

## 6.0 PROPOSED PROJECT

### A. PRELIMINARY PROJECT DESIGN

The existing asbestos cement (AC) mains are considered the most significant issue currently facing the Town's water system. The recommended phasing is to first prioritize replacement of the AC pipes. This will help mitigate the Town's large volume of unaccounted for water and help create a more reliable and sustainable water system. This will lower maintenance efforts, O&M costs, and increase the water and energy efficiency of the system. After the Town's unaccounted for water is lowered, it is recommended to pursue expansion of the system's water storage and source water.

The recommended project entails replacing the existing AC pipes along West Park Avenue, from South Valley Street to South Second Street. The AC pipes will be replaced with PVC pipes using typical trench excavation. The existing 8-inch main along South Second Street, between West Gallatin Avenue and West Park Avenue, will be replaced in-kind. The mains along West Park Avenue, from South Valley Street to South Second Street will be upsized to 8-inch mains to increase system pressures and allow for future growth to the south and west. All other replaced mains will be 6-inch. The existing distribution system is placed beneath roadways that comprise of asphalt and gravel. Surface restoration will be included as a part of this alternative. **Figure 6-1** depicts the proposed improvements.



## B. PROJECT SCHEDULE

Table 6-1 presents the proposed implementation schedule.

<b>Table 6-1 Proposed Implementation Schedule</b>	
<b>Task</b>	<b>Estimated Completion Date</b>
Submit Final PER	May 2024
DNRC Grant Application	May 2024
MCEP Grant Application	May 2024
RD Funding Application	July 2024
Funding Secured	May 2025
Start Engineering Design	July 2025
Preliminary Construction Plans and Specifications Complete	October 2025
Agency Comments on Construction Plans and Specifications	December 2025
Final Construction Plans and Specifications Complete	January 2026
Advertise for Construction Bids	February 2026
Award Construction Contract	April 2026
Begin Construction	May 2026
Construction Complete	October 2026
One-Year Warranty Inspection	October 2027

## C. PERMIT REQUIREMENTS AND ENVIRONMENTAL IMPACTS

A stormwater pollution prevention plan (SWPPP) and Notice of Intent (NOI) are anticipated. DEQ plan and specification approvals, approval from funding agencies, and the Arlee/Lake County Water and Sewer District approval of plans and specifications will be required prior to construction.

Letters regarding environmental issues were sent to the following agencies requesting comments on the proposed project:

- United States Army Corp of Engineers
- Bureau of Land Management
- Department of Environmental Quality
- Department of Natural Resources and Conservation
- United States Environmental Protection Agency
- US Fish and Wildlife Service
- Natural Resources Conservation Service

- Montana Fish, Wildlife and Parks
- State Historic Preservation Office

**D. SUSTAINABILITY CONSIDERATIONS**

1. Water and Energy Efficiency

It is expected that aging pipes and connections are responsible for a large portion of unaccounted for water. Replacing old and leaking mains will result in increased water efficiency. Additionally, reducing leakage will reduce the required water production. This will reduce the required pumping, positively impacting the energy efficiency of the water system.

2. Green Infrastructure

Storm water management with regard to water main repair and replacement is not applicable.

3. Other

The new mains will require less maintenance when compared to the existing AC mains.

**E. TOTAL PROJECT COST ESTIMATE**

**Table 6-2** presents a summary of the construction, contingency, administrative, engineering, and legal costs.

<b>Table 6-2 Project Cost Summary</b>	
<b>Category</b>	<b>Alternative D2</b>
Construction & Inflation	\$815,556
Contingency	\$122,333
Administrative, Engineering, and Legal*	\$234,472
<b>Totals**</b>	<b>\$1,172,000</b>
**Rounded totals from Chapter 4.	

A proposed project budget breakdown outlining anticipated administrative, engineering, and legal costs is presented in **Table 6-3**. Some costs have been rounded for budgetary purposes.

