



Where Life is Sweet

City of Hermiston, Oregon

CAPITAL IMPROVEMENTS PLAN UPDATE

2023



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engineering · surveying · natural resources

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CAPITAL IMPROVEMENTS PLAN UPDATE

FOR

CITY OF HERMISTON, OREGON

JANUARY 2023



RENEWS 12-31-24



Where Life is Sweet

ANDERSON PERRY & ASSOCIATES, INC.

La Grande, Redmond, Hermiston, and Enterprise, Oregon
Walla Walla, Washington

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Introduction

This Capital Improvements Plan (CIP) Update provides the framework for implementing the City's facility and infrastructure asset-based improvement process over a five-year period starting in fiscal year 2022-23. The CIP outlines cost estimates for projects that require significant capital investment and are essential to safeguarding the financial health of the City, while providing continued delivery of services to citizens and businesses.

It is anticipated that the CIP will continue to be reviewed and updated periodically (at least every two years) to accommodate community needs and changes in financial resources. The CIP includes a list of the City's capital improvements projects, prioritizes the projects (subject to periodic review), and schedules the projects for funding and construction.

The CIP is a tool to be used in the development of responsible and progressive financial planning goals. The CIP complies with the City's financial policies. City policies and the CIP form the basis for making annual capital budget decisions and support the City's continued commitment to sound, long-range financial planning and direction.

The CIP identifies budgets and fiscal years for capital projects of several types. Capital improvements projects will be coordinated with the annual budget process to maintain full utilization of available resources. For each capital improvements project, the CIP provides a variety of information, including a project description and the service needs to be addressed, a proposed timetable, and proposed funding sources.

Generally, capital improvements projects will be prioritized with the most urgent projects first. In some instances, projects have been scheduled to coincide with an urgently needed project of another department to maximize effort, saving overall cost and/or maintaining the integrity of previously made investments. Ongoing operating costs are not included in the CIP.

Development of the CIP is a collaborative effort between the City's leadership team and department superintendents. The department staff participate in CIP development via specific master plans and other planning tools. Major capital improvements projects require City Council interaction during the development and funding stages.

Department Area Descriptions

This CIP is divided into the following sections:

- Water Department
- Recycled Water Department
- Street Department
- Water Department Appendix
- Recycled Water Department Appendix
- Street Department Appendix

Project Types

Projects generally fall within the primary categories identified below:

- System Repairs and Replacements - Projects needed to maintain existing infrastructure, typically needed to ensure reliable service.
- System Improvements - Projects designed to increase the functionality, efficiency, and/or capability of the infrastructure.
- Capacity-increasing Projects to Meet Population and Commercial Business Growth
- Redevelopment and Community Enhancement - Projects created for urban renewal, overall community or neighborhood livability, and safety enhancement.

Department Goals

- Provide quality management of the CIP.
- Provide meaningful input for the City Council to make fiscally responsible decisions.
- Update the Council on program implementation.
- Ensure timely information is provided to the Finance Department and to the City Council for cost differences.
- Provide timely project starts and completions.

What Projects Are in the Capital Improvements Plan

Capital assets are defined as tangible and intangible assets acquired for use in operations that will benefit more than a single fiscal period. This CIP presents capital improvements and capital outlay. Capital improvements are expansions of, or improvements to, the City's physical facilities, such as buildings, land, and infrastructure, including roads, bridges, sidewalks, and utility systems. Capital outlay is generally used for equipment, vehicles, and technologies. The City's capitalization threshold has a minimum value of \$5,000 and a life expectancy of at least three years. Projects costing less than \$5,000 are not considered capital and are funded through operating budgets.

Projects in the CIP can include:

- Construction costs (i.e., labor, materials, and contractors involved in completing a project).
- Acquisition of land or structures.
- Engineering or architectural services, professional studies, or other administrative costs.
- Expenses for City equipment, vehicles, and technologies.
- Expenses for expanding City facilities.

Funding Overview

The implementation of the CIP relies on a variety of potential funding sources. These include utility rate charges, tax increment revenues, user fees, general fund revenues, grants, and system development charges. Most of the

funding scenarios may be somewhat complex and interwoven based on project goals, anticipated construction elements, and project timelines. The accounting of infrastructure income prohibits the transfer of funds between some departments. For example, street income can only be utilized for repair and maintenance or capital improvements associated with the Street Department.

Capital improvement cost estimates are created and/or updated based on discussions with City staff and vendors and current bid results of other recent construction projects in the area. Each project estimate includes a 4.0 percent per year inflation rate anticipated to cover escalating project costs realized each year. This percentage is based on inflation rates that vary based on the economy, and it is anticipated that rates will vary from those estimated. Estimates include planning fees, if any, design engineering fees, construction costs, and anticipated construction engineering service fees (i.e., bidding assistance, project observations technical assistance, construction surveying, etc.).

Each of the three department sections contain figures that show project priority with an estimated cost for the next five-year period.

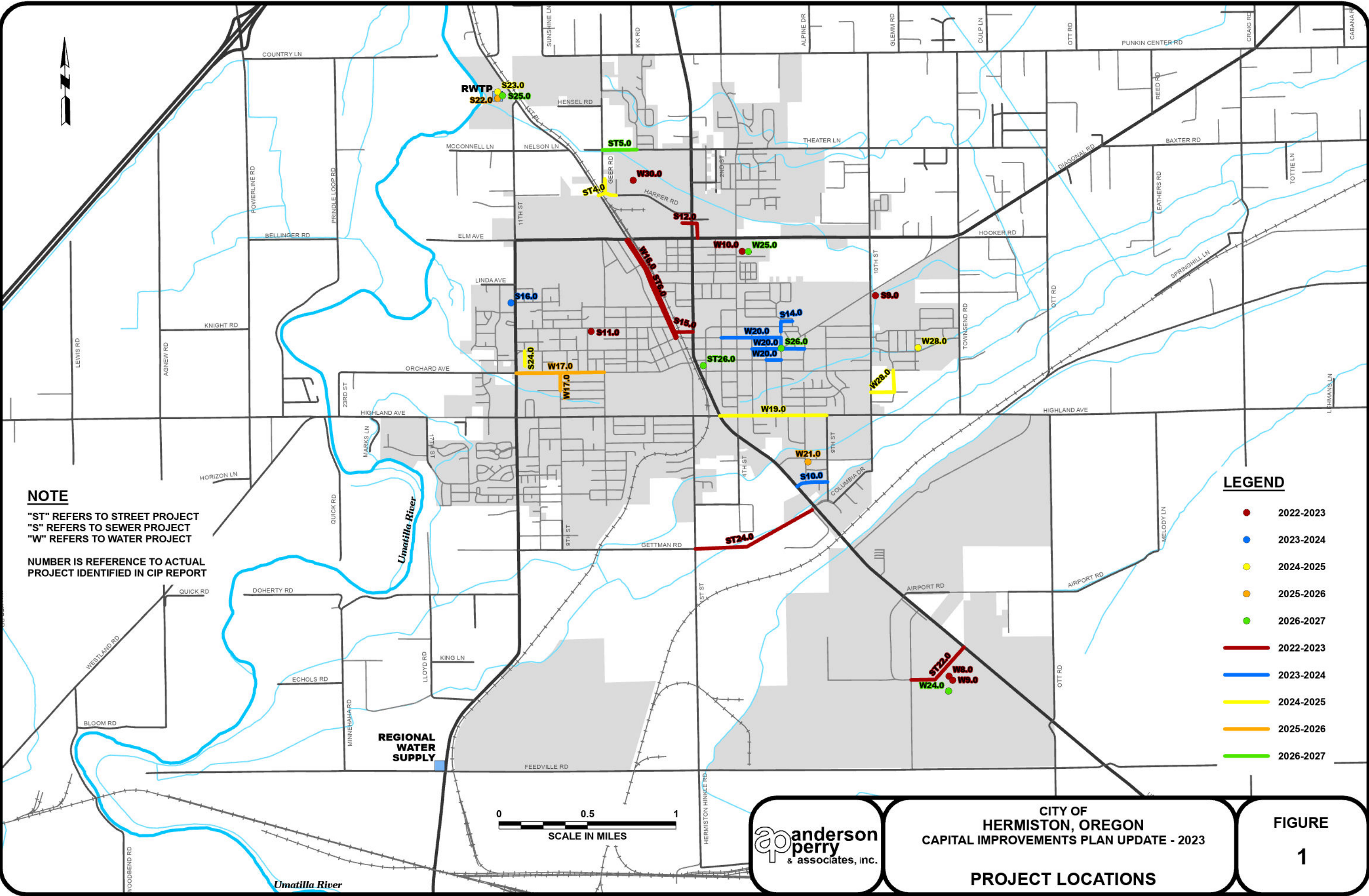
The CIP is not a financing document. Rather, the CIP is a planning document that places projects in the annual budget whereby funds are appropriated for them by the City Council. Prior to actual project work, refined scopes of work, construction cost estimates, and associated design fees will be presented to the City Council for final approval to expend funds.

Project Overview

Projects across the City that entail infrastructure improvements for the Water, Recycled Water, and Street Departments are identified in this CIP. The projects within these departments are identified on Figure 1, and the associated labels are referenced to project summaries included in each of the three department sections.

Additional projects within each of the three departments that are currently prioritized outside of the five-year CIP window due to funding limitations have been identified. These projects are included in the appendices for inclusion in future CIP updates.

Completed CIP projects within each of the three departments are shown in the appendices for reference.



NOTE

"ST" REFERS TO STREET PROJECT
"S" REFERS TO SEWER PROJECT
"W" REFERS TO WATER PROJECT

NUMBER IS REFERENCE TO ACTUAL PROJECT IDENTIFIED IN CIP REPORT

LEGEND

- 2022-2023
- 2023-2024
- 2024-2025
- 2025-2026
- 2026-2027
- 2022-2023
- 2023-2024
- 2024-2025
- 2025-2026
- 2026-2027

0 0.5 1
SCALE IN MILES



CITY OF
HERMISTON, OREGON
CAPITAL IMPROVEMENTS PLAN UPDATE - 2023
PROJECT LOCATIONS

FIGURE
1

Water Department

The City of Hermiston completed a Water System Master Plan in March 2019 that presents a detailed description and evaluation of the City's water system. In general, the City's water system consists of:

- Water Reservoirs 6
- Total Water Storage 7 MG
- Miles of Pipe Approximately 93 miles
- Water Wells 5
- Booster Pump Stations 10

The City supplies water to residential, commercial, and industrial water users within its service area. The proposed projects in the Capital Improvements Plan (CIP) include "increased-capacity" projects, "replacement/renewal" projects, and equipment upgrades. The CIP does not include projects associated with the regional water system. The proposed improvements have been programmed based on facility needs, the urgency of proposed upgrades, and anticipated funding availability.

Table 1 provides an overview of the proposed water system projects, anticipated financial expenditures, and the proposed fiscal year of each improvement. Figure 2 shows the physical locations of proposed water system improvements throughout the City.

The capital improvements list for the Water Department provided herein is based on replacement/renewal/repair projects completed and the City's Water System Master Plan prepared in 2019. Projects within the Water Department include distribution system improvements, booster pump upgrades, reservoir modifications/construction, and improvements planned to improve system reliability.

City of Hermiston, Oregon
 Capital Improvements Plan Update
 Future Value - Water Project Summary

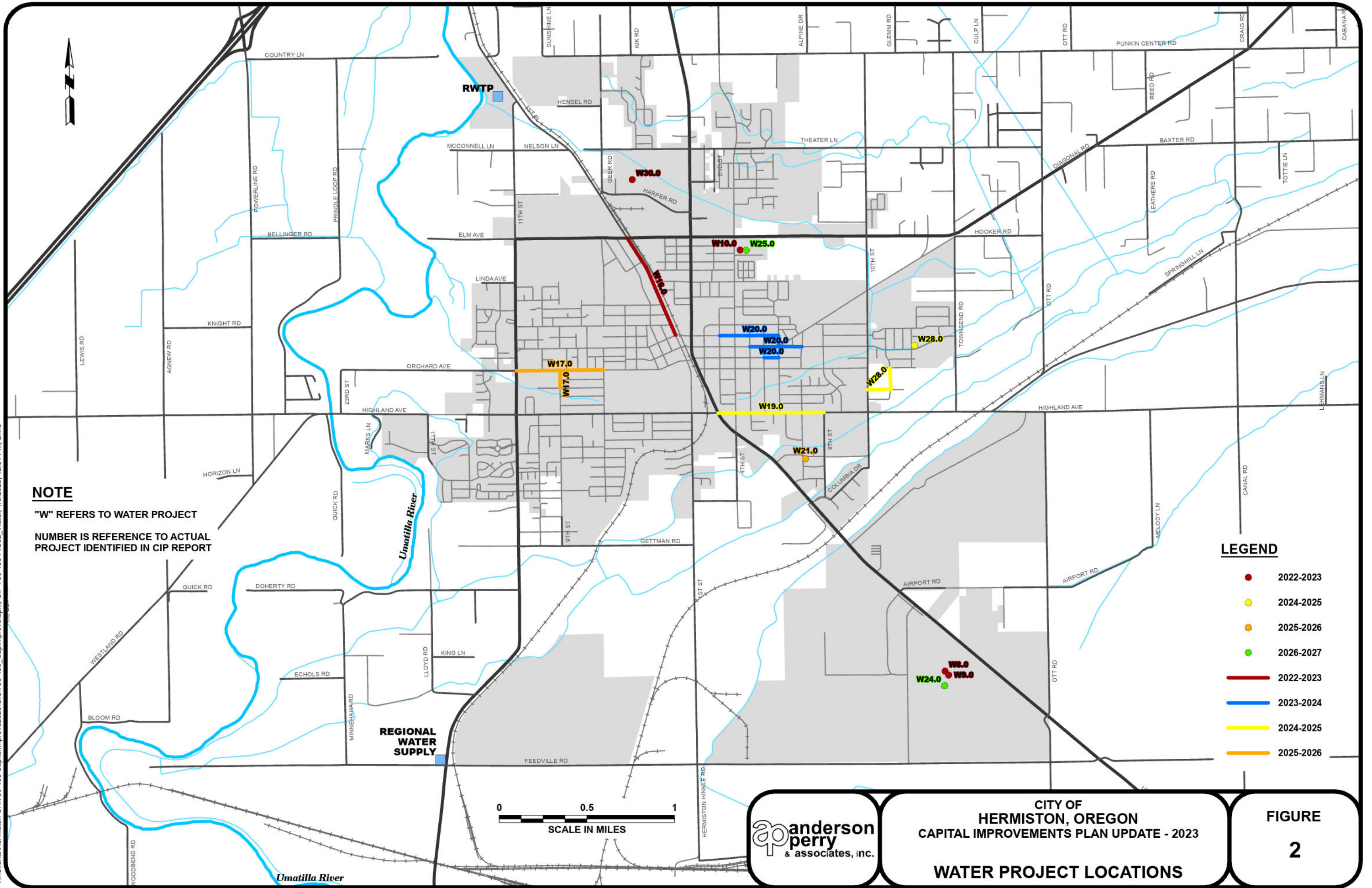
Project No.	Project	FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27
Supply						
W 8.0	Well No. 6 Backup Generator	\$ 380,000	\$ -	\$ -	\$ -	\$ -
W 9.0	Well No. 6 Chlorination System Structure	\$ 450,000	\$ -	\$ -	\$ -	\$ -
W 10.0	Well No. 4 Control System	\$ 390,000	\$ -	\$ -	\$ -	\$ -
W 22.0	Chlorination Scales	\$ -	\$ -	\$ -	\$ -	\$ 15,000
W 24.0	Well No. 6, Reservoir No. 2 Exterior Surfaces Painting	\$ -	\$ -	\$ -	\$ -	\$ 115,000
W 25.0	Well No. 4 Reservoir Exterior Surfaces Painting	\$ -	\$ -	\$ -	\$ -	\$ 200,000
W 30.0	Well No. 5 Water System Improvements	\$ 881,880	\$ -	\$ -	\$ -	\$ -
Distribution						
W 16.0	N.1st Place Water Line Replacement	\$ 800,000	\$ -	\$ -	\$ -	\$ -
W 17.0	W. Orchard Avenue Water Line Replacement	\$ -	\$ -	\$ -	\$ 1,100,000	\$ -
W 19.0	E. Highland Avenue Water Line Replacement	\$ -	\$ -	\$ 1,280,000	\$ -	\$ -
W 20.0	E. Gladys Avenue and E. Main Street Water Line Replacement	\$ -	\$ 1,800,000	\$ -	\$ -	\$ -
W 21.0	View Drive Booster Pump Station Upgrades	\$ -	\$ -	\$ -	\$ 750,000	\$ -
W 28.0	Highland Booster Pump Station and Pressure Zone Reconfiguration	\$ -	\$ -	\$ 1,100,000	\$ -	\$ -
Water Reserve						
W 18.0	Residential Water Meter Replacement	\$ -	\$ -	\$ 150,000	\$ 150,000	\$ -
Water Total		\$ 2,901,880	\$ 1,800,000	\$ 2,530,000	\$ 2,000,000	\$ 330,000



CITY OF
 HERMISTON, OREGON
 CAPITAL IMPROVEMENTS PLAN UPDATE
 FUTURE VALUE - WATER
 PROJECT SUMMARY

TABLE

1





Project Number:	W 8.0
Project Name:	Well No. 6 Backup Generator
Fund:	Water
Subcategory:	Supply
Estimated Cost:	\$380,000
Fiscal Year:	2022-23

Project Description:

The project will provide a natural gas generator sized to provide backup power for pumping and control systems at the Well No. 6 site. The project includes development of a concrete pad for the generator, electrical systems that will include an automatic transfer switch and control systems, and engineering/permitting.

Project Justification:

Well No. 6 is a primary well and the only well available that has the ability to provide minimal water supply to the entire City during a power outage. Additionally, this pump directly serves critical infrastructure that includes the industrial area, including the Walmart Distribution Center, the Eastern Oregon Higher Education Center, Pioneer Seed, and the Eastern Oregon Trade and Event Center. A backup generator is needed to ensure the well can operate during a power outage.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
W 8.0	Water Fund	\$380,000	2022-23
Total for Fiscal Year		\$380,000	



Project Number:	W 9.0
Project Name:	Well No. 6 Chlorination System Structure
Fund:	Water
Subcategory:	Supply
Estimated Cost:	\$450,000
Fiscal Year:	2022-23

Project Description:

The project will construct a block structure approximately 10 feet by 30 feet in size. The size of the structure will need to be verified during design. The project will include construction of a new chlorine building, ventilation system, chlorination system, chlorine scales, chlorine emergency alarms, and safety equipment.

