENT

A. PLANNING AREA / MAPS

The City of Choteau is located in the Teton River Valley Plain area in Teton County along state highways 287 and 89 (See Figure 1).

The wastewater collection system is located throughout the city in the alley ways and generally flows from north to south. The treatment facility, a facultative lagoon, is located south of the city. The planning area includes the incorporated boundary of the City and adjacent areas outside the city limits where future growth is expected (see Figure 2). The phase 1 sewer main replacement project is shown in Figure 3 and the UV disinfection system project is shown in Figure 4.

The project will take approximately four months to construct following system design. Construction is scheduled to begin in May 2010.

B. FLOW PROJECTIONS

The current average flow to the wastewater treatment facility is estimated to be 619,000 gallons per day. This flow rate results in a net wastewater flow of 348 gallons per capita per day (gpcd). This per capita flow rate greatly exceeds the EPA "trigger" value of 120 gpcd, which is considered to include an acceptable level of infiltration based on economic considerations. With values ranging throughout the year from 200% to 330% of the EPA baseline value, groundwater infiltration remains very high in the system. While the decrease in collection system flows after the proposed improvements are nearly impossible to accurately estimate at this time, it is expected that since a significant percentage of the overall infiltration occurs in the sewer line located between Main Avenue and First Avenue that the reduction will be significant.

Based on past census data, Choteau has been experiencing a slight increase in population since the 1990s. Since there are no foreseeable changes that will destabilize the population trend, for planning purposes the annual growth rate in the City is estimated to be 0.225% annually through 2030. Overall the new facility will have a design population that will be less than that of the current facility (2,060 people) but will have a design flow that will likely exceed current design flow of 0.300 MGD due to the excessive infiltration (see Table 3). The impacts of the elevated flows on nondegradation limits and total maximum daily loads

(TMDLs) will need to be addressed with the Phase 2 improvements once a treatment technology has been selected and the results of eliminating infiltration from the Phase 1 improvements are known.

**Table 3
PROJECTED POPULATION AND WASTEWATER FLOWS**

Year	Population	Average Daily Flow	Peak Month Flow
		(gal/day)	(gal/day)
2007	1,810 ¹	472,000 ²	541,000 ²
2030	2,000	400,000 ³	600,000 ³

¹ Montana Department of Commerce population estimate.

² Based on 2007 Discharge Monitoring Report (DMR) data

³ Estimated values. Actual design flows dependent on effectiveness of phase 1 improvements.

C. NATURAL FEATURES

Within the city, land use is predominantly residential, while land outside the city limits is primarily open rangeland and farmland. Land topography consists of rolling terrain created by intense glaciations that have created deep silt and gravel glacial moraine deposits and alluvial plains. The topography enables a conventional gravity system to transport wastewater to the treatment system located south of town without the use of a lift station. The Teton River flows along the western and southern sides of the city.

Soils in the Teton River Valley consist of deposits of loam gravel clay mixtures, sandy loam and loam and clay for the first 16 feet. Below this layer there is a layer of sand and gravel to a thickness for 20 to 30 feet below the surface. Below the sand and gravel layer there is a blue shale layer. The City of Choteau wastewater treatment plant discharges to an unnamed man-made ditch that flows 0.3 miles to the Teton River. The segment of the Teton River to which the plant discharges is classified as a B-1 water body. Waters classified as 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.

Groundwater is located in the impervious subsurface sand, silt and gravel deposits of the Teton Valley aquifer. This aquifer is underlain by an impervious subsurface stratum formed by a hardpan layer of aggregates cemented by flaciated limestone byproducts. Groundwater flows parallel to the Teton River in a down-valley, southerly direction. The groundwater is recharged by down gradient groundwater flow from upgradient aquifer gravels; seepage through the bed of the Teton River; seepage from irrigation ditches; direct infiltration of precipitation; and possible discharge from the Virgelle Sandstone.