<b>Table 6-3 Proposed Budget</b>		
<b>Administrative and Financial Costs</b>		
<b>Item</b>	<b>Percent of Total Budget</b>	<b>Cost</b>
Personnel Costs	0.10%	\$1,172
Office Costs	0.10%	\$1,172
Grant Administration	0.93%	\$10,900
Legal Costs	0.20%	\$2,344
Audit Fees	1.20%	\$14,064
Travel & Training	0.10%	\$1,172
Interim Interest	0.00%	\$0
Bond Counsel	1.15%	\$13,478
Permit and Review Fees	0.25%	\$2,930
<i>Subtotal</i>	<b>4.03%</b>	<b>\$47,232</b>
<b>Activity Costs</b>		
<b>Item</b>	<b>Percent of Total Budget</b>	<b>Cost</b>
Engineering - Basic Services	7.29%	\$85,439
Engineering - Resident Project Representative	5.45%	\$63,874
Engineering - Additional Services	3.20%	\$37,504
Construction	69.59%	\$815,595
Contingency	10.44%	\$122,357
<i>Subtotal</i>	<b>95.97%</b>	<b>\$1,124,768</b>
<b>Project Total</b>		<b>\$1,172,000</b>

## **F. ANNUAL OPERATING BUDGET**

The proposed annual operating budget, including income, O&M costs, debt repayment, debt service reserves, and short-lived assets, is discussed in the following sections. A detailed summary of the proposed funding scenario is provided in Section G below.

### 1. Income

The Town of Manhattan water system income primarily consists of collected user and impact fees. The Town's annual wastewater system revenue has averaged \$508,480.40 over the past 3 complete fiscal years. The average annual water system revenue, excluding charges for services, is \$140,818.33. Reference **Table 6-4** for detailed water system revenue.

<b>Table 6-4</b>				
<b>Water System Revenue</b>				
<b>Item</b>	<b>2020-2021</b>	<b>2021-2022</b>	<b>2022-2023</b>	<b>Average</b>
Public Works Charges for Services	\$362,005.07	\$361,373.40	\$379,607.74	\$367,662.07
Water Miscellaneous	\$46,702.50	\$244,354.75	\$37,268.72	\$109,441.99
State Fee	\$1,634.00	\$1,670.00	\$1,732.00	\$1,678.67
Impact Administration Fee	\$1,591.35	\$1,314.70	\$420.00	\$1,108.68
Water Impact Fee	\$35,358.08	\$24,362.72	\$8,404.00	\$22,708.27
Interest	\$3,453.97	\$1,806.92	\$12,381.28	\$5,880.72
<b>Total</b>	<b>\$450,744.97</b>	<b>\$634,882.49</b>	<b>\$439,813.74</b>	<b>\$508,480.40</b>

User rates must be raised in order to fund the proposed improvements and qualify for MCEP funds. To fund the proposed improvements and provide the required debt service, the Town will need to increase the base sewer user rate by \$1.05 per EDU per month. Additional funding related discussion is included later in this Chapter.

The Town currently has 1076.7 total EDUs, with 815 residential EDUs. Although an increase in population is projected for this planning document, the proposed project will not directly impact the number of water connections; projected EDUs will correspond to the current number.

The proposed increase of \$1.05 per EDU per month results in additional income of \$1,130.53 per month or \$13,566.42 annually.

2. Annual O&M Costs

The Town’s recent annual water system O&M expenses are presented in **Table 6-5**. The proposed project is expected to decrease O&M effort. However, it is conservatively assumed that the Town’s required O&M expenditures will remain consistent with previous years.

<b>Table 6-5</b>				
<b>Operation and Maintenance Summary</b>				
<b>Operating Expenses</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>Average Operating Expenses</b>
Town Council	\$2,173.64	\$2,152.84	\$2,123.43	\$2,149.97
Mayor	\$3,159.35	\$3,160.51	\$2,986.71	\$3,102.19
Legal	\$1,181.25	\$526.25	\$0.00	\$569.17
Water Administration	\$112,610.51	\$91,848.62	\$101,825.05	\$102,094.73
Water Supply - Pumping	\$103,473.04	\$55,984.95	\$114,200.42	\$91,219.47
Water Treatment	\$9,347.93	\$4,4521.43	\$19,791.44	\$11,220.27
Water Transport and Distribution	\$194,163.16	\$164,017.88	\$155,049.06	\$171,076.70
Water R/D – Source of Supply	\$0.00	\$2,035.00	\$4,686.50	\$2,240.50
SRF Bonds	\$29,078.75	\$45,768.75	\$30,912.50	\$35,253.33
<b>Total</b>	<b>\$455,187.63</b>	<b>\$370,016.23</b>	<b>\$431,575.11</b>	<b>\$418,826.32</b>

### 3. Debt Repayment

The Town is currently repaying three loans. Loan information is presented in **Table 6-6**.