Project Justification:

The chlorine room at Well No. 6 is too small (5 feet by 8 feet) for its current use, and the structure is fiberglass with a concrete floor. When originally constructed, the structure was occasionally used for chlorination equipment storage. Today, the chlorine room is in constant use and has been damaged during the exchange of heavy chlorine cylinders. A larger building will allow more efficient operation of the well and improved safety for staff handling chlorine cylinders.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
W 9.0	Water Fund	\$450,000	2022-23
Total for Fiscal Year		\$450,000	



Project Number:	W 10.0
Project Name:	Well No. 4 Control System
Fund:	Water
Subcategory:	Supply
Estimated Cost:	\$390,000
Fiscal Year:	2022-23

Project Description:

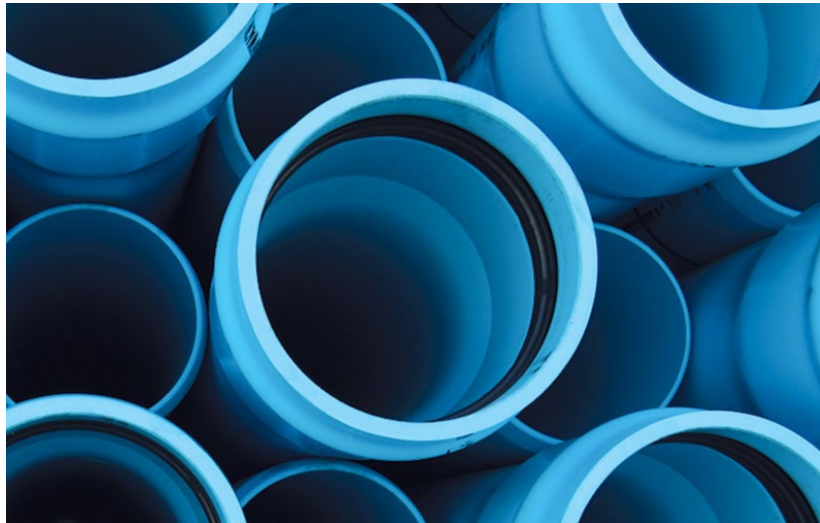
The project will install a variable frequency drive unit to control the Well No. 4 pump motor. The variable frequency drive unit, which controls the pump motor and is a type of adjustable speed drive, will reduce wear and tear on the pump motor and reduce electrical costs associated with operation of the pump. Work will also replace all piping within the pump house and will install new valves, flowmeters, and pressure gauges. Work at the station will include removal of all old electrical systems that are no longer functional or utilized.

Project Justification:

The 2,500-gallon per minute Well No. 4 pumping system was designed in the 1960s and is obsolete. The control system is unreliable and inefficient, and the piping system has been disassembled, allowing parts to be utilized for other system repairs throughout the years, making the pumping system difficult to maintain. The station experiences large pressure fluctuations, and operational controls currently utilize a Cla-Val pump control valve that is a challenge to configure. The pump house needs to be updated to ensure system reliability and that the pumping system is operational during peak demands. Improvements to the well pump and well column piping were completed in 2013, so no improvements to these components are anticipated.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
W 10.0	Water Fund	\$390,000	2022-23
Total for Fiscal Year		\$390,000	



Project Number:	W 16.0
Project Name:	N. 1st Place Water Line Replacement
Fund:	Water
Subcategory:	Distribution
Estimated Cost:	\$800,000
Fiscal Year:	2022-23

Project Description:

The project will include replacing approximately 3,800 linear feet of existing water mains on N. 1st Place between W. Hermiston Avenue and W. Elm Street. The existing undersized water line will be replaced with new 12-inch ductile iron pipe within the roadway. Tees, valves, hydrants, and water service lines will be replaced within the project area. The project may need temporary water services to provide water to local residents during construction.

Project Justification:

This project will eliminate failing, deteriorating and undersized lines, reduce repair work, and improve public safety. Sections of the water distribution system within the project area were installed in the 1920s using steel pipe. The proposed pipe replacements will remove some of the oldest pipes within the City water system.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
W 16.0	Water Fund	\$800,000	2022-23
Total for Fiscal Year		\$800,000	



Project Number:	W 17.0
Project Name:	W. Orchard Avenue Water Line Replacement
Fund:	Water
Subcategory:	Distribution
Estimated Cost:	\$1,110,000
Fiscal Year:	2025-26

Project Description:

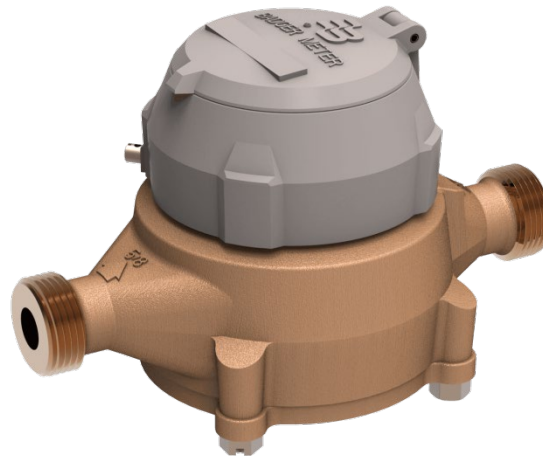
The project will include replacing approximately 3,200 linear feet of existing water main line along W. Orchard Avenue between S.W. 7th Street and S.W. 11th Street and a small portion along S.W. 9th Street between W. Orchard Avenue and W. Juniper Avenue. The existing undersized water lines will be replaced with new 8-inch ductile iron pipe within the roadway. Tees, valves, hydrants, and water service lines will be replaced within the project area. The project may need temporary water services to provide water to local residents during construction.

Project Justification:

This project will eliminate failing, deteriorating and undersized lines, reduce repair work, and improve public safety. Sections of the water distribution system within the project area were installed in the 1920s using steel pipe. Proposed pipe replacements will remove some of the oldest pipes within the City water system.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
W 17.0	Water Fund	\$1,110,000	2025-26
Total for Fiscal Year		\$1,110,000	



Project Number:	W 18.0
Project Name:	Residential Water Meter Replacement
Fund:	Water
Subcategory:	Water Reserve
Estimated Cost:	\$300,000
Fiscal Year:	2024-25 to 2025-26

Project Description:

Replace existing water meters with new cellular read water meters throughout the water system. Meters will be purchased in bulk quantities and installed by either the City or a contractor hired through a public bid process. To fund future meter replacements, reserve deposits will be made annually to ensure funds are available.

Project Justification:

Residential water meters have a typical lifespan of ten years, and this project establishes reserves for future replacement of the City’s water meters. Water meters provide information associated with water usage, help determine water loss across the water system, and serve as the basis for the water utility’s recurring revenue. Residential water meter replacement economics show that replacement meters can minimize revenue loss as when meters age, the water meters typically under-record water usage.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
W 18.0	Water Fund	\$150,000	2024-25
W 18.0	Water Fund	\$150,000	2025-26
Total for Fiscal Year		\$300,000	



Project Number:	W 19.0
Project Name:	E. Highland Avenue Water Line Replacement
Fund:	Water
Subcategory:	Distribution
Estimated Cost:	\$1,280,000
Fiscal Year:	2024-25

Project Description:

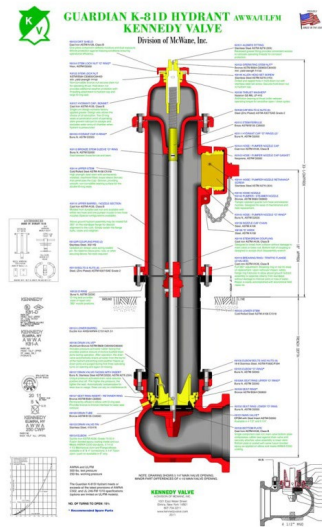
The project will include replacing the water main in E. Highland Avenue between S.E. 6th and S.E. 10th Streets. Work will include a study to review improvement options, which may include modifying the pressure zone boundary. The existing water line will be replaced with new ductile iron pipe within the roadway. The relocation/replacement of pressure reducing valves between the two pressure zones in this area may also be required to increase water pressure for residents. Tees, valves, and water service lines will be replaced within the project area. The project may need temporary water services to provide water to local residents during construction.

Project Justification:

The project will include replacing the water main and/or the relocation of pressure reducing valves in E. Highland Avenue. This area, which is near the boundary of two pressure zones within the City, has historical pressure problems that are on the verge of not meeting state minimum pressure requirements (20 pounds per square inch). The project will improve water pressures within the immediate area and improve water circulation.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
W 19.0	Water Fund	\$1,280,000	2024-25
Total for Fiscal Year		\$1,280,000	



Project Number:	W 20.0
Project Name:	E. Gladys Avenue and E. Main Street Water Line Replacement
Fund:	Water
Subcategory:	Distribution
Estimated Cost:	\$1,800,000
Fiscal Year:	2023-24

Project Description:

The project will include replacing approximately 4,400 linear feet of existing water main line along E. Gladys Avenue between N.E. 3rd Street and N.E. 7th Street and along E. Main Street between N.E. 5th Street and N.E. 9th Street. Two other small portions of pipe on E. Hurlburt and S.E. 7th Streets will also be replaced. The existing water line will be replaced with new 6-inch and 12-inch ductile iron pipe within the roadway. Tees, valves, and old cast iron water service lines will be replaced within the project area. The project may need temporary water services to provide water to local residents during construction.

Project Justification:

This will eliminate failing, deteriorating and undersized lines, reduce repair work, and improve public safety. Sections of the water distribution system within the project area were installed in the 1920s using steel pipe. Proposed pipe replacements will remove some of the oldest pipes within the City water system.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
W 20.0	Water Fund	\$1,800,000	2023-24
Total for Fiscal Year		\$1,800,000	



Project Number:	W 21.0
Project Name:	View Drive Booster Pump Station Upgrades
Fund:	Water
Subcategory:	Supply
Estimated Cost:	\$750,000
Fiscal Year:	2025-26

Project Description:

The project will include reconstructing the pump station. The new pump station will be located in an aboveground structure to avoid confined space entry regulations and provide sufficient room for operation and maintenance activities and room for future growth. The project will potentially require property acquisition to develop the facility. Pumps will be resized to ensure they will be able to meet demands within the service area as the service area expands with development. In addition, the pumps will be sized to ensure backup service to Well No. 6 can be supported. Work will include construction of new pumps, valving, control systems, electrical systems, and a structure. Work will need to include accommodations to supply the pressure zone with water during construction. The need for this project should also be evaluated with the potential implementation of projects W 26.0 and W 27.0 discussed herein.

Project Justification:

The booster pump station at View Drive is underground, undersized, and obsolete. Originally installed in the 1980s, it has become unreliable due to age. The replacement booster pump station would be designed so it can be expanded in the event that population growth exceeds projections. The View Drive Booster Pump Station provides backup for Well No. 6 and serves industrial areas, the Eastern Oregon Higher Education Center, Walmart distribution center, Pioneer Seed, and the Eastern Oregon Trade and Event Center.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
W 21.0	Water Fund	\$750,000	2025-26
Total for Fiscal Year		\$750,000	



Project Number:	W 22.0
Project Name:	Chlorination Scales
Fund:	Water
Subcategory:	Supply
Estimated Cost:	\$15,000
Fiscal Year:	2026-27

Project Description:

The project will install new digital chlorine scales at each well site. Work will be completed by City crews.

Project Justification:

The chlorination scales at each well site are old and inaccurate. Replacement of the scales is necessary to ensure chlorine tanks are replaced prior to running out of gas.

Funding Data:			
Project No.	Fund Name	Amount	Fiscal Year
W 22.0	Water Fund	\$15,000	2026-27
Total for Fiscal Year		\$15,000	



Project Number:	W 24.0
Project Name:	Well No. 6, Reservoir No. 2 Exterior Surfaces Painting
Fund:	Water
Subcategory:	Storage
Estimated Cost:	\$115,000
Fiscal Year:	2026-27

Project Description:

The project will include painting all reservoir exterior surfaces. To paint reservoir exterior surfaces, the reservoir may need to be drained to ensure the paint cures properly depending on the time of the year the project occurs. The project will require exterior surfaces be sandblasted to remove all contamination and rust. Following surface preparation, the reservoir would be primed and finish coats of paint applied and tested to ensure the application paint thickness meets manufacturer and/or Engineer-specified thickness.

Project Justification:

The Well No. 6, Reservoir No. 2 needs to be repainted to minimize further corrosion of the steel plates from which the reservoir was constructed. The reservoir was last painted in 1996 and has visible deterioration. The reservoir color is also recommended to be changed to prevent pheasants from flying into the reservoir.

Funding Data:			
Project No.	Fund Name	Amount	Fiscal Year
W 24.0	Water Fund	\$115,000	2026-27
Total for Fiscal Year		\$115,000	



Project Number:	W 25.0
Project Name:	Well No. 4 Reservoir Exterior Surfaces Painting
Fund:	Water
Subcategory:	Supply
Estimated Cost:	\$200,000
Fiscal Year:	2026-27

Project Description:

The project will include painting all reservoir exterior surfaces. To paint reservoir exterior surfaces, the reservoir may need to be drained to ensure the paint cures properly depending on the time of year the project occurs. The project will require exterior surfaces be sandblasted to remove all contamination and rust. Following surface preparation, the reservoir would be primed and finish coats of paint applied and tested to ensure the application paint thickness meets manufacturer and/or Engineer-specified thickness.

Project Justification:

The Well No. 4 Reservoir needs to be repainted to minimize future corrosion of the steel plates from which the reservoir was constructed. The reservoir was last painted in approximately 1987 and has visible deterioration. A new protective coating will help prevent the reservoir from rusting.

Funding Data:			
Project No.	Fund Name	Amount	Fiscal Year
W 25.0	Water Fund	\$200,000	2026-27
Total for Fiscal Year		\$200,000	



Project Number:	W 28.0
Project Name:	Highland Booster Pump Station and Pressure Zone Reconfiguration
Fund:	Water
Subcategory:	Distribution
Estimated Cost:	\$1,100,000
Fiscal Year:	2024-25

Project Description:

The project will include the installation of a new booster pump station in an aboveground structure. Utilities will be brought to the site. The booster pump station will be complete with new pumps, controls and instrumentation, piping, valves, heating, air conditioning, etc. Work will also include installation of approximately 1,000 feet of 12-inch ductile iron water line and several silent check valves in vaults to create a new pressure zone.

Project Justification:

The water system along E. Highland Avenue in the proposed pressure zone has historical pressure problems that are on the cusp of not meeting state minimum pressure requirements (20 pounds per square inch). The project will improve water pressures within this problematic area. In addition, the new booster pump station will enable new water mains to be installed with adequate service pressure to the south and east of currently developed areas, encouraging further development of the area.

Funding Data:			
Project No.	Fund Name	Amount	Fiscal Year
W 28.0	Water Fund	\$1,100,000	2024-25
Total for Fiscal Year		\$1,100,000	



Project Number:	W 30.0
Project Name:	Well No. 5 Water System Improvements
Fund:	Water
Subcategory:	Supply
Estimated Cost:	\$881,880
Fiscal Year:	2022-23

Project Description:

Work will include installation of a new deep well pump, replacement of three booster pump motors, and associated electrical and controls improvements, including variable frequency drives.

Project Justification:

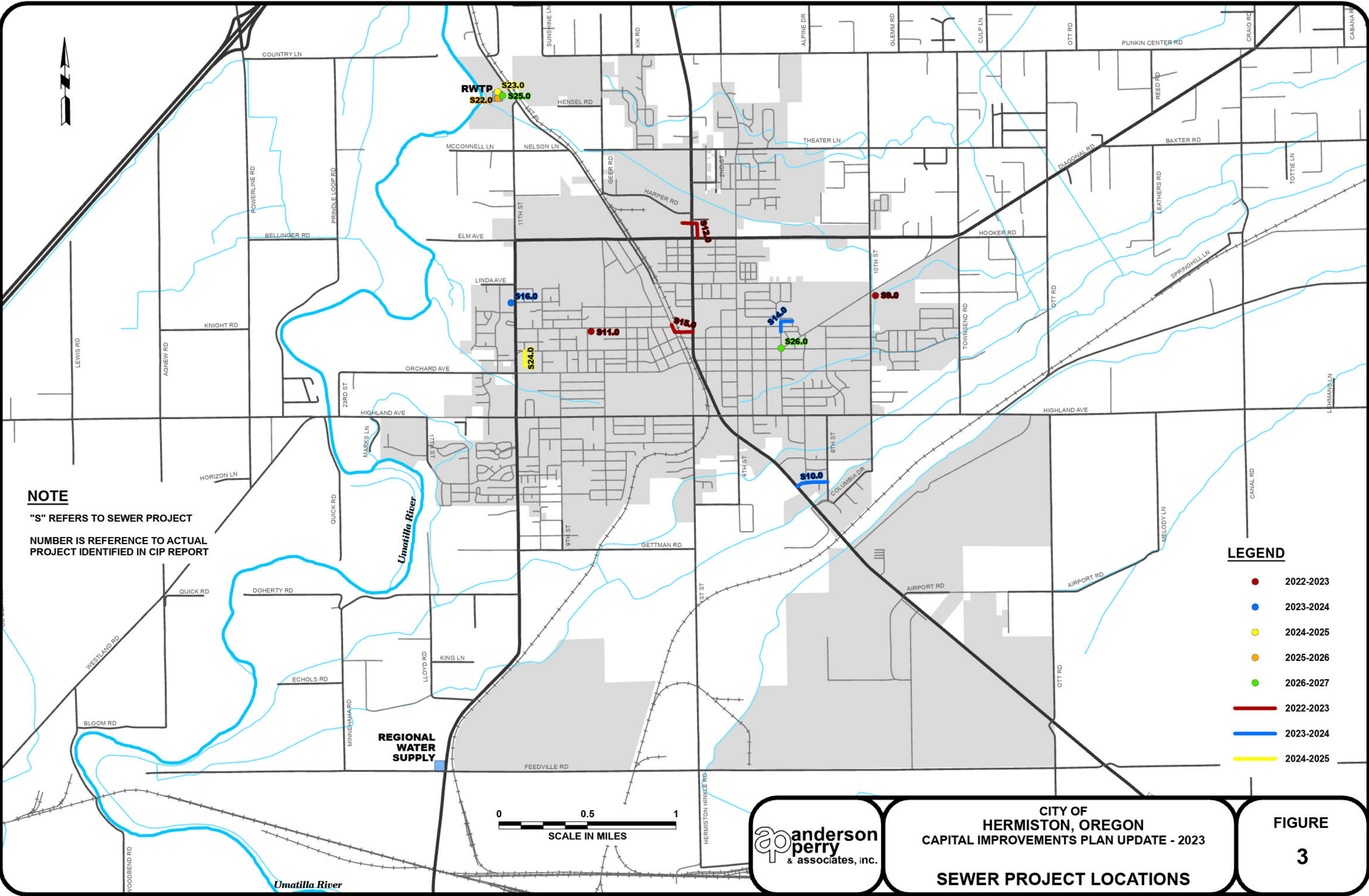
Well No. 5 has become the City’s primary water source in recent years. The current pumping capacity is less than the water right associated with Well No. 5. The project will increase pumping capacity to allow the City to perfect its water right for the full 5,000 gallons per minute instantaneous flow allocation. The well source provides water to the main pressure zone, which is the baseline for all water distribution within the City’s water service area.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
W 30.0	Water Fund	\$881,880	2022-23
Total for Fiscal Year		\$881,880	

**City of Hermiston, Oregon
Capital Improvements Plan Update
Future Value - Recycled Water Project Summary**

Project No.	Project	FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27
Collection						
S 9.0	Lift Station No. 5 Wetwell Upgrades	\$ 100,000	\$ -	\$ -	\$ -	\$ -
S 10.0	E. Evelyn Avenue Gravity Sewer Line Replacement	\$ -	\$ 380,000	\$ -	\$ -	\$ -
S 11.0	Lift Station No. 4 Reconstruction	\$ 600,000	\$ -	\$ -	\$ -	\$ -
S 12.0	McDonald's and U.S. Highway 395 Gravity Sewer Line Replacement	\$ 250,000	\$ -	\$ -	\$ -	\$ -
S 14.0	N.E. 7th Street Gravity Sewer Line Replacement	\$ -	\$ 300,000	\$ -	\$ -	\$ -
S 15.0	Decommission Lift Station No. 3	\$ 1,600,000	\$ -	\$ -	\$ -	\$ -
S 16.0	Lift Station No. 7 Reconstruction	\$ -	\$ 610,000	\$ -	\$ -	\$ -
S 24.0	Victory Square Park Gravity Sewer Line Replacement	\$ -	\$ -	\$ 230,000	\$ -	\$ -
S 26.0	Lift Station No. 1 Electrical Upgrades	\$ -	\$ -	\$ -	\$ -	\$ 180,000
Treatment						
S 25.0	Recycled Water Treatment Plant Chlorination Improvements	\$ -	\$ -	\$ -	\$ -	\$ 1,200,000
Sewer Reserve						
S 22.0	Recycled Water Treatment Plant Membrane Filter Savings and Replacement		\$ 100,000	\$ 100,000	\$ 1,000,000	\$ -
S 23.0	Recycled Water Treatment Plant Pump and Motor Savings and Replacement	\$ 150,000	\$ 30,000	\$ 700,000		
Recycled Water Total		\$ 2,700,000	\$ 1,420,000	\$ 1,030,000	\$ 1,000,000	\$ 1,380,000





Project Number:	S 9.0
Project Name:	Lift Station No. 5 Wetwell Upgrades
Fund:	Recycled Water
Subcategory:	Collection
Estimated Cost:	\$100,000
Fiscal Year:	2022-23

Project Description:

The project will include mechanical system painting and the repair and sealing of concrete surfaces. The recently installed drop bowl minimizes the impacts from inflows landing directly on the top of the pumps, a reduction in suspended air in the water, and a reduction in the off-gassing of hydrogen sulfide. The painting and sealing improvements will repair damage to the facility. To complete this work, bypass pumping will need to be installed and maintained during construction.