The climate in Choteau is characterized as semi-arid. Choteau's average high temperature in August is 81°F, but can occasionally top 100 °F during the

summer months. The average low temperature is approximately 30 °F, but can reach -30 °F during the winter months. Warm, strong chinook winds are common in Choteau and typically raise the temperatures above the freezing level several times during the winter months. The average annual precipitation rate is 12.5 inches per year.

V. ENVIRONMENTAL IMPACTS OF PROPOSED PROJECT

A. DIRECT AND INDIRECT ENVIRONMENTAL IMPACTS

1. Land Use – Improvements to the sewer lines within the City limits will occur within existing alley right of ways. The UV improvements will be constructed on approximately 0.4 acres of adjacent property located south of the existing lagoon. The City currently holds a right of way deed from the State of Montana for construction of the UV unit on this property. This land is currently used for livestock grazing. Ultimately, any area utilized by this project would be offset with the area of the existing lagoon system once a new facility is constructed and the existing facility is abandoned and the area restored.
2. Floodplains – Based on floodplain maps, the City's wastewater treatment facility and a small portion of the collection system are located within designated floodplain areas. Spring Creek, which runs through the northeast edge of town, experiences flooding from spring time runoff on occasion. When this occurs it is possible for flood waters to enter the collection system through manhole covers. The wastewater treatment lagoons are protected from flooding by the lagoon dikes which extend 10 feet higher than the surrounding ground elevation. The disinfection system will be similarly protected from flooding as the UV units and controls will be located atop an extension of lagoon dike on the southeast corner of the existing lagoon near the current discharge structure. Extending the dike will require fill in the 100-year floodplain and specific permitting allowance would be required from the Corps of Engineers and the local floodplain administrator. The local floodplain coordinator for Teton County has indicated a floodplain permit would be required for facilities constructed in the floodplain, but that the proposed project would not be disallowed due to this location. The Department of Natural Resources and Conservation was contacted regarding the proposed improvements and their comments are summarized in Section X of this report.
3. Wetlands - The collection system improvements are not located in any wetland areas. Some of the areas surrounding the treatment facility will likely qualify as wetlands due to the hydric soils in the area and hydrophilic plant growth (e.g., cattails). The area of wetlands is predominately to the west, and north of the existing lagoon. The discharge ditch that conveys effluent for the treatment facility to the Teton River also passes through some wetland areas. The area proposed for the UV system appears to have some vegetation typical of wetland area.

A biological assessment will be required to delineate and classify the wetlands that are located at the proposed UV fill site. Depending on the result of the delineation and the area impacted, the project may qualify for authorization under DA Nationwide Permit 39 found in the March 12, 2007 Federal Register (Vol. 72, No. 47, 11092), Reissuance of Nationwide Permit 39 (NWP 39). To qualify for NWP 39 authorization, the City must submit to the Corps of Engineers (COE) the required information addressing the General and Regional Conditions listed in the NWP 39 Fact Sheet. If the COE determines that the project does not qualify under the NWP 39 authorization (i.e., the wetland acreage impacted exceeds 0.5 acres), an Individual Permit will be needed for the project and an additional Public Notice Process and Section 404(b)(1) analysis will be required. A wetland mitigation plan, approved by the COE, will be developed once the wetland delineation is complete. It is likely that the rerouting of the unnamed ditch around the toe of the proposed fill site will, over time; result in an increase in wetland area due to the additional ditch length.