<b>Table 6-6 Existing Sewer Loans</b>						
<b>Loan</b>	<b>Lender</b>	<b>Outstanding Balance <sup>(1)</sup></b>	<b>Loan Amount</b>	<b>Funding Date</b>	<b>Interest Rate</b>	<b>Maturity Date</b>
9999CTS8	SRF	\$27,000	\$74,000	4/24/2013	2.25%	1/1/2028
9CTLKF5	ARRA	\$36,000	\$102,300	11/10/2009	0.75%	7/1/2029
9999FX931	SRF	\$186,000	\$281,000	7/23/2015	2.50%	7/1/2035

(1) As of June 2023

### 4. Reserves

#### **a. Debt Service Reserves**

The proposed loan will require the Town to maintain a debt service reserve. This value is conservatively estimated as 110% of the semiannual payment, \$14,000.

#### **b. Short-Lived Assets**

The Town has historically maintained a reserves to address its short-lived assets. No additional short-lived assets will be acquired as a result of the proposed project.

### **G. FUNDING STRATEGY**

Available grant and loan programs include the Montana Renewable Resource Grant and Loan Program (RRGL), Montana Coal Endowment Program (MCEP), the Community Development Block Grant Program (CDBG), State Revolving Fund (SRF), the US Department of Agriculture Rural Development (RD), and the Water Resources Development Act (WRDA) program. The following sections provide a general discussion of the local, grant, and loan funds available as well as a proposed funding strategy.

#### 1. Montana Renewable Resource Grant and Loan Program (RRGL)

The Montana legislature established the RRGL Program to conserve, develop, manage, and protect Montana's renewable resources. The program is administered by the Resource Development Bureau of the DNRC. Funds are appropriated directly through the legislature the following year based on recommendations from DNRC. The legislature must approve the funding for the grant prior to the start of the project. The grant funding limits are \$125,000. The loan amount limit is the maximum amount that can be borrowed by the local government and repaid by issuing bonds. Applicants are notified of their ranking by the fall of the year the application

#### 2. Montana Coal Endowment Program (MCEP)

This State-funded program is administered by the Montana Department of Commerce (MDOC). The funding is derived from a portion of the Coal Tax Trust Fund interest. The MCEP program

provides matching grants for qualifying projects up to \$750,000. In order to qualify for the maximum grant of \$750,000, the applicant's average user rates must be at least 150% of the community's target rate upon completion of the proposed project. If user rates are projected to be between 125% and 150% of the target rate, the applicant may apply for a maximum grant of \$625,000. Applicants with user rates under 125% of the target rate can apply for a maximum of \$500,000. In addition, the grant must not exceed \$20,000 per benefited household and be no greater than 50% of the eligible project expenses. A dollar for dollar match is required by MCEP and can consist of cash, other grants, or loans.

The MDOC requires a community to have their rates at a minimum of their published target rates to apply for grant money. The target rates are based on the community's Median Household Income (MHI), determined by the Census Bureau. The Town of Manhattan's MHI is listed at \$60,324. Because the Town provides both water and sewer, the water and wastewater target rate must be met to qualify for funding. Water and wastewater target rates are calculated at 2.3% of the monthly household income as follows:

$$(\$60,324/12)*0.023=\$115.62$$

The above formula sets the combined water and wastewater target rate for the Town of Manhattan at \$115.62 per EDU per month. Currently, the Town collects an average combine user rate of \$114.88 per EDU per month. The proposed debt service, discussed later, will increase the Town's base sewer rate by \$1.05. This will raise the average combine user rate to \$115.93 per EDU per month. Under the proposed user rates, the Town is eligible for \$500,000 in MCEP funding. There are 815 residential hookups in the Town. A MCEP grant of \$500,000 equates to \$613.50 per household. If awarded, this funding will not exceed MDOC's requirement of no more than \$20,000 per benefited household.

Applicants for the MCEP program are accepted every other year by the MDOC and submitted to the legislature for review and approval for funding. The applications are accepted in the spring of the year prior to the next legislative session (even-numbered years) and approved the following year. The applicants are generally notified of their ranking in the fall of the year the application was submitted.

### 3. Community Development Block Grant (CDBG) Program

Montana's CDBG program is a federally funded competitive grant program intended to assist communities of less than 50,000 people with primary benefits to low and moderate income (LMI) persons. In order to be eligible, a community must have at least 51% of the population considered LMI. The funds are frequently pooled with other federal, state, or local resources to improve infrastructure, including water and wastewater facilities. The maximum grant awarded for a public facility project is \$450,000 or \$20,000 per LMI household to be benefitted by the project, whichever is lower. It is required that 25% of the grant funds are matched. CDBG applications are submitted annually in the summer. The chosen applicants typically receive award letters by late fall of the year of application.