Project Justification:

Lift Station No. 5 is one of the City’s newer lift stations. The existing lift station has experienced paint flaking on the pumps and hydrogen sulfide corrosion on interior surfaces from the raw sewage. Without upgrades, the mechanical equipment will need premature replacement. Recoating the wetwell will prevent corrosion, protect the wetwell’s integrity, and prolong the wetwell’s life expectancy.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
S 9.0	Recycled Water Fund	\$100,000	2022-23
Total for Fiscal Year		\$100,000	



Project Number:	S 10.0
Project Name:	E. Evelyn Avenue Gravity Sewer Line Replacement
Fund:	Recycled Water
Subcategory:	Collection
Estimated Cost:	\$380,000
Fiscal Year:	2023-24

Project Description:

The project will include replacing 650 linear feet of the existing sanitary sewer line located in E. Evelyn Avenue beginning at S.E. 8th Street and extending east to S.E. 9th Street. A design report will need to be developed to evaluate alternatives associated with relocation of the existing main located in the backyards of residences along the project route, including installation of a bypass line to be located within the roadway that will maintain the existing line and/or installation of a liner within the existing piping system. Work may include installation of new polyvinyl chloride sewer pipe and new precast manholes within the project limits. Included in the work to replace the sewer line is full-width roadway paving, traffic control measures, high groundwater mitigation, and sewage bypass pumping.

Project Justification:

The existing sewer line lacks the capacity needed to provide expanding service to the Eastern Oregon Trade and Event Center and the Cook Industrial Area. Replacing the sewer line will ensure development within these areas will not be limited by the existing 8- and 10-inch asbestos concrete pipes.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
S 10.0	Recycled Water Fund	\$380,000	2023-24
Total for Fiscal Year		\$380,000	



Project Number:	S 11.0
Project Name:	Lift Station No. 4 Reconstruction
Fund:	Recycled Water
Subcategory:	Collection
Estimated Cost:	\$600,000
Fiscal Year:	2022-23

Project Description:

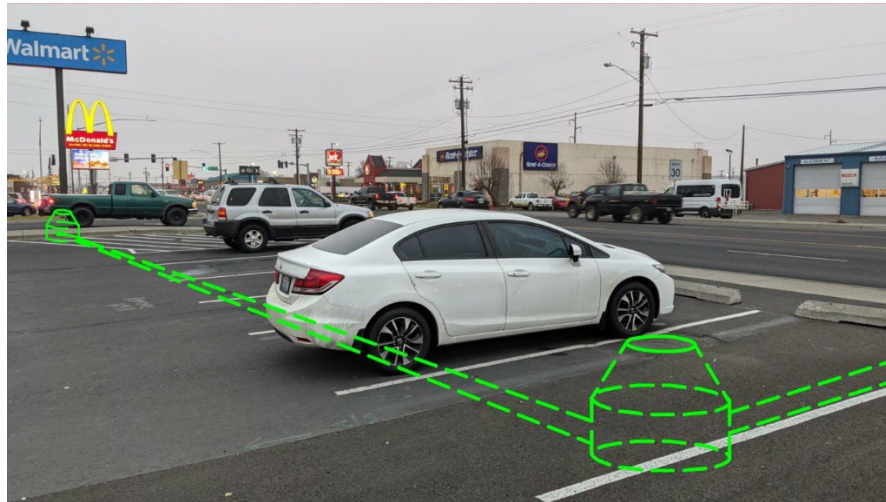
This project will include a well structure, duplex pumps, pump slide rails, ventilation system, internal piping, and electrical and control system upgrades. The design of bypass pumping during construction will need to be analyzed during the design and may dictate the need for additional property to site the new pump chamber. An odor control system will need to be implemented as the facility is within a developed area.

Project Justification:

Lift Station No. 4 is an older pump station built in approximately 1981 and, as such, the submersible duplex pump station has experienced corrosion on metal elements and the physical brick structure. Replacement of the shallow wetwell will increase capacity, eliminate porous brick, and safeguard the environment. Ventilation of the structure is poor, and electrical systems need to be updated.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
S 11.0	Recycled Water Fund	\$600,000	2022-23
Total for Fiscal Year		\$600,000	



Project Number:	S 12.0
Project Name:	McDonald's and U.S. Highway 395 Gravity Sewer Line Replacement
Fund:	Recycled Water
Subcategory:	Collection
Estimated Cost:	\$250,000
Fiscal Year:	2022-23

Project Description:

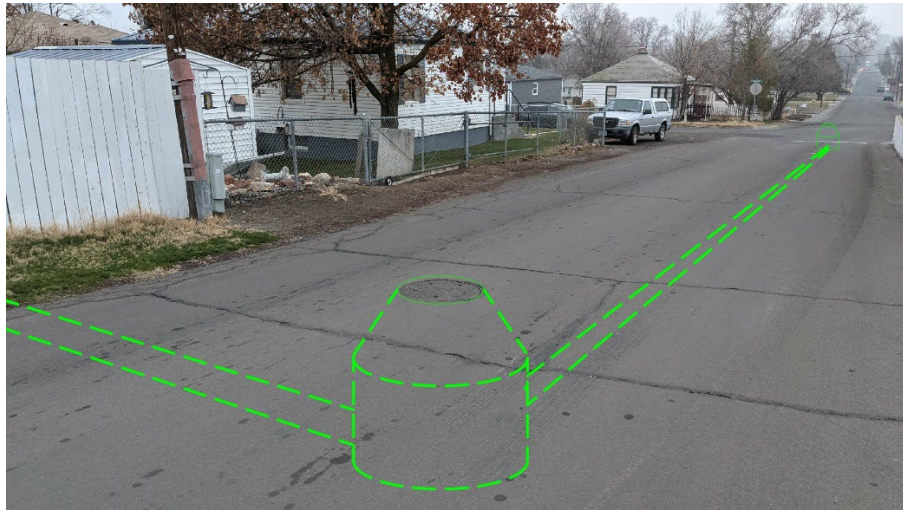
The project will include installation by trenching methods of approximately 700 feet of new polyvinyl chloride sewer line north of McDonald's. Another section of existing pipe, located beneath U.S. Highway 395, will also need replaced or repaired. The pipe bursting method will likely be used to replace this section of pipe to minimize surface restoration and traffic disruption and improve Contractor safety during installation.

Project Justification:

joint. Pipe failure and deterioration is causing pipe blockage and requires the City to clean this line monthly. Additionally, pipe failure may be allowing sewage to exfiltrate into the surrounding soil. The proposed new sewer lines would eliminate current monthly maintenance costs and provide watertight lines to protect existing groundwater resources from contamination.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
S 12.0	Recycled Water Fund	\$250,000	2022-23
Total for Fiscal Year		\$250,000	



Project Number:	S 14.0
Project Name:	N.E. 7th Street Gravity Sewer Line Replacement
Fund:	Recycled Water
Subcategory:	Collection
Estimated Cost:	\$300,000
Fiscal Year:	2023-24

Project Description:

The project will include installation by conventional trenching methods of approximately 600 feet of new polyvinyl chloride sewer line on N.E. 7th Street from E. Fay Avenue (Manhole E10-19 to E10-13) to midway between E. Sunset Drive and E. Ridgeway Avenue. A second section of pipe located in between E. Sunset Drive and E. Ridgeway Avenue from N.E. 7th Street to N.E. 8th Place (Manhole E10-20 to E10-19) will also be replaced by trenching methods. The second section of pipe is located along back property lines and will likely require substantial fence restoration.

Project Justification:

Multiple deficiencies exist in the pipe segments, including structural failures, protruding laterals, pipe sags, obstruction in laterals, root intrusions, and separated joints. Pipe deficiencies cause blockages that hinder sewer flow and require the City to clean this line monthly. Newly installed pipe will save maintenance costs and drastically reduce the likelihood of blockages, thus mitigating the potential for sewage backing up into local residences.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
S 14.0	Recycled Water Fund	\$300,000	2023-24
Total for Fiscal Year		\$300,000	



Project Number:	S 15.0
Project Name:	Decommission Lift Station No. 3
Fund:	Recycled Water
Subcategory:	Collection
Estimated Cost:	\$1,600,000
Fiscal Year:	2022-23

Project Description:

The project will include decommissioning Lift Station No. 3 and installing new gravity mains to reconfigure sewer flows. Traffic control elements will need to be developed during the design phase, with the station being located under U.S. Highway 395.

Design elements will need to include an evaluation of extending a gravity sewer line to Lift Station No. 6. Lift Station No. 6 is also in poor shape and requires an upgrade to accommodate future growth. The extension of a gravity line from Lift Station No. 6 to Lift Station No. 3 and a crossing under the Union Pacific Railroad tracks may be more cost effective than replacing both lift stations independently.

Project Justification:

Lift Station No. 3 is an older pump station built in approximately 1981 and located under U.S. Highway 395. The existing submersible duplex pumps and electrical systems need to be replaced. In addition, access to the wetwell is a safety concern because it is located beneath U.S. Highway 395.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
S 15.0	Recycled Water Fund	\$1,600,000	2022-23
Total for Fiscal Year		\$1,600,000	



Project Number:	S 16.0
Project Name:	Lift Station No. 7 Reconstruction
Fund:	Recycled Water
Subcategory:	Collection
Estimated Cost:	\$610,000
Fiscal Year:	2023-24

Project Description:

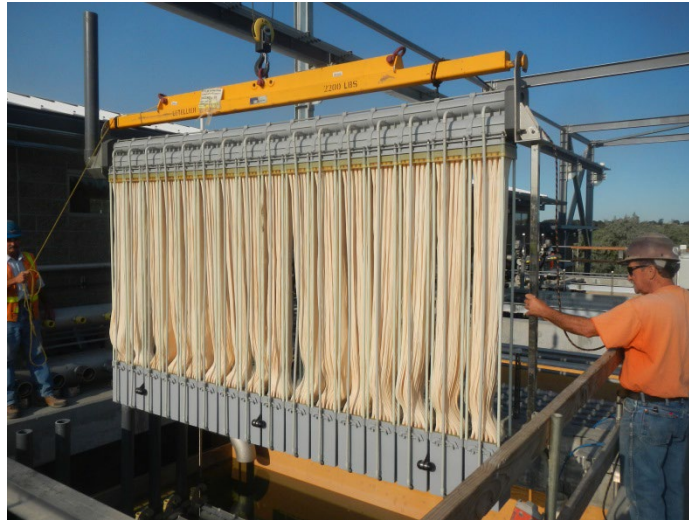
The project will include installing duplex pumps and upgraded electrical and control systems. The project will replace existing mechanical pumps, rails, and valving systems. The roof structure will be replaced with a traffic-rated lid integrated into the sidewalk. Wetwell storage capacity may need to be increased based on growth predictions within the service area.

Project Justification:

Lift Station No. 7 is an older pump station built in approximately 1981. The existing submersible duplex pumps and electrical systems need to be replaced.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
S 16.0	Recycled Water Fund	\$610,000	2023-24
Total for Fiscal Year		\$610,000	



Project Number:	S 22.0
Project Name:	Recycled Water Treatment Plant Membrane Filter Replacement
Fund:	Recycled Water
Subcategory:	Treatment
Estimated Cost:	\$1,200,000 (Total Reserve Deposits)
Fiscal Year:	2023-24 to 2025-26

Project Description:

Installation of new membrane filter cassettes at the recycled water treatment plant will be completed as part of the project. The cassettes will be a sole source acquisition to facilitate installation within existing equipment in the recycled water treatment plant. A total of 44 cassettes are part of the recycled water treatment plant. The existing cassettes manufactured by Evoqua will need to be replaced to ensure the recycled water treatment plant can meet Oregon Department of Environmental Quality discharge permit requirements.

Project Justification:

Membrane filter cassettes are expected to provide service for approximately 10 years. Since replacement will be required in a single event, it is necessary to save money annually so funds are available to replace the cassettes when their expected life is reached at 10 years of age (\$1,000,000). Cassettes need to be replaced on a regular schedule to prevent cassette fouling, which could ultimately lead to operational issues and permit noncompliance.

Funding Data:			
Project No.	Fund Name	Amount	Fiscal Year
S 22.0	Recycled Water Fund	\$100,000	2023-24
S 22.0	Recycled Water Fund	\$100,000	2024-25
S 22.0	Recycled Water Fund	\$1,000,000	2025-26
Total for Fiscal Year		\$1,200,000	



Project Number:	S 23.0
Project Name:	Recycled Water Treatment Plant Pump and Motor Replacement
Fund:	Recycled Water
Subcategory:	Treatment
Estimated Cost:	\$880,000 (Total Reserve Deposits)
Fiscal Year:	2022-23 to 2024-25

Project Description:

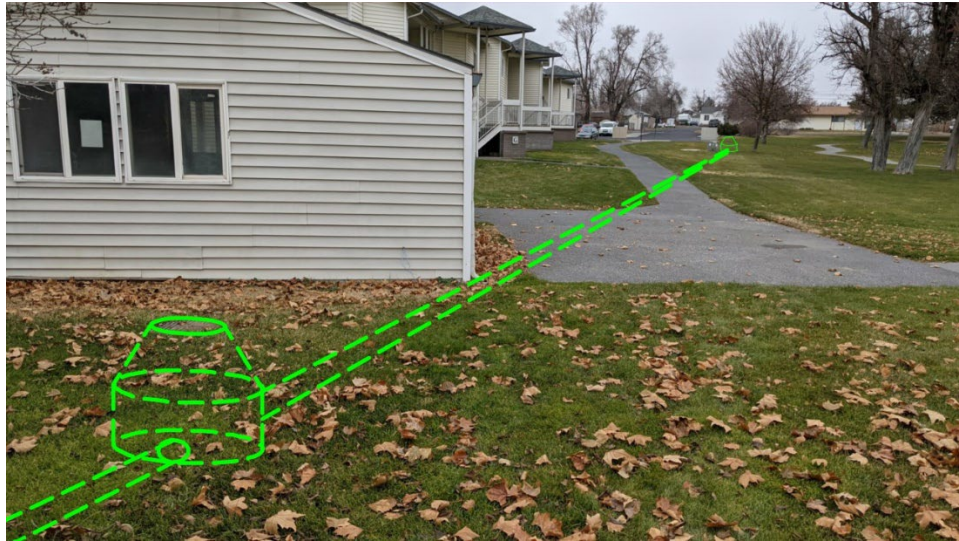
The project will include installing new pumps and motors at the recycled water treatment plant. Upgrades will be required to the primary screens, raw water pumps (two), mechanical mixers (nine), aeration blowers (four), membrane bioreactor feed pumps (nine), chlorine injector pumps (two), metering systems (four), irrigation pumps (four), aeration blower/mixer (four), and various recirculation pumps. There are approximately 67 different pumps, motors, and mechanical elements that will need replaced during their 20-year service life.

Project Justification:

Pumps and motors at the recycled water treatment plant are expected to provide service for approximately 10 to 20 years. Most equipment was installed during facility upgrades completed in 2014, although several pumps were last upgraded in 1981. Since replacement will be required in a relatively small window, it is necessary to save money annually so funds are available to replace a total of approximately 67 different pumps, motors, and mechanical elements within the recycled water treatment plant when their expected life is reached.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
S 23.0	Recycled Water Fund	\$150,000	2022-23
S 23.0	Recycled Water Fund	\$30,000	2023-24
S 23.0	Recycled Water Fund	\$700,000	2024-25
Total for Fiscal Year		\$880,000	



Project Number:	S 24.0
Project Name:	Victory Square Park Gravity Sewer Line Replacement
Fund:	Recycled Water
Subcategory:	Collection
Estimated Cost:	\$230,000
Fiscal Year:	2024-25

Project Description:

The project will include installation by conventional trenching methods of approximately 310 feet of new polyvinyl chloride sewer line east of Foxwood Apartments in Liberty Square Park (Manhole W9-46 to W9-47) and approximately 250 feet in W. Madrona Avenue (Manhole W9-37 to W9-40).

Project Justification:

This line has large sags, abrupt changes in pipe slope, and sidewall deterioration. The sewer pipe is likely near capacity during high flow periods because of the large sags. A new sewer line would prevent any exfiltration from contaminating groundwater resources and increase pipe capacity. Eliminating pipe deficiencies would enable the City to save maintenance costs by removing the line from the monthly cleaning schedule.

Funding Data:			
Project No.	Fund Name	Amount	Fiscal Year
S 24.0	Recycled Water Fund	\$230,000	2024-25
Total for Fiscal Year		\$230,000	



Project Number:	S 25.0
Project Name:	Recycled Water Treatment Plant Chlorination Improvements
Fund:	Recycled Water
Subcategory:	Treatment
Estimated Cost:	\$1,200,000
Fiscal Year:	2026-27

Project Description:

The project will replace existing gas chlorine treatment equipment at the recycled water treatment plant. Disinfection required to meet existing operating permit conditions will be completed using ultraviolet light.