4. Cultural Resources – No impacts to cultural resources are anticipated. All construction activity will occur on previously disturbed ground. The State Historical Preservation Office was contacted regarding the proposed improvements and their comments are summarized in Section X of this report.
5. Fish and Wildlife – The Montana Natural Heritage Program indicated that the Grey Wolf, Eastern Bluebird, and the Grizzly Bear are animal species of concern in the Choteau area. The project will not affect any critical wildlife habitats, nor will any known endangered species be affected. Sewer line improvements will occur within existing alley right-of-ways within the City limits and within previously disturbed areas. The UV system improvements will occupy approximately ½ acre on adjacent property south of the existing lagoon. Extension of the lagoon dike to the south will require that the unnamed ditch which runs along the toe of the southern embankment be rerouted around the toe of UV fill site to maintain flow. The US Fish and Wildlife Services was contacted regarding the proposed improvements and their comments are summarized in Section X of this report.
6. Water Quality – The sewer collection main improvements will not impact surface water and will only impact groundwater in that its infiltration into the sewer pipe will be reduced. The UV system installation will require the rerouting of the unnamed ditch which currently runs along the toe of the southern embankment around the toe of the proposed fill site. Impacts to the nearby surface stream associated with storm water runoff during construction will have to be mitigated with appropriate best management practices and carefully maintained during construction. The proposed project will improve surface water quality by providing adequate disinfection of the discharge preventing water quality standards violations associated with fecal coliform bacteria. The TMDL developed for the

Teton River, has resulted in an allocated sediment load limit for the Choteau WWTP. However, the proposed phase 1 improvements will not result in increased system flows or treatment capacity, therefore compliance with Montana's Nondegradation Policy and TMDL limits will not be an issue.

7. Air Quality - Short-term negative impacts on air quality are expected to occur during construction from heavy equipment in the form of dust and exhaust fumes associated with service connection replacement and placement of fill for the UV system. Proper construction practices will minimize this problem. Project specifications will require dust control. No long term air quality effects would result from any of this work.
8. Public Health - Public health will not be negatively affected by the proposed project. Reducing the infiltration of groundwater into the sewer collection system and likely exfiltration of sewage from the collection system will result in less potential for public health risks associated with groundwater contamination. In addition, removing groundwater infiltration will improve treatment system performance and efficiency by increasing the wastewater detention time through the existing lagoon. The proposed UV disinfection system will adequately disinfect the treated effluent, decreasing the potential of human exposure to pathogenic organisms in the wastewater effluent.
9. Energy – An increase in energy consumption will occur after the new UV system is constructed. Energy consumption will be minimized as much as possible through energy efficient equipment and the proper sizing of the disinfection system to meet the requirements in the discharge permit. The consumption of energy resources directly associated with construction of the recommended improvements is unavoidable but will be a short-term commitment.
10. Noise - Short-term impacts from excessive noise levels may occur during the construction activities. The construction period will be limited to normal daytime hours to avoid early morning or late evening construction disturbances. No significant long-term impacts from noise will occur.
11. Environmental Justice – Environmental Justice Executive Order 12898: The proposed project will not result in disproportionately high or adverse human health or environmental effects on minority or low income populations. The economic impact will ultimately affect all of the users of the system proportionately to the taxable value of the system if a general obligation bond were used to secure a loan for the cost of the project. Otherwise users would all pay nearly the same or based upon the size of the water service to the respective property. No disproportionate effects among any portion of the community would be expected.
12. Growth - Improvements to the WWTP will be a positive feature for the community and are mandated in the facility's discharge permit (Permit

No. MT0020052). The proposed improvements are not designed to increase system treatment capacity but will reduce system flows to the treatment lagoon. The environmental assessment for the Phase 2 improvements, when implemented, will address treatment capacity issues and associated community growth.

12. Cumulative Effects - No significant adverse impacts are anticipated with the proposed improvements. Approximately 0.4 acres of grazing lands south of the existing lagoon will be lost, however over the long term when the existing lagoon is abandoned and the site reclaimed that land can revert back to grazing lands so it will be offset. A wetlands mitigation plan approved by the Corps of Engineers will be prepared, if necessary for expansion of the lagoon embankment to accommodate the UV disinfection system.

B. UNAVOIDABLE ADVERSE IMPACTS

Short-term construction related impacts (i.e., noise, dust, etc.) will occur, but should be minimized through proper construction management. Energy consumption during construction and energy for the new UV system cannot be avoided.

VI. PUBLIC PARTICIPATION

Problems associated with the wastewater system have been discussed at council meetings numerous times over the years. A public hearing to discuss increased sewer rates was held on April 1, 2008. The engineer discussed the need for the project (i.e., excessive infiltration, new disinfection requirements, and treatment improvements), presented alternatives for phase 1 and 2 improvements, associated costs, funding sources, and the impact to user rates. In addition a newsletter was sent out to all city residents to explain the proposed upcoming projects and the need to increase sewer rates to assist in paying for the projects. No comments were received from the public.