According to the 2015-2019 American Communities Survey, the Town's LMI is 32.8%, making them ineligible to CDBG funding.

### 4. State Revolving Fund Loan (SRF)



The SRF program was originally initiated by the Montana legislature for water and wastewater projects with federal seed money. This program provides at or below market interest rates to qualifying entities. The loans are funded with capitalization grants from EPA and are matched with state-issued general obligation bonds.

To be eligible for the SRF Program, the project must be on the SRF Project Priority List and Intended Use Plan. The annual process to identify projects eligible for SRF funds begins in July, and applications must be submitted with the Uniform Application. Early notification by the applicant is important to be included on the priority list. A project remains on the list until it has been completed, regardless of funding sources that finance the project.

#### 5. US Department of Agriculture Rural Development (RD)

The US Department of Agriculture RD program provides grants and loans to rural communities of less than 10,000 people. These funds may be used to construct, repair, improve, expand, or modify rural water and sewer facilities. Priority is given to communities of less than 5,500 in population. Funds are available for up to 75% of the eligible facility costs. Eligible communities are those that are unable to obtain financing at reasonable rates and terms elsewhere. The maximum term of RD loans is 40 years or the useful life of the facility, whichever is less. All loans must be secured. Bonds or notes pledging taxes, assessments, or revenues may be accepted as security if they meet statutory requirements. Grants are only available if they are required to reduce the rates to a target level commensurate with the fees residents in similar communities pay. This rate is typically set at approximately one percent of the median income.

Rural Development operates with an open application cycle, and applications may be received and funded at any time during the year. In order to be eligible, communities must meet RD's target user rates, which is typically an average of three similar communities. The application must be accompanied by the Uniform Application, an Environmental Assessment, and include a loan component. Each project is given a priority score based on income, population, health, and other considerations. The applicants with the highest scores are selected to proceed with the application process. RD funding will not be considered at this time but is an option if the preferred funding scenario is not awarded.

#### 6. Water Resources Development Act (WRDA)

The WRDA program is a congressional law where the federal government undertakes projects which construct or maintain water resources and infrastructure. This work is managed through the Army Corps of Engineers. Army Corps projects are typically authorized every two years by Congress and funded annually in appropriation bills. Due to the unpredictable nature of the WRDA grant, this funding option is not included in the proposed funding strategy. If awarded, this will decrease the required loan component of the project.

#### 7. Summary of Funding Approach

The proposed funding approach includes an RRGL grant, a MCEP grant, and an RD loan. RRGL and the SRF loan would provide the dollar for dollar match for the MCEP grant. A summary of the proposed project funding is provided in **Table 6-7**.

<b>Table 6-7 Proposed Funding Scenario</b>		
<b>Program</b>	<b>Type</b>	<b>Amount</b>
Local Funds	Local	\$150,000
RRGL	Grant	\$125,000
MCEP	Grant	\$500,000
RD	Loan	\$410,250
RD	Grant	\$136,750
<b>Total Budget</b>		<b>\$1,172,000</b>

**Table 6-8** presents estimated user rate. The proposed strategy excludes funding from WRDA. If a WRDA grant is awarded, user rates will decrease. The Town's current revenue is sufficient for the existing O&M requirement, short lived asset reserves, and existing debt service. The proposed project will not increase O&M requirements, the required debt service to fund the project will result in an estimated increase in user rates of \$1.05.

<b>Table 6-8 User Rate Calculations</b>		
Total Project Cost		\$1,172,000
<b>Funding Contributions</b>		
Local Funds	12.8%	\$150,000
MCEP Grant	42.7%	\$500,000
RRGL Grant	10.7%	\$125,000
RD Loan	25.4%	\$297,750
RD Grant	8.5%	\$99,250
<i>Sum Total</i>	100%	<i>\$1,172,000</i>
<b>Loan Amortization</b>		
Loan Amount		\$297,750
Annual Interest Rate		2.75%
Loan Term		40 years
Number of Payments per Year		2
Interest per Period		1.38%
Payment Per Period		\$6,159.96
Debt Service Reserve and Coverage		1.1
Annual Debt Service with Coverage		\$12,319.92
<b>O&amp;M Costs</b>		
New Annual O&M		\$148,000
<b>Estimated User Rates</b>		
<b>New Average Monthly User Rate</b>		<b>\$30.43</b>
Proposed Monthly Base Rate Increase		\$1.05
New Monthly Income from Charges		\$32,762.77
New Annual Income from Charges		\$393,153.26