Project Justification:

The City’s draft National Pollutant Discharge Elimination System Permit renewal document sets new limits on discharging chlorine byproducts on the treatment plant effluent, which are not achievable gas chlorination methods are continued to be used.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
S 25.0	Recycled Water Fund	\$1,200,000	2026-27
Total for Fiscal Year		\$1,200,000	



Project Number:	S 26.0
Project Name:	Lift Station No. 1 Electrical Upgrades
Fund:	Recycled Water
Subcategory:	Collection
Estimated Cost:	\$180,000
Fiscal Year:	2026-27

Project Description:

The project will install new electrical switchgear to replace equipment that has reached the end of its service life.

Project Justification:

Extensive work has occurred in the past few years at this facility, including pump upgrades, backup power generation, and improved ventilation systems while leaving the old electrical gear in place. Electrical parts fail from time and exposure, and many parts become difficult or impossible to obtain when repairs are needed. To avoid spills and associated environmental consequences, it is necessary to replace the current obsolete electrical equipment.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
S 26.0	Recycled Water Fund	\$180,000	2026-27
Total for Fiscal Year		\$180,000	

Street Department

The capital improvements list for the Street Department is based on the 1999 Transportation System Plan last updated in 2015, replacement/renewal/repair projects completed, and knowledge of the system provided by the Street Department staff. In general, the City's street system consists of:

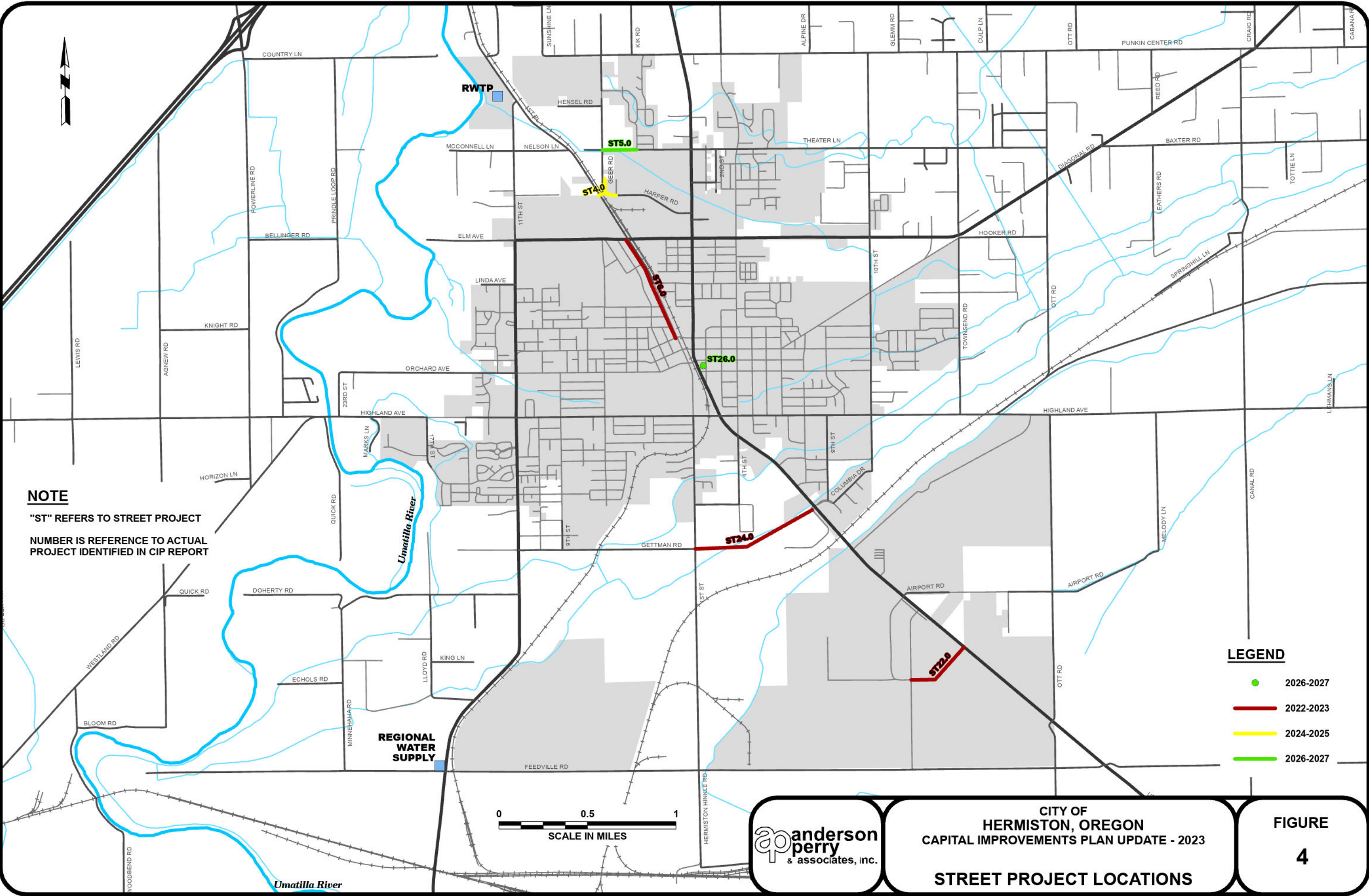
- Roadway Centerline Miles Approximately 81
- Bridges/Box Culverts 5
- Stormwater Lift Stations 3
- Traffic Signals 6

The Capital Improvements Plan projects identified by this department include street rehabilitation, street beautification, street widening, intersection safety improvements, pedestrian improvements, new streets, and box culverts.

Table 3 provides an overview of the proposed street system projects, anticipated financial expenditures, and the proposed fiscal year of each improvement. Figure 4 shows the physical locations of proposed system improvements throughout the City.

City of Hermiston, Oregon
 Capital Improvements Plan Update
 Future Value - Street Project Summary

Project No.	Project	FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27
Street Projects						
ST 4.0	N.W. Geer Road, W. Harper Road, and N. 1st Place Realignment	\$ -	\$ -	\$ 1,410,000	\$ -	\$ -
ST 5.0	W. Theater Lane Widening	\$ -	\$ -	\$ -	\$ -	\$ 600,000
ST 6.0	N. 1st Place Roadway Improvements	\$ 4,100,000	\$ -	\$ -	\$ -	\$ -
ST 21.0	Arterial/Collector Sidewalk Infill	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000
ST 22.0	E. Penney Avenue (S.E. Kelli Boulevard to U.S. Highway 395)	\$ 995,000	\$ -	\$ -	\$ -	
ST 24.0	E. Gettman Road Construction (S. 1st Street to U.S. Highway 395) Right-of-Way Plan	\$ 100,000				
ST 26.0	E. Hurlburt Avenue and S.E. 2nd Street Parking Lot Reconstruction	\$ -	\$ -	\$ -	\$ -	\$ 300,000
Street Total		\$ 5,225,000	\$ 30,000	\$ 1,440,000	\$ 30,000	\$ 930,000



NOTE

"ST" REFERS TO STREET PROJECT
NUMBER IS REFERENCE TO ACTUAL PROJECT IDENTIFIED IN CIP REPORT

LEGEND

- 2026-2027
- 2022-2023
- 2024-2025
- 2026-2027

0 0.5 1
SCALE IN MILES



CITY OF
HERMISTON, OREGON
CAPITAL IMPROVEMENTS PLAN UPDATE - 2023
STREET PROJECT LOCATIONS

**FIGURE
4**



Project Number:	ST 4.0
Project Name:	N.W. Geer Road, W. Harper Road, and N. 1st Place Realignment
Fund:	Street
Subcategory:	
Estimated Cost:	\$1,410,000
Fiscal Year:	2024-25

Project Description:

The project will include the abandonment of the existing intersection of N.W. Geer Road, W. Harper Road, and N. 1st Place. The project will realign the intersection on N. 1st Place further to the north to allow for a larger traffic queue at the railroad grade crossing, while matching critical roadway and sidewalk elevations. The N. 1st Place intersection will be realigned to develop improved access to property east of N. 1st Place. Work will restore centerline stripes and crosswalks and adjust all roadway monumentation and manholes/catch basins. Work will need to be coordinated with Union Pacific Railroad, City Water and Recycled Water Departments, and external utility providers to ensure all underground utility work is completed concurrently.

Project Justification:

N.W. Geer Road, W. Harper Road, and N. 1st Place need to be reconstructed to improve traffic and pedestrian movements at the N. 1st Place intersection and to improve connectivity to property east of N. 1st Place. In addition, the repair is needed to eliminate extensive patching and depressed areas from traffic and development activity.

Funding Data:			
Project No.	Fund Name	Amount	Fiscal Year
ST 4.0	Street Fund	\$1,410,000	2024-25
Total for Fiscal Year		\$1,410,000	



Project Number:	ST 5.0
Project Name:	W. Theater Lane Widening
Fund:	Street
Subcategory:	
Estimated Cost:	\$600,000
Fiscal Year:	2026-27

Project Description:

The project will include the widening of W. Theater Lane from 1st Street to N.W. Eucalyptus Drive. The project will extend curb, gutter, and sidewalk on the south side of the roadway and improve the intersection of W. Theater Lane and N.W. Geer Road. Americans with Disabilities Act ramps within the project area will be upgraded to match current Americans with Disabilities Act standards. Work will restore centerline stripes and crosswalks and adjust all roadway monumentation and manholes/catch basins.

Project Justification:

W. Theater Lane needs to be widened to realign the roadway centerline and improve the intersection with N.W. Geer Road, extend sidewalks, and create a road section that can support future traffic volumes. The roadway serves as critical conveyance route in the northwest quadrant of the City.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
ST 5.0	Street Fund	\$600,000	2026-27
Total for Fiscal Year		\$600,000	



Project Number:	ST 6.0
Project Name:	N. 1st Place Roadway Improvements
Fund:	Street
Subcategory:	
Estimated Cost:	\$4,100,000
Fiscal Year:	2022-23

Project Description:

The project will include the redevelopment of N. 1st Place from W. Hermiston Avenue extending north to W. Elm Avenue. The project is critical to the community as it develops a secondary north/south arterial on the west side of the railroad tracks. The project will rebuild the existing drive and turn lanes; install curb, gutter, and sidewalks; develop drainage; delineate parking; and restrict access to the roadway through development of formal driveways. Americans with Disabilities Act ramps will be developed that meet current Americans with Disabilities Act standards. Work will need to be coordinated with City Water and Recycled Water Departments and external utility providers to ensure all underground utility work is completed concurrently.

Project Justification:

N. 1st Place needs to be reconstructed to develop a secondary north/south arterial. The existing roadway surface has both longitudinal/transverse cracking, no sidewalks, and unrestricted access to the roadway from parking and undeveloped areas. Roadway improvements are required to prevent premature failure of the roadway and ensure the roadway is functional for the community and businesses in the area.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
ST 6.0	Street Fund	\$4,100,000	2022-23
Total for Fiscal Year		\$4,100,000	



Project Number:	ST 21.0
Project Name:	Arterial/Collector Sidewalk Infill
Fund:	Discretionary General Fund Contribution
Subcategory:	
Estimated Cost:	\$30,000 per year
Fiscal Year:	2022-23 to TBD

Project Description:

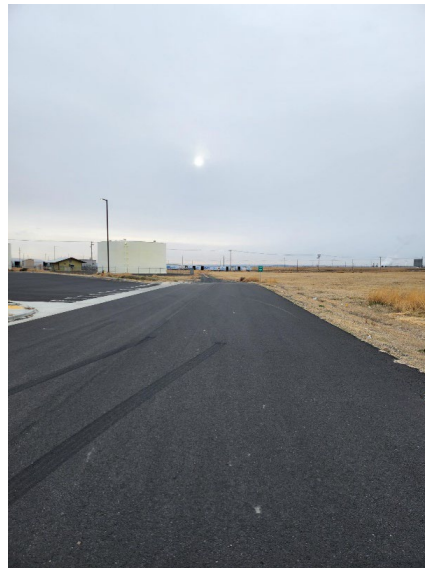
This project is a multi-year program to improve pedestrian safety by targeting new sidewalk construction investments to the highest-impact areas; specifically, by only focusing on missing sidewalk segments located along streets that are either Arterials or Collectors. A comprehensive sidewalk inventory was completed in 2018 and identified all missing sidewalk sections throughout the City. With a focus on prioritizing segments along Arterials and Collectors, the first round of projects was identified along W. Orchard Avenue, between S.W. 3rd and S.W. 9th Streets, and along N.E. 4th Street between E. Ridgeway and E. Jennie Ave. This program will fill in these missing sidewalk sections in small projects over five years by investing not more than \$30,000 per year to install them. Larger pedestrian projects will be addressed as their own independent projects.

Project Justification:

Sidewalk installation and maintenance is the responsibility of the adjacent property owner, and as vacant properties develop, they have been required to install sidewalk since the mid-1970s. Unfortunately, this policy, while fiscally prudent for the taxpayers, has resulted in some missing sidewalk sections along heavily traveled streets. Therefore, in the interest of benefitting the public at large, this project invests scarce public resources to very targeted sidewalk sections to improve overall mobility through the community without committing public resources to install sidewalks in low-need areas, such as a residential cul-de-sac.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
ST 21.0	Discretionary General Fund Contribution	\$30,000 per year	2022-23 TBD
Total for Fiscal Year		\$30,000 per year	



Project Number:	ST 22.0
Project Name:	E. Penney Avenue (S.E. Kelli Boulevard to U.S. Highway 395)
Fund:	Grant
Subcategory:	
Estimated Cost:	\$995,000
Fiscal Year:	2022-23

Project Description:

The project will be an extension of approximately 800 feet of existing roadway constructed with recent development and terminate at Kelli Boulevard with this phase. The project will include curb, gutter, and sidewalk on the south half. Pedestrian ramps will be developed that meet current Americans with Disabilities Act standards.

Project Justification:

E. Penney Avenue needs to be extended to eventually develop a secondary east/west route in the South Hermiston Industrial Park. This project will continue to spur growth in this area with additional connectivity.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
ST 22.0	Grant Funded	\$995,000	2022-23
Total for Fiscal Year		\$995,000	



Project Number:	ST 24.0
Project Name:	E. Gettman Road Construction (S. 1st Street to U.S. Highway 395) Right-of-Way Plan
Fund:	Street
Subcategory:	
Estimated Cost:	\$100,000
Fiscal Year:	2022-23

Project Description:

The project will include developing E. Gettman Road from S. 1st Street to U.S. Highway 395 (approximately 3,850 feet). The project will develop a roadway corridor and provide necessary documentation and coordination needed to obtain required right-of-way.

Project Justification:

The south end of the City continues to develop and, with the construction of Armand Larive Middle School, the traffic volume along W. Gettman Road and S. 1st Street has increased significantly. Development of E. Gettman Road between S. 1st Street and U.S. Highway 395 will take some traffic off local streets and provide a good east-to-west collector for this developing area.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
ST 24.0	Street Fund	\$100,000	2022-23
Total for Fiscal Year		\$100,000	



Project Number:	ST 26.0
Project Name:	E. Hurlburt Avenue and S.E. 2nd Street Parking Lot Reconstruction
Fund:	Street
Subcategory:	
Estimated Cost:	\$300,000
Fiscal Year:	2026-27

Project Description:

The project will reconstruct an existing downtown parking lot utilized by local businesses. The project will include removal of existing asphalt and replacement with a pavement section of 2.5 inches of asphalt pavement over 6 inches of base rock and pavement markings. The project may also include concrete sidewalk, driveway, and Americans with Disabilities Act improvements.

Project Justification:

The existing parking lot surface is in poor condition, potentially creating an unsafe condition for patrons of downtown businesses who currently utilize this parking lot.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
ST 26.0	Street Fund	\$300,000	2026-27
Total for Fiscal Year		\$300,000	

Water Department Appendix

Projects in the "Water Department Appendix" are either completed or are proposed projects that are not included in the five-year Capital Improvements Plan (CIP) planning period. Any dates included with the projects in the "Water Department Appendix" section have not been approved by the City Council. These projects should be considered as supported by the City Council, pending adequate funding. Projects included in this list should be the first to be considered during updates to the five-year CIP, as well as for potential grant funding opportunities if they arise and do not compete for grant funds with projects listed in the current five-year CIP.

PROPOSED WATER CAPITAL IMPROVEMENT PROJECTS

Project No.*	Project Description	Cost Estimate
W 26.0	Deep Basalt Well and Pump Station	\$1,100,000
W 27.0	Southwest Storage Reservoir	\$3,100,000
W 31.0	Moore Booster Station Replacement	\$350,000
W 32.0	W. Highland Avenue/S. 1st Street Asbestos Concrete Main Replacement	\$1,350,000
W 33.0	N.W. 11th Street Main Extension	\$520,000

**Project numbers have no implication to priority.*

COMPLETED WATER CAPITAL IMPROVEMENT PROJECTS

Project No.	Project Description	Fiscal Year Completed
W 1.0	Combination Vactor and Equipment Trailer	2018-19
W 2.0	Backhoe Loader	2019-20
W 3.0	Service Utility Truck	2020-21
W 4.0	Water System Supervisory Control and Data Acquisition Replacement	2019-20
W 5.0	Water System Supervisory Control and Data Acquisition Radio System	2019-20
W 6.0	Leak Detection Equipment	2020-21
W 7.0	Well No. 6 Pumping System Upgrades	2018-19
W 11.0	Well No. 4, Reservoir Cathodic Protection System	2018-19
W 12.0	Well No. 6, Reservoir No. 1 Cathodic Protection System	2019-20
W 13.0	Well No. 6, Reservoir No. 1 Interior Surface Painting	2019-20
W 14.0	Geer Road Water Line Extension	2018-19
W 15.0	W. Ridgeway Water Line Replacement	2020-21
W 23.0	Well No. 6, Reservoir No. 1 Exterior Surfaces Painting	2019-20
W 29.0	Downtown Utility Line Replacement (1st Street to 3rd Street)	2021-22



Project Number:	W 1.0
Project Name:	Combination Vector and Equipment Trailer
Fund:	Water and Street
Subcategory:	Vehicles/Equipment
Estimated Cost:	\$40,000
Actual Cost:	\$57,997
Fiscal Year:	2018-19

Project Description:

The trailer will be setup to accommodate multiple tasks in limited access areas. The trailer will utilize a hydro excavator outfitted with a 36 horsepower diesel engine, minimum 95-gallon water tank, water pump capable of generating 3,000 pounds per square inch, 250 gallon spoil tank with hydraulic door, and 450 cubic feet per minute vacuum with an 8-foot, 3-inch diameter hose with washable cartridge filters. The trailer will be outfitted with an industrial, hydraulically operated valve exercising system.