VII. AGENCY ACTION, APPLICABLE REGULATIONS AND PERMITTING AUTHORITIES

No additional permits will be required from the State Revolving Fund (SRF) section of the DEQ for this project after the review of the submitted plans and specifications. However, coverage under the storm water general discharge permit and possibly 318 Authorization (Short-Term Water Quality Standards for Turbidity) will be required from the DEQ Water Protection Bureau prior to the beginning of construction. A Section 404 permit from the U.S. Army Corp of Engineers and a 124 permit from the Montana Department of Fish, Wildlife and Parks will most likely be required for work associated with construction of the UV system and rerouting of the unnamed ditch along the southern embankment. A permit for construction in the floodplain will most likely be required from the City of Choteau and/or Teton County.

VIII. RECOMMENDATION FOR FURTHER ENVIRONMENTAL ANALYSIS

EIS More Detailed EA No Further Analysis

Rationale for Recommendation: Through this EA, the DEQ has verified that none of the adverse impacts of the proposed Choteau Phase 1 Wastewater Treatment System project are significant. Kathleen Miller, P.E., representing the MDOC, TSEP reviewed the EA on January 12, 2010 and is in concurrence with the findings of the MDEQ. Therefore, an environmental impact statement is not required. The environmental review was conducted in accordance with the Administrative Rules of Montana (ARM) 17.4.607, 17.4.608, 17.4.609, and 17.4.610. The EA is the appropriate level of analysis because none of the adverse effects of the impacts are significant.

IX. REFERENCE DOCUMENTS

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

1. City of Choteau Wastewater System Preliminary Engineering Report, May 2008, prepared by HKM Engineering, Inc.
2. Correspondence from the Corps of Engineers Omaha District Helena Regulatory Office, November 2009.
3. Updated Project Cost, December 2009, prepared by HKM Engineering, Inc.

X. AGENCIES CONSULTED

The following agencies have been contacted in regard to the proposed construction of this project:

1. The U.S. Fish and Wildlife Service reviewed the proposed project and determined that the proposed changes are unlikely to adversely affect fish and wildlife resources under the purview of the U.S. Fish and Wildlife Service. However they have a preference for the land application/irrigation alternatives, as that would prevent further nutrient loading in the Teton River.
2. The Montana Department of Natural Resources and Conservation (DNRC) reviewed the proposed project and stated that the entire project is located within the floodplain; part in the City of Choteau and part in Teton County. Because the proposed improvements include both City and County property, permits will be required from both jurisdictional agencies. The proposed collection line improvements are primarily located within the City limits of Choteau and will need a floodplain permit from the City. The proposed UV treatment improvements project is located outside the City in the County and will require a floodplain permit from the County.
3. The Montana Historical Society's State Historic Preservation Office (SHPO) reviewed the proposed project. According to their records, there have been a few previously recorded sites and a few cultural resource inventories done within the designated search locales. Because of previous ground disturbances, SHPO stated that there was a low likelihood that cultural properties would be impacted and, as such, felt a cultural resource inventory is unwarranted at this time. However if cultural materials are inadvertently discovered during this project,

their office must be contacted and the site investigated. If any structure over 50 years old is to be altered, it is recommended that they be recorded and a determination of their eligibility for listing on the National Register of Historic Places be made.

4. The U.S. Department of the Army Corps of Engineers (USCOE) reviewed the proposed project. The USCOE 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. The USCOE stated that if fill will be placed either temporarily or permanently in a water of the United States, a Department of Army permit will be required for the project. A permit application must be submitted if the final design requires the placement of fill material in any jurisdictional waters.

5. The Montana Department of Fish, Wildlife and Parks reviewed the proposed project. They had no concerns or comments related to potential negative impacts on wildlife or wildlife habitat.

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