Project Justification:

A properly equipped trailer will provide a versatile, mobile unit that creates efficiencies by consolidating equipment that can be shared by the Water and Street Departments. The trailer will be equipped to clean out valve boxes, exercise water valves, clean out meter vaults, and provide Geographical Information System mapping for valves, hydrants, and meters.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
W 1.0	Water Fund	\$40,000	2018-19
Total for Fiscal Year		\$40,000	



Project Number: W 2.0, S 1.0, ST 1.1

Project Name: Backhoe Loader

Fund: Water, Sewer, and Street

Subcategory: Vehicles/Equipment

Estimated Cost: \$90,000

Actual Cost:

Fiscal Year: 2019-20

Project Description:

The new backhoe loader will be shared between the Water, Recycled Water, and Street Departments. The new backhoe loader should have the following features: minimum 110 horsepower engine meeting Tier 4 emission standards, four-wheel drive, dig depth of 15 feet, center-pivot hoe, auxiliary hydraulic line to front and rear buckets, hydraulic hoe thumb, 1.75-cubic yard loader bucket, heavy duty soil hoe bucket, enclosed cab air conditioning, and quick release buckets. The backhoe will need to be capable of driving and carrying loads within the City. The 1994 backhoe loader should be surplus with the 1979 backhoe loader being utilized as a backup.

Project Justification:

The existing 1994 backhoe serves as the primary emergency unit to repair water line breaks. The backhoe has the following issues:

- The fuel tank is integrated into the frame and is unrepairable, with \$5,000 invested to date.
- The design life is 5,000 hours, and it is currently at 4,000 hours.
- The transmission is not working correctly (estimated \$10,000 to repair). The dealer has advised the City not to use third and fourth gears.
- The brakes and other safety components are not working properly and are creating safety issues.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
W 2.0	Water Fund	\$90,000	2019-20
S 1.0	Sewer Fund	\$20,000	2019-20
ST 1.1	Street Fund	\$30,000	2019-20
Total for Fiscal Year		\$140,000	



Project Number:	W 3.0
Project Name:	Service Utility Truck
Fund:	Water
Subcategory:	Vehicles/Equipment
Estimated Cost:	\$68,000
Fiscal Year:	2018-19 to 2022-23

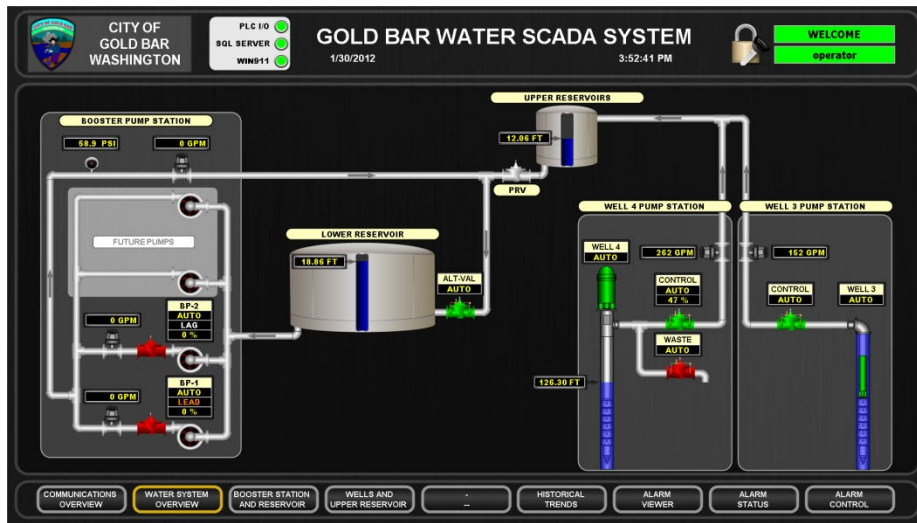
Project Description:

New service utility truck will consist of a full-size, 1-ton, standard cab domestic service truck. Typical vehicle features will include: diesel engine, four-wheel drive, automatic transmission, base trim package, air conditioning, light bar, work area lighting, cloth interior, trailer hitch package, truck box sufficiently sized to store tools and equipment. Box should be able to accommodate crane, air compressor, welder, and generator.

Project Justification:

The service utility truck is nearing the end of its service life, and the engine and transmission are undersized and inadequate. The service truck has over 100,000 miles, it has exceeded its acceptable life span, and its continued use will expose the City to increased maintenance costs.

Funding Data:			
Project No.	Fund Name	Amount	Fiscal Year
W 3.0	Water Fund	\$26,000	2018-19
W 3.0	Water Fund	\$10,000	2019-20
W 3.0	Water Fund	\$10,000	2020-21
W 3.0	Water Fund	\$10,000	2021-22
W 3.0	Water Fund	\$12,000	2022-23
Total for Fiscal Year		\$68,000	



Project Number:	W 4.0
Project Name:	Water System Supervisory Control and Data Acquisition Replacement
Fund:	Water
Subcategory:	Communications
Estimated Cost:	\$160,000
Actual Cost:	\$160,000
Fiscal Year:	2019-20

Project Description:

Replacement of the City’s supervisory control and data acquisition system will involve replacement of control systems at each of the City’s five reservoirs, six well sites, and seven booster pump stations. Work will include replacement of the computers and installation of graphical user interfaces that allow users to interface and monitor water system equipment. Included in the project are new programmable logic controllers, hardware elements, software, programming, and installation of equipment. Remote access systems will be provided as part of the project, and Allen Bradley equipment will be utilized for the programmable logic controller systems.

Project Justification:

The City’s existing supervisory control and data acquisition system was installed in 1999 and is subject to frequent repairs. A typical lifespan for control systems is 10 to 15 years and, with the system being 18 years old, parts to repair the system are difficult to find. Replacing the system will improve remote operation, avoiding the need to specifically visit a site when a problem occurs.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
W 4.0	Water Fund	\$160,000	2019-20
Total for Fiscal Year		\$160,000	



Project Number:	W 5.0
Project Name:	Water System Supervisory Control and Data Acquisition Radio System
Fund:	Water
Subcategory:	Communications
Estimated Cost:	\$30,000
Actual Cost:	\$15,697
Fiscal Year:	2019-20

Project Description:

Replacement of the City’s supervisory control and data acquisition antenna radio system will involve replacement of the communication portion of the antenna control systems at each of the City’s five reservoirs, six well sites, and seven booster pump stations. Work will also need to have a radio survey completed to ensure all control points located throughout the City can be connected into the system with the proposed equipment.

Project Justification:

The City’s existing antenna supervisory control and data acquisition radio system is 18 years old and is subject to frequent repairs. Without any hardwired, fiber-optic cable system, the City relies on a wireless radio at each of the City’s water system sites. A typical lifespan for control systems radios is 10 to 15 years and, with the system being 18 years old, parts to repair the system are difficult to find. Replacement of the system radios will improve system operations, avoid system outages, and ensure the City’s critical infrastructure is reliable.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
W 5.0	Water Fund	\$30,000	2019-20
Total for Fiscal Year		\$30,000	



Project Number:	W 6.0
Project Name:	Leak Detection Equipment
Fund:	Water
Subcategory:	Communications
Estimated Cost:	\$30,000
Actual Cost:	
Fiscal Year:	2020-21

Project Description:

The project will allow the City to purchase leak detection equipment and have City staff certified in the operation and maintenance of the equipment.

Project Justification:

Leak detection is part of the City’s yearly operation and maintenance program that allows the staff to identify water leaks prior to a leak becoming an emergency repair. In addition, the City’s approved Water System Master Plan and Water System Conservation Plan require the City directly own the leak detection equipment. Leak detection services are currently outsourced annually, as the City does not have the equipment and are not trained in the use of the equipment.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
W 6.0	Water Fund	\$30,000	2020-21
Total for Fiscal Year		\$30,000	



Project Number:	W 7.0
Project Name:	Well No. 6 Pumping System Upgrades
Fund:	Water
Subcategory:	Supply
Estimated Cost:	\$175,000
Actual Cost:	\$26,050*
Fiscal Year:	2018-19

*The initial budget was based on full replacement of all mechanisms. Working closely with the Contractor, and after disassembly and inspection, it was determined many components could be reconditioned rather than replaced, allowing them to be reutilized. Many parts had less wear than expected from a pumping system of this age and depth.

Project Description:

The project will replace the existing 1,780-gallon per minute pumping system. Installation of a water level measurement system in the well will be included with the project. Installation of the measurement system will be complicated, as the well is not straight and standard methods (using air line, for reading water depths will be problematic. An ultrasonic measurement system will need to be evaluated.

Project Justification:

Well No. 6 is the primary well for its pressure zone and is the only well available in a high pressure zone that could provide minimal water supply to lower pressure zones covering the entire City during a power outage. The existing 1,780-gallon per minute pump was last repaired in 1994. The backup pumping system for the Well No. 6 and the View Drive Booster Pump Station lacks the capacity to provide service to Well No. 6 pressure zone. The Well No. 6 pumping system serves critical infrastructure, which includes the Walmart Distribution Center, the Eastern Oregon Higher Education Center, Pioneer Seed, and the Eastern Oregon Trade and Event Center. Preventive maintenance of Well No. 6 is needed to avoid significant inconvenience and loss of water to area businesses.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
W 7.0	Water Fund	\$175,000	2018-19
Total for Fiscal Year		\$175,000	



Project Number:	W 11.0
Project Name:	Well No. 4 Reservoir Cathodic Protection System
Fund:	Water
Subcategory:	Storage
Estimated Cost:	\$60,000
Actual Cost:	\$33,530
Fiscal Year:	2018-19

Project Description:

The project will install a cathodic protection system in the interior of the reservoir. The system will consist of an impressed current system using relatively inert anodes connected to a power supply. The system will be suspended in the interior of the reservoir, which will protect the steel reservoir from corrosion.

Project Justification:

The Well No. 4 Reservoir has been repainted four times since construction due to rusting of the steel reservoir. Steel naturally reacts with water and oxygen, releasing energy and returning to its more stable chemical state, iron oxide. Cathodic protection extends the life of a steel water reservoir by providing a sacrificial anode within the reservoir. The sacrificial anode provides a fault so the structural tank and interior/exterior coatings will not fail. Installation of a cathodic protection system in the Well No. 4 Reservoir should be completed before recoating the reservoir.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
W 11.0	Water Fund	\$60,000	2018-19
Total for Fiscal Year		\$60,000	



Project Number:	W 12.0
Project Name:	Well No. 6, Reservoir No. 1 Cathodic Protection System
Fund:	Water
Subcategory:	Storage
Estimated Cost:	\$62,000* (\$397,000 when combined with W 13.0 and W 23.0)
Actual Cost:	\$239,216
Fiscal Year:	2019-20

*This project, inclusive of W 12.0, 13.0, and 23.0, came in approximately \$150,000 under the original estimate because of a number of competitive bids from local contractors as well as efficiencies gained by combining three projects into one.

Project Description:

The project will install a cathodic protection system in the interior of the reservoir. The system will consist of an impressed current system using relatively inert anodes connected to a power supply. The system will be suspended in the interior of the reservoir, which will protect the steel reservoir from corrosion. This project may be included with project W 13.0 to avoid having to drain the reservoir twice.

Project Justification:

The Well No. 6, Reservoir No. 1 does not have a cathodic protection system, while the newer Well No. 6 Reservoir No. 2 does have a cathodic protection system. Steel naturally reacts with water and oxygen, releasing energy and returning to its more stable chemical state, iron oxide. Cathodic protection extends the life of a steel water reservoir by providing a sacrificial anode within the reservoir. The sacrificial anode provides a fault so the structural tank and interior/exterior coatings will not fail. Installation of a cathodic protection system in Well No. 6, Reservoir No. 1 should be completed before recoating the reservoir.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
W 12.0	Water Fund	\$62,000	2019-20
Total for Fiscal Year		\$62,000	



Project Number:	W 13.0
Project Name:	Well No. 6, Reservoir No. 1 Interior Surface Painting
Fund:	Water
Subcategory:	Storage
Estimated Cost:	\$220,000* (\$282,000 when combined with W 12.0 and W 23.0)
Actual Cost:	\$239,216
Fiscal Year:	2019-20

*This project, inclusive of W 12.0, 13.0, and 23.0 came in approximately \$150,000 under the original estimate because of a number of competitive bids from local contractors as well as efficiencies gained by combining two projects into one.

Project Description:

The project will install a cathodic protection system in the interior of the reservoir. The system will consist of an impressed current system using relatively inert anodes connected to a power supply. The system will be suspended in the interior of the reservoir, which will protect the steel reservoir from corrosion. This project may be included with project W 13.0 to avoid having to drain the reservoir twice.

Project Justification:

The Well No. 6, Reservoir No. 1 does not have a cathodic protection system, while the newer Well No. 6 Reservoir No. 2 does have a cathodic protection system. Steel naturally reacts with water and oxygen, releasing energy and returning to its more stable chemical state, iron oxide. Cathodic protection extends the life of a steel water reservoir by providing a sacrificial anode within the reservoir. The sacrificial anode provides a fault so the structural tank and interior/exterior coatings will not fail. Installation of a cathodic protection system in Well No. 6, Reservoir No. 1 should be completed before recoating the reservoir.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
W 13.0	Water Fund	\$220,000	2019-20
Total for Fiscal Year		\$220,000	



Project Number:	W 14.0
Project Name:	Geer Road Water Line Extension
Fund:	Water
Subcategory:	Distribution
Estimated Cost:	\$150,000
Actual Cost:	\$101,522.67* Final Application for Payment
Fiscal Year:	2018-19

*Cost savings were possible because the City had much of the pipe on-hand for the Contractor to install.

Project Description:

The project will include constructing a water main extension in Geer Road beginning at West Theater Lane extending south to West Harper Road. Work will include construction of a new 36-inch water line extension in an alignment within the existing road right-of-way that will minimize the need for asphalt removal and replacement. Tees and valves will be installed to allow future installation of fire hydrants within the project area. The new water line will need to cross the existing irrigation main in Geer Road. If the City completes the project construction, costs will be reduced.

Project Justification:

The dead-end water line on Geer Road provides water to more than 200 homes and businesses located within the Geer Booster Pump Station pressure zone. Any shutdown of the existing water line within West Theater Lane cuts off water service to the entire area. Looping the water line will mitigate inconveniences due to a line break or maintenance. Other benefits include improved fire flows, water quality, and water pressure.

Funding Data:			
Project No.	Fund Name	Amount	Fiscal Year
W 14.0	Water Fund	\$150,000	2018-19
Total for Fiscal Year		\$150,000	



Project Number:	W 15.0
Project Name:	W. Ridgeway Water Line Replacement
Fund:	Water
Subcategory:	Distribution
Estimated Cost:	\$320,000
Actual Cost:	\$446,555*
Fiscal Year:	2020-21

*Due to unforeseen soil conditions, asphalt restoration significantly increased, which led to a decision to re-pave the entire street width.

Project Description:

The project will include replacing the water main in W. Ridgeway beginning at the intersection of W. Hartley Avenue/N.W. 7th Street south to W. Ridgeway Avenue, east to N.W. 6th Street, and south to the intersection of N.W. 6th Street/W. Madrona Avenue. The existing 6-inch water line will be replaced with new 12-inch pipe within the existing roadway. Tees, valves, hydrants, and water service lines will be replaced within the project area. The project may need temporary water services to provide water to local residents during construction.

Project Justification:

An aggressive water main line replacement program will eliminate failing, deteriorating lines, minimize repair work, eliminate steel pipes, and improve public safety. Sections of the water distribution system within the project area were installed in the 1920s using steel pipe. This area may have lead in the pipes or fittings. These pipes are some of the oldest within the City.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
W 15.0	Water Fund	\$320,000	2020-21
Total for Fiscal Year		\$320,000	



Project Number: W 23.0

Project Name: Well No. 6, Reservoir No. 1 Exterior Surfaces Painting

Fund: Water

Subcategory: Supply

Estimated Cost: \$115,000 (\$397,000 when combined with W 12.0 and W 13.0)

Actual Cost: \$239,216

Fiscal Year: 2019-20

*This project, inclusive of W 12.0, 13.0, and 23.0, came in approximately \$156,000 under the original estimate because of a number of competitive bids from local contractors as well as efficiencies gained by combining three projects into one.

Project Description:

The project will include painting all exterior surfaces. To paint exterior surfaces, the reservoir may need to be drained to ensure the paint cures properly depending on the time of the year the project occurs. The project will require that exterior surfaces be sandblasted to remove all contamination and rust. Following surface preparation, the reservoir would be primed and finish coats of paint applied and tested to ensure the application paint thickness meets manufacturer and/or Engineer-specified thickness.

Project Justification:

The Well No. 6, Reservoir No. 1 needs to be repainted to minimize further corrosion of the steel plates from which the reservoir was constructed. The reservoir was last painted in 1991. The reservoir color is also recommended to be changed to prevent pheasants from flying into the reservoir.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
W 23.0	Water Fund	\$115,000	2019-20
Total for Fiscal Year		\$115,000	



Project Number:	W 26.0
Project Name:	Deep Basalt Well and Pump Station
Fund:	Water
Subcategory:	Supply
Estimated Cost:	\$1,100,000 (plus inflation depending on year constructed)
Fiscal Year:	Undefined

Project Description:

This project will involve installing a new deep basalt well in the southwest area of the City. The well and associated booster pump station will ideally be located near the site of a new reservoir. The anticipated capacity of the well is approximately 1,000 gallons per minute. Existing City water rights are anticipated to be transferred to the new well.

Project Justification:

Based on the Water System Master Plan prepared by the City in 2018 and 2019, the City will need additional supply capacity in the next 5 to 10 years. This well will add an additional supply source and serve as a source of water to an anticipated new reservoir located in the vicinity of this well. Refer to the City’s Water System Master Plan for further discussion.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
W 26.0	Water Fund	\$1,100,000	Undefined
Total for Fiscal Year		\$1,100,000	



Project Number:	W 27.0
Project Name:	Southwest Storage Reservoir
Fund:	Water
Subcategory:	Storage
Estimated Cost:	\$3,100,000 (plus inflation depending on year constructed)
Fiscal Year:	Undefined

Project Description:

The project will include developing a new reservoir located in the southwest area of the City. Work will include construction of the new reservoir, water line extensions, control systems, valves, site development, property acquisition, and engineering/permitting services. Specific attention for access to the reservoir roof will be evaluated during design. Access alternatives may entail an exterior stairway system or a ladder system with landings.

Project Justification:

A new 2,000,000-gallon reservoir on the southwest side of town is needed to accommodate additional water demands from ongoing population growth. A new reservoir will reduce the City’s reliance on booster pump stations to pressurize the system, provide compliance with fire flow requirements as well as applicable health and safety rules, and will ensure minimum water distribution system pressures are maintained. A new well constructed in a separate project would keep the reservoir full and operating. The Water System Master Plan prepared in 2018 and 2019 discusses this project in more depth.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
W 27.0	Water Fund	\$3,100,000	Undefined
Total for Fiscal Year		\$3,100,000	



Project Number:	W 29.0
Project Name:	Downtown Utility Line Replacement (1st Street to 3rd Street)
Fund:	Water
Subcategory:	Distribution
Estimated Cost:	\$300,000
Actual Cost:	\$329,047
Fiscal Year:	2020-21

Project Description:

The project will include installation of new ductile iron and polyvinyl chloride water and sewer main lines through the alleyway in between Main Street and Gladys Avenue from N. 1st Street to N. 3rd Street. The project will be included as part of the new City Hall project to save cost by taking advantage of paving already being removed for the City Hall project.

Project Justification:

The water and sewer lines along the alleyway are among the oldest lines in the City, likely installed in the early to mid-1900s. These lines are long past their design life. Existing sewer lines are unreinforced concrete and vitrified clay pipe, which is known to be extremely brittle. Existing water lines are cast iron pipe, which does not meet current standards. The proposed pipe replacements will remove some of the oldest pipes in the City's water and sewer systems.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
W 29.0	Water Fund	\$300,000	2020-21
Total for Fiscal Year		\$300,000	



Project Number:	W 31.0
Project Name:	Moore Booster Station Equipment Replacement
Fund:	Water
Subcategory:	Distribution
Estimated Cost:	\$350,000 (plus inflation depending on year constructed)
Fiscal Year:	Undefined

Project Description:

This project will replace the existing booster pump station equipment that is nearing the end of its useful life. Equipment considered for replacement will include pumps, motors, and electrical and controls-related equipment. The project is assumed to utilize the existing structure with only minor improvements.

Project Justification:

The equipment associated with the Moore Booster Station is nearing the end of its useful life, which contributes to increased maintenance costs and difficulty in procuring replacement parts and supplies for the outdated equipment. Although the development of the southwest portion of the City includes plans for the southwest water storage reservoir, the Water System Master Plan calls for the Moore Booster Station to be a necessary backup to the Joseph and Alora Heights Booster Pump Stations that will be converted to supply the new reservoir.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
W 31.0	Water Fund	\$350,000	Undefined
Total for Fiscal Year		\$350,000	



Project Number:	W 32.0
Project Name:	W. Highland Avenue/S. 1st Street Asbestos Concrete Main Replacement
Fund:	Water
Subcategory:	Distribution
Estimated Cost:	\$1,350,000 (plus inflation depending on year constructed)
Fiscal Year:	Undefined

Project Description:

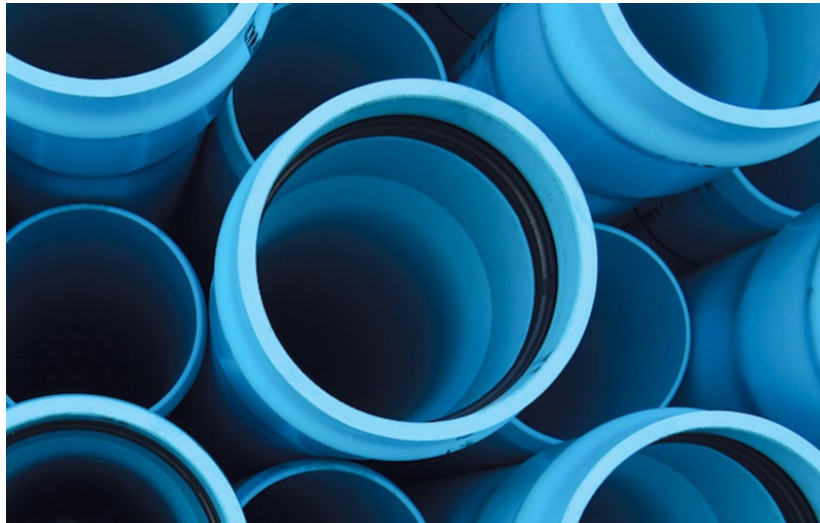
The project will include replacing approximately 4,800 linear feet of existing water main line along W. Highland Avenue between S.W. 4th Street and S.E. 4th Street and along S. 1st Street between W. Orchard Avenue and W. Highland Avenue. The existing asbestos concrete water lines will be replaced with new 8-inch ductile iron pipe within the roadway. Tees, valves, hydrants, and water service lines will be replaced within the project area. The project may need temporary water services to provide water to local residents during construction.

Project Justification:

This project will eliminate failing, deteriorating and undersized lines; reduce repair work; and improve public safety. Proposed pipe replacements will remove some of the oldest pipes within the City water system.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
W 32.0	Water Fund	\$1,350,000	Undefined
Total for Fiscal Year		\$1,350,000	



Project Number:	W 33.0
Project Name:	N.W. 11th Street Main Extension
Fund:	Water
Subcategory:	Distribution
Estimated Cost:	\$520,000 (plus inflation depending on year constructed)
Fiscal Year:	Undefined

Project Description:

The project will include constructing a water main extension in N.W. 11th Street at N.W. Sjoren Lane extending north to W. Nelson Lane. Work will include construction of approximately 1,700 feet of new 8-inch water line in an alignment within the existing road right-of-way that will minimize the need for asphalt removal and replacement. Tees and valves will be installed to allow future installation of fire hydrants within the project area.

Project Justification:

The dead-end water line on W. Nelson Lane and N.W. 11th Street provides water service to the northwest corner of the City, including the recycled water treatment plant. Any shutdown of the existing water line in this areas cuts off water service to the entire area. Looping the water line will mitigate inconveniences due to a line break or maintenance. Other benefits will include improved fire flows, water quality, and water pressure.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
W 33.0	Water Fund	\$520,000	Undefined
Total for Fiscal Year		\$520,000	

Recycled Water Department Appendix

Projects in the "Recycled Water Department Appendix" are either completed or are proposed projects that are not included in the five-year Capital Improvements Plan (CIP) planning period. Upon final adoption of the Sanitary Sewer Collection System Study (SSCSS), recommended system improvements identified within the SSCSS will be added to this appendix. Any dates included with the projects in the "Recycled Water Department Appendix" section have not been approved by the City Council. These projects should be considered as supported by the City Council, pending adequate funding. Projects included in this list should be the first to be considered during updates to the five-year CIP, as well as for potential grant funding opportunities if they arise and do not compete for grant funds with projects listed in the current five-year CIP.

PROPOSED RECYCLED WATER CAPITAL IMPROVEMENT PROJECTS

Project No.*	Project Description	Cost Estimate
S 19.0	Recycled Water Treatment Plant Biosolids Pond Dredging	\$300,000
S 27.0	W. Juniper/W. Pine Avenue Gravity Sewer Line Replacement	\$480,000
S 28.0	S. 1st Street Gravity Sewer Line Replacement	\$130,000
S 29.0	E. Newport Avenue Gravity Sewer Line Improvements	\$130,000
S 30.0	W. Madrona/W. Ridgeway Avenue Sewer Line Replacement	\$270,000
S 31.0	N.E. 9th Street Gravity Sewer Line Replacement	\$180,000
S 32.0	S.E. 5th Street Gravity Sewer Line Replacement	\$165,000
S 33.0	Lift Station No. 8 Electrical and Controls	\$340,000

**Project numbers have no implication to priority.*

COMPLETED RECYCLED WATER CAPITAL IMPROVEMENT PROJECTS

Project No.	Project Description	Fiscal Year Completed
S 1.0	Backhoe Loader	2019-20
S 2.0	S.E. 7th Street Gravity Sewer Line Replacement - Phase I	2018-19
S 3.0	Lift Stations No. 1 and 8 Underground Fuel Storage Tank Replacement	2020-21
S 4.0	7th Street Manhole Replacement	2020-21
S 5.0	S.E. 7th Street Gravity Sewer Line Replacement - Phases II and III	2020-21
S 6.0	Lift Station No. 1 Pump Upgrades	2019-20
S 7.0	Lift Station No. 1 Ventilation System Replacement	2019-20
S 8.0	Lift Station No. 1 Generator Replacement	2019-20
S 13.0	Lift Station No. 6 Reconstruction	2019-20
S 17.0	Recycled Water Treatment Plant Administrative Building Heating, Ventilation, and Air Conditioning Upgrades	2018-19

COMPLETED RECYCLED WATER CAPITAL IMPROVEMENT PROJECTS, CONT'D.

Project No.	Project Description	Fiscal Year Completed
S 20.0	Sanitary Sewer Collection System Study	2020-21
S 21.0	Vactor Truck	2018-19



Project Number:	W 2.0, S 1.0, ST 1.1
Project Name:	Backhoe Loader
Fund:	Water, Recycled Water, and Street
Subcategory:	Vehicles/Equipment
Estimated Cost:	\$20,000
Actual Cost:	
Fiscal Year:	2019-20

Project Description:

The new backhoe loader will be shared between the Water, Recycled Water, and Street Departments. The new backhoe loader should have the following features: minimum 110 horsepower engine with Tier 4 emission standards, four-wheel drive, dig depth of 15 feet, center-pivot hoe, auxiliary hydraulic line to front and rear buckets, hydraulic hoe thumb, 1.75-cubic yard loader bucket, heavy duty soil hoe bucket, fully enclosed cab, air conditioning, and quick release buckets. The backhoe loader will need to be capable of driving and carrying loads within the City. The 1994 backhoe loader should be surplus with the 1979 backhoe loader being utilized as a backup.

Project Justification:

The existing 1994 Case backhoe loader serves as the primary emergency unit to repair water line breaks. The backhoe loader has the following issues:

- The fuel tank is integrated into the frame and is problematic to repair, with \$5,000 invested to date.
- The design life is 5,000 hours, and it is currently at 4,000 hours.
- The transmission is not working correctly (estimated \$10,000 to repair). The dealer has advised the City not to use third and fourth gears.
- The brakes and other safety components are not working properly and are creating safety issues.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
W 2.0	Water Fund	\$90,000	2019-20
S 1.0	Recycled Water Fund	\$20,000	2019-20
ST 1.1	Street Fund	\$30,000	2019-20
Total for Fiscal Year		\$140,000	



Project Number:	S 2.0
Project Name:	S.E. 7th Street Gravity Sewer Line Replacement - Phase I
Fund:	Recycled Water
Subcategory:	Collection
Estimated Cost:	\$160,000
Actual Cost:	\$154,424
Fiscal Year:	20108-19

Project Description:

The project will include replacing 650 linear feet of the existing sanitary sewer line located in S.E. 7th Street beginning at E. Main Street and extending south to E. Newport Avenue. Work will include installation of new PVC sewer pipe and new precast manholes within the project limits. Included in the work to replace the piping are roadway restoration, traffic control measures, high groundwater mitigation, and sewage bypass pumping to accommodate collection system improvements.

Project Justification:

The existing sewer line lacks the capacity needed to provide expanding service to the Eastern Oregon Trade and Event Center and the Cook Industrial Area. Replacing the sewer line will ensure development within these areas will not be limited by the existing 8-inch concrete pipe.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
S 2.0	Recycled Water Fund	\$160,000	2018-19
Total for Fiscal Year		\$160,000	



Project Number:	S 3.0
Project Name:	Lift Stations No. 1 and 8 Underground Fuel Storage Tank Replacement
Fund:	Recycled Water
Subcategory:	Collection
Estimated Cost:	\$40,000
Actual Cost:	
Fiscal Year:	2019-20 to 2020-21

Project Description:

The project will require the removal of the existing underground fuel storage tank. The project will also include the purchase and installation of a double-walled tank on a concrete pad along with associated fuel line plumbing to the existing generator.

Project Justification:

Underground fuel storage tanks require an Oregon Department of Environmental Quality permit and annual inspections in addition to an annual fee. The fee, inspections, and associated recordkeeping and maintenance requirements can be eliminated by replacing the underground storage tank with an aboveground storage tank. Additionally, replacing the tank will reduce the City’s exposure to future monitoring requirements.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
S 3.0	Recycled Water Fund	\$40,000	2019-20 to 2020-21
Total for Fiscal Year		\$40,000	



Project Number:	S 4.0
Project Name:	7th Street Manhole Replacement
Fund:	Recycled Water
Subcategory:	Collection
Estimated Cost:	\$20,000
Actual Cost:	
Fiscal Year:	2020-21

Project Description:

The project will include replacing the existing manhole located in 7th Street. Work will include installation of a new cast-in-place base section and precast manhole sections as needed to reach the ground surface. The project will include traffic control, groundwater pumping systems, sewage bypass pumping, and side service reconnections.

Project Justification:

The existing structure is a brick manhole that is failing. The structure is missing several bricks in the cone section, has been allowing water to infiltrate into the collection system due to high groundwater levels, and is a risk for catastrophic failure within the roadway.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
S 4.0	Recycled Water Fund	\$20,000	2020-21
Total for Fiscal Year		\$20,000	



Project Number:	S 5.0
Project Name:	S.E. 7th Street Gravity Sewer Line Replacement - Phases II and III
Fund:	Recycled Water
Subcategory:	Collection
Estimated Cost:	\$740,000
Actual Cost:	\$673,129*
Fiscal Year:	2020-21

*Construction efforts better identified the cause of the existing line blockage, reducing the scope of new sewer line installation. The potential for additional cost savings was also identified during the design process, allowing for new construction while eliminating the need for temporary bypass pumping.

Project Description:

The project will include replacing approximately 1,360 linear feet of the existing sanitary sewer line located in S.E. 7th Street beginning at E. Newport Avenue and extending south to E. Highland Avenue. Work will include installation of new polyvinyl chloride sewer pipe and new precast manholes within the project limits. Included in the work to replace the sewer line are full-width roadway paving, traffic control measures, high groundwater mitigation, and sewage bypass pumping to accommodate collection system improvements.

Project Justification:

The existing sewer line lacks the capacity needed to provide expanding service to the Eastern Oregon Trade and Event Center and the Cook Industrial Area. Replacement of the sewer line will ensure development within these areas will not be limited by the existing 8-inch concrete pipe.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
S 5.0	Recycled Water Fund	\$740,000	2020-21
Total for Fiscal Year		\$740,000	



Project Number:	S 6.0
Project Name:	Lift Station No. 1 Pump Upgrades
Fund:	Recycled Water
Subcategory:	Collection
Estimated Cost:	\$100,000
Fiscal Year:	2019-20 to 2020-21

*S 6.0 combined with S 7.0 and S 8.0 to save costs by completing the projects under one construction Contract.

Project Description:

Lift Station No. 1 has recently had the pump motors, located outside of the wetwell, replaced. The project will include the replacement of the pump column, line shaft, pump bowls and impellers for each of the three pumps installed in the wetwell. The existing motors will be mounted to the new equipment and sewage bypass pumping, if required during pump installation, will be included in the project.

Project Justification:

Lift Station No. 1 is a sewage pump station that utilizes a drywell/wetwell configuration. The three existing line shaft pumps were originally installed in 1981 and are reaching the end of their design life. The three pumps need to be replaced to avoid lift station problems.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
S 6.0	Recycled Water Fund	\$100,000	2019-20 to 2020-21
Total for Fiscal Year		\$100,000	



Project Number:	S 7.0
Project Name:	Lift Station No.1 Ventilation System Replacement
Fund:	Recycled Water
Subcategory:	Collection
Estimated Cost:	\$60,000
Actual Cost:	
Fiscal Year:	2019-20 to 2020-21

*S 7.0 combined with S 6.0 and S 8.0 to save costs by completing the projects under one construction Contract.

Project Description:

The project will install a new ventilation system and carbon filter on the vent discharge point from the lift station. Design goals will include minimizing odors and reducing maintenance time and costs at the facility.

Project Justification:

Lift station ventilation systems are extremely important to safeguard the lives of wastewater operators. Hydrogen sulfide gas is immediately dangerous to life and health and is responsible for numerous deaths annually. Additionally, hydrogen sulfide gas is extremely corrosive and shortens equipment life. The ventilation system should be removed and replaced to safeguard personal safety and maximize the life of components in the lift station.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
S 7.0	Recycled Water Fund	\$60,000	2019-20 to 2020-21
Total for Fiscal Year		\$60,000	



Project Number:	S 8.0
Project Name:	Lift Station No. 1 Generator Replacement
Fund:	Recycled Water
Subcategory:	Collection
Estimated Cost:	\$100,000
Actual Cost:	
Fiscal Year:	2019-20 to 2020-21

*S 7.0 combined with S 6.0 and S 8.0 to save costs by completing the projects under one construction Contract.

Project Description:

The project will install a new 100-kilowatt generator at the facility. Work will be coordinated with the installation of the new fuel tank to minimize secondary impacts with working being completed by two contractors.

Project Justification:

Backup power generators at lift stations are needed to ensure uninterrupted service to sewer users and avoid overflows to the environment. Although lift station backup generators do not normally receive a lot of use, various parts fail from time and exposure and many parts become difficult or impossible to obtain when repairs are needed. To avoid spills and associated environmental consequences, it is necessary to replace the current obsolete backup power generator.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
S 8.0	Recycled Water Fund	\$100,000	2019-20 to 2020-21
Total for Fiscal Year		\$100,000	



Project Number:	S 13.0
Project Name:	Lift Station No. 6 Reconstruction
Fund:	Recycled Water
Subcategory:	Collection
Estimated Cost:	\$620,000
Actual Cost:	\$710,589*
Fiscal Year:	2022-23

*The increased cost was due to higher-than-expected inflation and the limited number of interested bidders.

Project Description:

This project will include a well structure, duplex pumps, pump slide rails, ventilation system, internal piping, and electrical and control system upgrades. Property acquisition may be required to accommodate construction and increased wetwell sizing. The odor control system will need to be implemented. Growth within the service area will need to be accommodated in the station sizing projections.

Design elements will need to include an evaluation of extending a gravity sewer line to Lift Station No. 3. Lift Station No. 3 is located under U.S. Highway 395 and is also in poor shape. The extension of a gravity line from Lift Station No. 6 to Lift Station No. 3 and a crossing under the Union Pacific Railroad tracks may be more cost effective than replacing both lift stations independently.

Project Justification:

Lift Station No. 6 is an older pump station built in approximately 1981 and, as such, the submersible duplex pump station has experienced corrosion on all metal elements and the physical concrete structure. The existing structure is 22 feet deep. The facility receives all discharges from the community pool and the wetwell's capacity is insufficient to accommodate sewage flows without excessive pump cycles. A larger wetwell will provide more time between pump cycles, simultaneously providing a buffer against overflows and system backups.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
S 13.0	Recycled Water Fund	\$620,000	2022-23
Total for Fiscal Year		\$620,000	



Project Number:	S 17.0
Project Name:	Recycled Water Treatment Plant Administrative Building Heating, Ventilation, and Air Conditioning Upgrades
Fund:	Recycled Water
Subcategory:	Treatment
Estimated Cost:	\$40,000
Actual Cost:	\$53,974.62*
Fiscal Year:	2018-19

*Included additional insulation work.

Project Description:

The project will include the installation of new heat pumps and a furnace and ducting to accommodate a new heating, ventilation, and air conditioning system in the administrative building at the recycled water treatment plant. Building modifications and electrical systems modifications may be required to accommodate the new equipment.

Project Justification:

Laboratory test procedures and compliance regulations escalate continuously. A new air conditioning system is needed to obtain and maintain certified compliance with existing and anticipated regulations.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
S 17.0	Recycled Water Fund	\$40,000	2018-19
Total for Fiscal Year		\$40,000	



Project Number:	S 19.0
Project Name:	Recycled Water Treatment Plant Biosolids Pond Dredging
Fund:	Recycled Water
Subcategory:	Disposal
Estimated Cost:	\$300,000 (Total Reserve Deposits) (plus inflation depending on project year)
Fiscal Year:	Undefined

Project Description:

The project will include the permitting, dredging, dewatering, and hauling of biosolids to a disposal facility. Work will include a pre-dredge survey of the lagoon to quantify the total volume of solids within the pond, chemical testing of the biosolids as required in the permits, and development of bid documents for the project. The Contractor is anticipated to be paid based on the volume of solids removed and the water content of the biosolids hauled to the disposal site to ensure adequate dewatering of the material is being completed.

Project Justification:

The biosolids handling equipment installed in 2018 reduces the total volume of suspended solids within the wastewater but does not eliminate it. Suspended solids will continue to settle out of the water within the lagoon but at a slower rate. Biosolids removal in the lagoon will need to be completed approximately every 20 years, based on current loading rates.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
S 19.0	Recycled Water Fund	\$50,000	Undefined
S 19.0	Recycled Water Fund	\$50,000	Undefined
S 19.0	Recycled Water Fund	\$50,000	Undefined
S 19.0	Recycled Water Fund	\$50,000	Undefined
S 19.0	Recycled Water Fund	\$50,000	Undefined
S 19.0	Recycled Water Fund	\$50,000	Undefined
Total for Fiscal Year		\$300,000	



Project Number:	S 20.0
Project Name:	Sanitary Sewer Collection System Study (SSCSS)
Fund:	Recycled Water
Subcategory:	Planning
Estimated Cost:	\$160,000
Actual Cost:	\$169,508
Fiscal Year:	2019-20 to 2020-21

Project Description:

The project will include a review of collection system plans, old reports, video records, staff interviews, and Geographic Information System records. The SSCSS will characterize the collection system, identify deficiencies, and prepare an implementation plan. Work will include a TV inspection, lift station evaluations, and a capacity analysis to assist in identifying problematic areas in the collection system. Findings will be summarized in the SSCSS, with cost estimates included for recommended improvements.

Project Justification:

The last collection system study was completed in 1997 and, since then, the population has increased by approximately 10,000 people. Periodic evaluations of the collection system allows the superintendent to identify and monitor trouble spots within the collection system, identify deficiencies, and effectively prioritize and plan collection system repairs and upgrades.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
S 20.0	Recycled Water Fund	\$160,000	2019-20 to 2020-21
Total for Fiscal Year		\$160,000	



Project Number:	S 21.0
Project Name:	Vactor Truck
Fund:	Recycled Water
Subcategory:	Vehicles/Equipment
Estimated Cost:	\$425,000
Actual Cost:	\$424,700
Fiscal Year:	2018-19

Project Description:

The Vactor truck will accommodate the primary cleaning of the sanitary sewer collection system. The Vactor truck will be set up on a Western Star 4700 chassis with tandem rear axle capable of supporting a minimum 1,300-gallon fresh water tank, a water pump capable of generating 3,000 pounds per square inch, 12-yard debris body with hydraulic door, dual-stage vacuum with 3/4-inch jet with 1,200 feet of hose on a 10-foot boom, with a cold weather recirculation system. The truck will have an electronic control and monitoring system mounted on the front hose reel, light bars, and aluminum wheels resistant to corrosion.

Project Justification:

The existing Vactor truck is nearing the end of its 10-year service life. The truck is used on a regular basis to maintain and clean the City's sanitary collection system and serves as a critical piece of equipment to resolve collection system blockages. The 2007 truck will remain in service as a backup unit, and the 1996 truck will be removed from inventory and surplused due to difficulties with storage and parts availability.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
S 21.0	Recycled Water Fund	\$425,000	2018-19
Total for Fiscal Year		\$425,000	



Project Number:	S 27.0
Project Name:	W. Juniper/W. Pine Avenue Gravity Sewer Line Replacement
Fund:	Recycled Water
Subcategory:	Collection
Estimated Cost:	\$480,000 (plus inflation depending on year constructed)
Fiscal Year:	Undefined

Project Description:

The project will include replacing 1,230 linear feet of existing sanitary sewer line located along W. Juniper Avenue and W. Pine Avenue (W9-2 to W1-5). Work will include installation of new polyvinyl chloride sewer pipe and new precast manholes to replace the piping on private property and yard and fence restoration and sewage bypass pumping to accommodate collection system improvements.

Project Justification:

The City identified these pipe segments as a high priority due to known root intrusions and defective laterals. The pipes to be replaced are located mid-block between residential lots. Because multiple laterals need to be replaced, it is recommended the pipe segments be replaced by conventional dig and replace methods.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
S 27.0	Recycled Water Fund	\$480,000	Undefined
Total for Fiscal Year		\$480,000	



Project Number:	S 28.0
Project Name:	S. 1st Street Gravity Sewer Line Replacement
Fund:	Recycled Water
Subcategory:	Collection
Estimated Cost:	\$130,000 (plus inflation depending on year constructed)
Fiscal Year:	Undefined

Project Description:

The project will include replacing 320 linear feet of existing sanitary sewer line located along S. 1st Street near the intersection of E. Highland Avenue (W15-89 to W15-72). Work will include installation of new polyvinyl chloride sewer pipe and new precast manholes to replace the piping within street right-of-way, including asphalt roadway and concrete restoration and sewage bypass pumping to accommodate collection system improvements.

Project Justification:

This existing section of pipeline is steel pipe. This material is susceptible to accelerated corrosion, which leads to pipe failure. The pipes to be replaced are within street right-of-way. It is recommended the pipe segments be replaced by conventional dig and replace methods.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
S 28.0	Recycled Water Fund	\$130,000	Undefined
Total for Fiscal Year		\$130,000	



Project Number:	S 29.0
Project Name:	E. Newport Avenue Gravity Sewer Line Improvements
Fund:	Recycled Water
Subcategory:	Collection
Estimated Cost:	\$130,000 (plus inflation depending on year constructed)
Fiscal Year:	Undefined

Project Description:

The project will include connecting to six existing sewer services lines, extending them to an existing 8-inch line running parallel, and abandoning the existing line in place (CO-56 to Manhole E13-148). Work will include installation of new polyvinyl chloride sewer service pipe within street right-of-way, including asphalt roadway and sewage bypass pumping to accommodate collection system improvements.

Project Justification:

This existing section of pipeline is vitrified clay pipe. This pipe is structurally compromised, exhibiting large cracks and missing sections of the pipe wall. Other deficiencies include protruding laterals, pipe sags, and failing joints. Therefore, it is recommended the pipe segment be abandoned in-place and existing sewer service connections be rerouted to the adjacent sewer line.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
S 29.0	Recycled Water Fund	\$130,000	Undefined
Total for Fiscal Year		\$130,000	



Project Number:	S 30.0
Project Name:	W. Madrona/W. Ridgeway Avenue Sewer Line Replacement
Fund:	Recycled Water
Subcategory:	Collection
Estimated Cost:	\$270,000 (plus inflation depending on year constructed)
Fiscal Year:	Undefined

Project Description:

The project will include replacing 510 linear feet of existing sanitary sewer line located along W. Madrona Avenue and W. Ridgeway Avenue (W9-39 to W9-24). Work will include installation of new polyvinyl chloride sewer pipe and new precast manholes to replace the piping on private property with yard and fence restoration and sewage bypass pumping to accommodate collection system improvements.

Project Justification:

The pipes at this location consist of two sections of 6-inch concrete pipe. Due to a horizontal bend in the pipe, television inspection is not possible. The sections of pipe successfully inspected in this area have pipe sags and spalls or holes in the pipe invert. Due to pipe size not meeting the minimum requirements according to Oregon Department of Environmental Quality standards, the deficiencies identified, and the access restrictions, it is recommended the pipe segment be replaced by conventional dig and replace methods.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
S 30.0	Recycled Water Fund	\$270,000	Undefined
Total for Fiscal Year		\$270,000	



Project Number:	S 31.0
Project Name:	N.E. 9th Street Gravity Sewer Line Replacement
Fund:	Recycled Water
Subcategory:	Collection
Estimated Cost:	\$180,000 (plus inflation depending on year constructed)
Fiscal Year:	Undefined

Project Description:

The project will include replacing 450 linear feet of existing sanitary sewer line located along N.E. 9th Street near the intersection of E. Main Street (CO-20 to W15-54). Work will include installation of new polyvinyl chloride sewer pipe and new precast manholes to replace the piping within street right-of-way, including asphalt roadway and concrete restoration and sewage bypass pumping to accommodate collection system improvements.

Project Justification:

Two sections of 8-inch cast iron pipe were installed at this location. The deficiencies include improperly installed service connections, pipe sags, and missing pipe lining exposing bare metal. The susceptibility to early corrosion issues led to its recommendation as a high priority.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
S 31.0	Recycled Water Fund	\$180,000	Undefined
Total for Fiscal Year		\$180,000	



Project Number:	S 32.0
Project Name:	S.E. 5th Street Gravity Sewer Line Replacement
Fund:	Recycled Water
Subcategory:	Collection
Estimated Cost:	\$165,000 (plus inflation depending on year constructed)
Fiscal Year:	Undefined

Project Description:

The project will include replacing 350 linear feet of existing sanitary sewer line located along S.E. 5th Street near the intersection of E. Hurlburt Avenue (W12-49 to W12-53). Work will include installation of new polyvinyl chloride sewer pipe and new precast manholes to replace the piping within street right-of-way, including asphalt roadway and concrete restoration and sewage bypass pumping to accommodate collection system improvements.

Project Justification:

This existing section of pipeline is vitrified clay pipe. Observed deficiencies include large pipe sags and offset joints. Other deficiencies are thought to exist in this line, but large pipe sags hindered visibility during the television inspection. Therefore, it is recommended the pipe segment be replaced with conventional dig and replace construction methods.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
S 32.0	Recycled Water Fund	\$165,000	Undefined
Total for Fiscal Year		\$165,000	



Project Number:	S 33.0
Project Name:	Lift Station No. 8 Electrical and Controls
Fund:	Recycled Water
Subcategory:	Collection
Estimated Cost:	\$340,000 (plus inflation depending on year constructed)
Fiscal Year:	Undefined

Project Description:

The project will install new electrical switchgear and controls to replace equipment that has reached the end of its service life.

Project Justification:

The electrical and pump controls at Lift Station No. 8 have surpassed their useful life and need to be updated to current industry standards. It is recommended that pumping volumes and pump run hours be monitored as development occurs in areas served by Lift Station No. 8 as pumping capacities will need to be increased to meet future demands.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
S 33.0	Recycled Water Fund	\$340,000	Undefined
Total for Fiscal Year		\$340,000	

Street Department Appendix

Projects in the "Street Department Appendix" are either completed or are proposed projects that are not included in the five-year Capital Improvements Plan (CIP) planning period. Any dates included with the projects in the "Street Department Appendix" section have not been approved by the City Council. These projects should be considered as supported by the City Council, pending adequate funding. Projects included in this list should be the first to be considered during updates to the five-year CIP, as well as for potential grant funding opportunities if they arise and do not compete for grant funds with projects listed in the current five-year CIP.

PROPOSED STREET CAPITAL IMPROVEMENT PROJECTS

Project No.*	Project Description	Cost Estimate
ST 7.0	Right-of-Way Acquisition	\$230,000
ST 8.0	N.W. June Avenue Improvements	\$190,000
ST 9.0	E. Highland Avenue and S. 1st Street Intersection Improvements	\$2,100,000
ST 10.0	W. Orchard Avenue and S. 1st Street Intersection Improvements	\$2,700,000
ST 11.1	E. Gettman Road Construction	\$2,800,000
ST 12.0	S.E. 10th Street Bridge Replacement	\$290,000
ST 13.0	N.W. 2nd Street Paving	\$210,000
ST 14.0	S.W. 17th Street Reconstruction	\$470,000
ST 15.0	N.E. 10th Street Reconstruction	\$3,100,000
ST 17.0	S.E. 7th and Main Street Roundabout	\$2,200,000
ST 18.0	Stormwater Lift Station No. 2 Reconstruction - Pumps	\$60,000
ST 19.0	Stormwater Lift Station No. 2 Reconstruction - Alarms	\$90,000
ST 20.0	Pedestrian Flashers	\$170,000
ST 23.0	W. Highland Avenue and S. 1st Street Intersection Improvements	\$2,100,000
ST 25.0	N.W. 2nd Street and W. Dogwood Avenue Paving	\$440,000
ST 27.0	S. 1st Street Intersection Alternatives Study	\$100,000

**Project numbers have no implication to priority.*

COMPLETED STREET CAPITAL IMPROVEMENT PROJECTS

Project No.	Project Description	Fiscal Year Completed
ST 1.0	S. 1st Street Bridge Replacement	2018-19
ST 1.1	Backhoe Loader	2019-20
ST 2.0	W. Hermiston Avenue Overlay	2018-19
ST 3.0	E. Theater Lane Construction	2019-20
ST 16.0	N.W. 3rd Street Paving	2022-23



Project Number:	ST 1.0
Project Name:	S. 1st Street Bridge Replacement
Fund:	Street
Subcategory:	
Estimated Cost:	\$200,000
Actual Cost:	\$318,611.69*
Fiscal Year:	2018-19

*Three primary factors contributed to the cost over-runs for this project. 1) The size and type of the project resulted in a low number of bids coming in higher than expected. 2) Underground utility conflicts created unanticipated challenges. 3) Extraordinary snowfall and cold temperatures in February and March 2019 caused a long delay just after work began. The final cost was \$118,000 more than the original estimate.

Project Description:

The project will replace and widen the bridge across the Maxwell Canal. Work will be completed when the irrigation canal is not actively flowing water to minimize construction coordination and installation issues. A new box culvert will be installed on a new foundation, the structure widened to facilitate matching existing roadway widths and a sidewalk extension across the structure, and existing guardrails will be replaced. Cost estimates are based on the bridge being closed to all traffic during construction to minimize conflicts.

Project Justification:

The bridge deck on S. 1st Street across Maxwell Canal is failing and needs to be repaired to safeguard public safety. The existing bridge deck has been cracking, and the increased maintenance costs are exceeding the costs associated with the replacement of the bridge deck. Widening of the structure to the right-of-way width will allow sidewalks to be extended across the structure. The project will improve the structural integrity of the roadway and prevent premature failure of the structure.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
ST 1.0	Street Fund	\$200,000	2018-19
Total for Fiscal Year		\$200,000	



Project Number:	W 2.0, S 1.0, ST 1.1
Project Name:	Backhoe Loader
Fund:	Water, Recycled Water, and Street
Subcategory:	Vehicles/Equipment
Estimated Cost:	\$30,000
Actual Cost:	
Fiscal Year:	2019-20

Project Description:

The new backhoe loader will be shared between the Water, Recycled Water, and Street Departments. The new backhoe loader should have the following features: minimum 110 horsepower engine with Tier 4 emission standards, four-wheel drive, dig depth of 15 feet, center-pivot hoe, auxiliary hydraulic line to front and rear buckets, hydraulic hoe thumb, 1.75-cubic yard loader bucket, heavy duty soil hoe bucket, fully enclosed cab, air conditioning, and quick release buckets. The backhoe loader will need to be capable of driving and carrying loads within the City. The 1994 backhoe loader should be surplus with the 1979 backhoe loader being utilized as a backup.

Project Justification:

The existing 1994 Case backhoe loader serves as the primary emergency unit to repair water line breaks. The backhoe loader has the following issues:

- The fuel tank is integrated into the frame and is problematic to repair, with \$5,000 invested to date.
- The design life is 5,000 hours, and it is currently at 4,000 hours.
- The transmission is not working correctly (estimated \$10,000 to repair). The dealer has advised the City not to use third and fourth gears.
- The brakes and other safety components are not working properly and are creating safety issues.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
W 2.0	Water Fund	\$90,000	2019-20
S 1.0	Recycled Water Fund	\$20,000	2019-20
ST 1.1	Street Fund	\$30,000	2019-20
Total for Fiscal Year		\$140,000	



Project Number:	ST 2.0
Project Name:	W. Hermiston Avenue Overlay
Fund:	Street
Subcategory:	
Estimated Cost:	\$490,000
Actual Cost:	\$615,348.91*
Fiscal Year:	2018-19

*The original project scope consisted of roadway resurfacing between N. 1st Place to N.W. 11th Street. However, the Public Infrastructure Committee and the City Council recognized that a storefront-to-storefront reconstruction was needed. This provided the City with the opportunity to replace the deteriorating sidewalks, add decorative lights, improve the storm sewer drainage, and relocate aerial utilities to underground. The final cost was \$125,000 above the original scope estimate.

Project Description:

The project will include resurfacing W. Hermiston Avenue from N. 1st Place to N.W. 11th Street. The project will grind the asphalt along the roadway as necessary to develop a smooth surface, restore surface drainage, and match critical roadway, sidewalk, doorway, and ramp elevations. Americans with Disabilities Act ramps within the project area will be upgraded to match current Americans with Disabilities Act standards. Work will restore centerline stripes and crosswalks and adjust all roadway monumentation and manholes/catch basins. Damaged sidewalks will be replaced. Work will be coordinated with City water and Recycled Water Departments and external utility providers to ensure all underground utility work is completed concurrently.

Project Justification:

W. Hermiston Avenue needs to be resurfaced to ensure the roadway subgrade is not damaged by water infiltration through the existing asphalt mat and that the roadway can support future traffic volumes. The existing roadway surface has both longitudinal/transverse cracking, and sidewalks have slopes and drop-offs that do not meet ADA standards. Roadway improvements are required to correct safety deficiencies, prevent the premature failure of the roadways, and meet the transportation needs of the community.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
ST 2.0	Street Fund	\$490,000	2018-19
Total for Fiscal Year		\$490,000	



Project Number:	ST 3.0
Project Name:	E. Theater Lane Construction
Fund:	Street
Subcategory:	
Estimated Cost:	\$630,000
Actual Cost:	\$474,570.25*
Fiscal Year:	2018-19 to 2019-20

*Substantial cost savings were realized on this project by partnering with private developers and by completing the work via Change Order during a non-CIP water system improvement project occurring in the same area.

Project Description:

The project will include installation of new asphalt roadway sections in those areas where the roadway is gravel between N.E. 8th and N.E. 10th Streets. Existing sidewalk ramps within the project area will be upgraded to match current ADA standards. Work will provide centerline stripes and crosswalks. New sidewalks will be installed by adjacent properties as development occurs. Work will need to be coordinated with City Water and Recycled Water Departments and external utility providers to ensure all underground utility work is completed concurrently.

Project Justification:

E. Theater Lane accesses undeveloped property that could support a new elementary school for the Hermiston School District. Sections of the existing roadway are gravel. If a school is developed in the area, frontage improvements will need to be included within the school's project costs.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
ST 3.0	Street Fund	\$45,000	2018-19
ST 3.0	Street Fund	\$585,000	2019-20
Total for Fiscal Year		\$630,000	



Project Number:	ST 7.0
Project Name:	Right-of-way Acquisition
Fund:	Street
Subcategory:	
Estimated Cost:	\$230,000 (plus inflation depending on year constructed)
Fiscal Year:	Undefined

Project Description:

The project will include acquisition of right-of-way along future roadway extensions within the City. The right-of-way will provide the City with the ability to fully develop a new roadway meeting design criteria with bike lanes and sidewalks in the future as development in the area continues. Work will need to include the required surveys, appraisals, and negotiations with the property owners necessary to secure the property.

Project Justification:

Narrow gravel roadways within the City with limited right-of-way will need to be improved to accommodate future traffic loading. These roadways traditionally evolve from their original rural nature and, as development extends, will be utilized as arterials.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
ST 7.0	Street Fund	\$230,000	Undefined
Total for Fiscal Year		\$230,000	



Project Number:	ST 8.0
Project Name:	N.W. June Avenue Improvements
Fund:	Street
Subcategory:	
Estimated Cost:	\$190,000 (plus inflation depending on year constructed)
Fiscal Year:	Undefined

Project Description:

The project will include development of a formal roadway on N.W. June Avenue from N.W. Spruce Street to N. 1st Street. The project will include roadway grading; storm drainage; installation of curb, gutter, and sidewalk; and asphalt pavement. Work will include installation of crosswalks and development of roadway monumentation.

Project Justification:

N.W. June Avenue, from N.W. Spruce Street to N. 1st Street lacks a formal roadway, and curb returns were installed when N. 1st Street was improved, creating formal definition for the roadway along N. 1st Street. The existing roadway surface is gravel, has no sidewalks, and has unrestricted access to the roadway from parking areas. Roadway improvements are required to prevent the premature failure of the roadway, minimize safety issues, and ensure the roadway is functional for the community and businesses in the area.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
ST 8.0	Street Fund	\$190,000	Undefined
Total for Fiscal Year		\$190,000	



Project Number:	ST 9.0
Project Name:	E. Highland Avenue and S. 1st Street Intersection Improvements
Fund:	Street and State Grant
Subcategory:	
Estimated Cost:	\$2,100,000 (plus inflation depending on year constructed)
Fiscal Year:	Undefined

Project Description:

This project will develop traffic control improvements to the E. Highland Avenue and S. 1st Street intersection. An intersection analysis will be completed that will evaluate improvements to the intersection to improve pedestrian movements that may include either a traffic roundabout, relocation of pedestrian crossing locations, or full signalization of the intersection. Improvements will be designed to accommodate pedestrian movements, left turn movements, and traffic volumes and may include new sidewalks, pavement modifications, drainage improvements, and/or signal systems.

Project Justification:

The E. Highland Avenue and S. 1st Street intersection is a major intersection with high traffic volumes. Hermiston High School is also located in the northwest corner of the intersection. The four-way stop-controlled intersection does not have any signalization or pedestrian control systems. Safety and traffic control improvements are warranted.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
ST 9.0	Street Fund	\$2,100,000	Undefined
Total for Fiscal Year		\$190,000	



Project Number:	ST 10.0
Project Name:	W. Orchard Avenue and S. 1st Street Intersection Improvements
Fund:	Street and State Grant
Subcategory:	
Estimated Cost:	\$2,700,000 (plus inflation depending on year constructed)
Fiscal Year:	Undefined

Project Description:

The project will develop intersection and roadway improvements to the W. Orchard Avenue and S. 1st Street intersection. Improvements will be designed to accommodate left turn movements, the short distance between the intersection and the Union Pacific Railroad tracks, traffic volumes, and pedestrian movements. Work may include new sidewalks, pavement modifications, drainage improvements, and/or signal systems.

Project Justification:

The W. Orchard Avenue and S. 1st Street intersection is a major intersection with high traffic volumes and difficult transition angles between the Union Pacific Railroad tracks, and U.S. Highway 395. The Orchard Avenue and S. 1st Street intersection needs to be realigned to minimize conflicts between vehicles, trucks, trains, and pedestrians. Safety and traffic control improvements are warranted.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
ST 10.0	Street Fund and State Grant	\$2,700,000	Undefined
Total for Fiscal Year		\$2,700,000	



Project Number:	ST 11.0
Project Name:	W. Gettman Road Construction (Highway 207 to S. 1st Street)
Fund:	Street
Subcategory:	
Estimated Cost:	\$2,800,000 (plus inflation depending on year constructed)
Fiscal Year:	Undefined

Project Description:

The project will include developing W. Gettman Road from Highway 207 to S. 1st Street (approximately 5,250 feet). The project will develop a new City street over the existing gravel roadway and will reconstruct portions of paved roadways not built to City standards. Curb, gutter, and sidewalks will not be included in the project, as they will be included as part of development projects in the area when they occur. The roadway will ultimately be developed as an urban minor collector with sidewalks and bike lanes in accordance with the City's 1999 Transportation System Plan. The Union Pacific Railroad track crossing will need to be improved along with a crossing of the Maxwell Canal. Work will need to be coordinated with City Water and Recycled Water Departments and external utility providers to ensure all underground utility work is completed concurrently.

Project Justification:

W. Gettman Road is a narrow gravel roadway, with limited right-of-way, located on the south edge of the City. Sections of the roadway near housing developments have been upgraded to include pavement. The roadway is evolving from its original rural nature and, as development extends, is being utilized as an east-to-west collector.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
ST 11.0	Street Fund	\$2,800,000	Undefined
Total for Fiscal Year		\$2,800,000	



Project Number:	ST 11.1
Project Name:	E. Gettman Road Construction (S. 1st Street to U.S. Highway 395)
Fund:	Street
Subcategory:	
Estimated Cost:	\$2,800,000 (plus inflation depending on year constructed)
Fiscal Year:	Undefined

Project Description:

The project will include developing E. Gettman Road from S. 1st Street to U.S. Highway 395 (approximately 3,850 feet). The project will construct a new roadway and will include crossing the "A" Line Canal by installing a concrete bottomless box culvert. Curb, gutter, and sidewalks will not be included in the project, as they will be included as part of development projects in the area when they occur. The roadway will ultimately be developed as an Urban Minor Collector with sidewalks and bike lanes in accordance with the City's 1999 Transportation System Plan. Work will need to be coordinated with City Water and Recycled Water Departments and external utility providers to ensure all underground utility work is completed concurrently. Right-of-way acquisition will be required and is included in the preliminary cost estimate.

Project Justification:

The south end of the City continues to develop and, with the construction of Armand Larive Middle School, the traffic volume along W. Gettman Road and S. 1st Street has increased significantly. Development of E. Gettman Road between S. 1st Street and U.S. Highway 395 will take some traffic off local streets and provide a good east-to-west collector for this developing area.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
ST 11.1	Street Fund	\$2,800,000	Undefined
Total for Fiscal Year		\$2,800,000	



Project Number:	ST 12.0
Project Name:	S.E. 10th Street Bridge Replacement
Fund:	Street
Subcategory:	
Estimated Cost:	\$290,000 (plus inflation depending on year constructed)
Fiscal Year:	Undefined

Project Description:

The project will replace and widen the bridge structure across the A Line Canal. Work will be completed when the irrigation canal is not flowing water to minimize construction coordination and installation issues. A new box culvert will be installed on a new foundation, the structure will be widened to accommodate two lanes of traffic, there will be an addition of a future sidewalk extension across the structure, and existing guardrails will be replaced. The existing gas line will need to be accommodated during the design process. Cost estimates are based on the bridge being closed to all traffic to streamline construction. Right-of-way acquisition is required and is included in the preliminary cost estimate.

Project Justification:

To ensure public safety, the bridge deck on the S.E. 10th Street box culvert across the A Line Canal is a single-lane bridge and does not accommodate pedestrian movements. In addition to the new box culvert, widening the structure will provide for two lanes of traffic, accommodate sidewalks, and improve its structural integrity.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
ST 12.0	Street Fund	\$290,000	Undefined
Total for Fiscal Year		\$290,000	



Project Number:	ST 13.0
Project Name:	N.W. 2nd Street Paving
Fund:	Street
Subcategory:	
Estimated Cost:	\$210,000 (plus inflation depending on year constructed)
Fiscal Year:	Undefined

Project Description:

The project will pave N.W. 2nd Street from W. Elm Avenue extending south to W. Dogwood Avenue (approximately 250 feet). The project includes roadway grading and development of a storm drainage system and asphalt pavement. Installation of centerline stripes and crosswalks and development of roadway monumentation may be included in the project.

Project Justification:

N.W. 2nd Street from W. Elm Avenue extending south to W. Dogwood Avenue is a gravel roadway. The existing roadway has no sidewalks and has unrestricted access to the roadway from parking areas and open areas in the immediate vicinity of the roadway. Roadway improvements are required to minimize maintenance activities, handle increased traffic volumes, minimize pedestrian safety issues, and ensure the roadway is functional for the community and business development.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
ST 13.0	Street Fund	\$210,000	Undefined
Total for Fiscal Year		\$210,000	



Project Number:	ST 14.0
Project Name:	S.W. 17th Street Reconstruction
Fund:	Street
Subcategory:	
Estimated Cost:	\$470,000 (plus inflation depending on year constructed)
Fiscal Year:	Undefined

Project Description:

The City is considering taking a proactive approach to the redevelopment of S.W. 17th Street beginning at Highland Avenue and extending south to 16th Place, as it is currently in the County but will be annexed into the City in the future. Asphalt surfaces will be ground and repaved, with missing sidewalk areas infilled to improve pedestrian safety. Americans with Disabilities Act ramps within the project area will be upgraded to match current Americans with Disabilities Act standards. Work will restore centerline stripes and crosswalks and adjust all roadway monumentation and manholes/catch basins. Work will need to be coordinated with the County, City Water and Recycled Water Departments, and external utility providers to ensure all underground utility work is completed concurrently. Right-of-way may be required to complete all improvements.

Project Justification:

S.W. 17th Street is currently in the County and needs to be reconstructed to improve pedestrian safety through installation of sidewalks and prevent premature subgrade failure due to water intrusion through roadway cracks. The lack of sidewalks has also allowed uncontrolled roadway access from property along the roadway creating sight distance issues. Repairs will meet the needs of the community to improve pedestrian and traffic safety elements.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
ST 14.0	Street Fund	\$470,000	Undefined
Total for Fiscal Year		\$470,000	



Project Number:	ST 15.0
Project Name:	N.E. 10th Street Reconstruction
Fund:	Street
Subcategory:	
Estimated Cost:	\$3,100,000 (plus inflation depending on year constructed)
Fiscal Year:	Undefined

Project Description:

The project will include paving N.E. 10th Street from Diagonal Road extending north to E. Elm Avenue (approximately 1,650 feet). The project will include roadway grading and development of a storm drainage system and asphalt pavement. The installation of centerline stripes and crosswalks and development of roadway monumentation may be included in the project.

Project Justification:

N.E. 10th Street from Diagonal Road extending north to E. Elm Avenue is a paved roadway. The existing roadway has no sidewalks and has unrestricted access to the roadway from parking areas and open areas in the immediate vicinity of the roadway. Roadway improvements are required to minimize maintenance activities, handle increased traffic volumes, minimize pedestrian safety issues, and ensure the roadway is functional for the community and the school located in the immediate vicinity.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
ST 15.0	Street Fund	\$3,100,000	Undefined
Total for Fiscal Year		\$3,100,000	



Project Number:	ST 16.0
Project Name:	N.W. 3rd Street Paving
Fund:	Street
Subcategory:	
Estimated Cost:	\$280,000 (plus inflation depending on year constructed)
Actual Cost:	\$159,977*
Fiscal Year:	Undefined

*The project did not include any curb or gutter and sidewalk; therefore, no storm drain improvements were required.

Project Description:

The project will include paving N.W. 3rd Street from W. Marie Avenue extending south to the termination of the existing gravel roadway (approximately 800 feet). The project includes roadway grading and development of a storm drainage system and asphalt pavement. Installation of centerline stripes and crosswalks and development of roadway monumentation may be included in the project.

Project Justification:

N.W. 3rd Street from W. Marie Avenue extending south to the termination of the existing gravel roadway lacks a formal roadway and asphalt. The existing roadway surface is gravel, has no sidewalks, and has unrestricted access to the roadway from parking areas and open areas in the immediate vicinity. Roadway improvements are required to prevent premature failure of the roadway, minimize safety issues, and ensure the roadway is functional for the community and businesses in the area.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
ST 16.0	Street Fund	\$280,000	Undefined
Total for Fiscal Year		\$280,000	



Project Number:	ST 17.0
Project Name:	S.E. 7th and Main Street Roundabout
Fund:	Street
Subcategory:	
Estimated Cost:	\$2,200,000 (plus inflation depending on year constructed)
Fiscal Year:	Undefined

Project Description:

The proposed roundabout will need to be designed to integrate into the existing right-of-way, accept existing roadway angles, and facilitate vehicle movement through the intersection. Preliminary stages of the project will need to include public open houses, evaluation of turning movements for vehicles utilizing the intersection, review of options for landscaping the center island, evaluation of existing utility impacts, and development of pedestrian movement routes.

Project Justification:

The S.E. 7th Street and Main Street intersection is a five-way intersection with Main Street being uncontrolled for vehicle movements and the other three legs having stop control. Roundabouts have been successfully integrated into communities to reduce traffic congestion and improve safety. The roundabout gives vehicles in the circular travel way the right-of-way, the impact area is relatively small, and the layout allows multiple roadways to reduce the number of vehicle/pedestrian conflicts.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
ST 17.0	Street Fund	\$2,200,000	Undefined
Total for Fiscal Year		\$2,200,000	



Project Number:	ST 18.0
Project Name:	Stormwater Lift Station No. 2 Reconstruction - Pumps
Fund:	Street
Subcategory:	Stormwater
Estimated Cost:	\$60,000 (plus inflation depending on year constructed)
Fiscal Year:	Undefined

Project Description:

The project will include the installation of duplex pumps. Engineering and construction engineering services will also be included in the project.

Project Justification:

Stormwater Lift Station No. 2 is an older pump station built in approximately 1981, located near the intersection of Catherine and 4th Streets. The existing submersible duplex pumps and electrical systems need to be replaced due to their age and the City’s inability to get replacement parts.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
ST 18.0	Street Fund	\$60,000	Undefined
Total for Fiscal Year		\$60,000	



Project Number:	ST 19.0
Project Name:	Stormwater Lift Station No. 2 Reconstruction – Alarms
Fund:	Street
Subcategory:	Stormwater
Estimated Cost:	\$90,000 (plus inflation depending on year constructed)
Fiscal Year:	Undefined

Project Description:

The project will include electrical and control system upgrades. Engineering and construction engineering services will also be included in the project.

Project Justification:

The stormwater Lift Station No. 2 alarms are not working as needed. Inactive alarms will not alert the operator that a stormwater problem has occurred. Overflows to the environment follow, creating traffic hazards.

Funding Data:			
Project No.	Fund Name	Amount	Fiscal Year
ST 19.0	Street Fund	\$90,000	Undefined
Total for Fiscal Year		\$90,000	



Project Number:	ST 20.0
Project Name:	Pedestrian Flashers
Fund:	Street
Subcategory:	Vehicles/Equipment
Estimated Cost:	\$170,000 (plus inflation depending on year constructed)
Fiscal Year:	Undefined

Project Description:

The project will install rectangular rapid flash beacons at strategic locations around the Hermiston High School. Rectangular rapid flash beacons may be solar-powered light-emitting diode signs capable of flashing patterns similar to emergency flashers. Work will also require installation of Americans with Disabilities ramps at the selected locations. The work will include the preparation of design engineering and construction engineering services.

Project Justification:

School student safety and associated traffic interaction require the use of upgraded safety signs and lights in and around the school premises.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
ST 20.0	Street Fund	\$170,000	Undefined
Total for Fiscal Year		\$170,000	



Project Number:	ST 23.0
Project Name:	W. Highland Avenue and S. 1st Street Intersection Improvements
Fund:	Street and State Grant
Subcategory:	
Estimated Cost:	\$2,100,000 (plus inflation depending on year constructed)
Fiscal Year:	Undefined

Project Description:

The project will develop traffic control improvements to the W. Highland Avenue and S. 1st Street intersection. Improvements will be designed to accommodate pedestrian movements, left turn movements, and traffic volumes and may include new sidewalks, pavement modifications, drainage improvements, and/or signal systems.

Project Justification:

The W. Highland Avenue and S. 1st Street intersection is a major intersection with high traffic volumes. Hermiston High School is also located in the northwest corner of the intersection. The four-way stop-controlled intersection does not have any signalization or pedestrian control systems. Safety and traffic control improvements are warranted.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
ST 23.0	Street Fund and State Grant	\$2,100,000	Undefined
Total for Fiscal Year		\$2,100,000	



Project Number:	ST 25.0
Project Name:	N.W. 2nd Street and W. Dogwood Avenue Paving
Fund:	Street
Subcategory:	
Estimated Cost:	\$440,000 (plus inflation depending on year constructed)
Fiscal Year:	Undefined

Project Description:

The project will pave N.W. 2nd Street from W. Elm Avenue extending south to W. Dogwood Avenue (approximately 600 feet). The project includes roadway grading and development of a storm drainage system and asphalt pavement. Installation of centerline stripes and crosswalks and development of roadway monumentation may be included in the project.

Project Justification:

N.W. 2nd Street from W. Elm Avenue extending south to W. Dogwood Avenue is a gravel roadway. The existing roadway has no sidewalks and has unrestricted access to the roadway from parking areas and open areas in the immediate vicinity of the roadway. Roadway improvements are required to minimize maintenance activities, handle increased traffic volumes, minimize pedestrian safety issues, and ensure the roadway is functional for the community and business development.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
ST 25.0	Street Fund	\$440,000	Undefined
Total for Fiscal Year		\$440,000	



Project Number:	ST 27.0
Project Name:	S. 1st Street Intersection Alternatives Study
Fund:	Street
Subcategory:	
Estimated Cost:	\$100,000 (plus inflation depending on year completed)
Fiscal Year:	Undefined

Project Description:

The project will develop intersection design alternatives and provide a recommendation for traffic control improvements to W. Highland Avenue and S. 1st Street and the W. Orchard Avenue and S. 1st Street intersections. The analysis will evaluate improvements to the intersection to improve pedestrian movements that may include either a traffic roundabout, relocation of pedestrian crossing locations, or full signalization of the intersection. Improvements will be designed to accommodate pedestrian movements, left turn movements, and traffic volumes and may include new sidewalks, pavement modifications, drainage improvements, and/or signal systems.

Project Justification:

The W. Highland Avenue and S. 1st Street intersection is a major intersection with high traffic volumes. Hermiston High School is also located in the northwest corner of the intersection. The four-way stop-controlled intersection does not have any signalization or pedestrian control systems. Safety and traffic control improvements are warranted. The W. Orchard Avenue and S. 1st Street intersection frequently experiences performance issues related to the proximity of a signalized rail crossing and signalized intersection with Oregon Highway 395. This intersection also experiences a high volume of emergency response vehicles due to the proximity of the police and fire stations.

Funding Data:

Project No.	Fund Name	Amount	Fiscal Year
ST 27.0	Street Fund	\$100,000	Undefined
Total for Fiscal Year		\$100,000	