CAPITAL IMPROVEMENT PROGRAM

April 1, 2019

Fiscal Years 2019-2024

The Capital Improvement Program (CIP) is the implementation plan for identified software, City facilities, transportation, storm drainage, water, and wastewater projects. The CIP may change based on the community's needs, available budget, regulatory impacts, etc.

Capital Improvement Program

FISCAL YEARS 2019-2024

INTRODUCTION

The capital infrastructure needs within the five year CIP are identified through a variety of sources, including master plans, City Council goals, operational needs, and regulatory obligations. The City has completed the updates of the utility system master plans over the last several years to address the reduced growth and demand shown in the previous master plans. These plans show a variety of projects in all locations.

The City Council committed to providing well maintained streets to our citizens. Although, this work started in 2012, there is a substantial amount of road repair yet to be completed. The Transportation Utility Fee was adopted and implemented in 2017 to address this need. The City improved a significant number of road segments last summer and this trend will be continuing. As a part of the pavement program, the City will also be addressing the need for adequate utilities under the pavement. The need for sidewalks and ADA facilities within our public rights-of-way continue. There will be a renewed commitment to address those locations that will provide the greatest benefit (ie. Critical Routes noted in the 2007 ADA Pedestrian Bike Plan; School Routes).

The City continues to focus its efforts towards establishing a high quality and adequate potable water supply, storage, and distribution system. With the completion of the Water Master Plan, additional projects have been added to address system deficiencies over the next several years. The City's utility systems are vulnerable to damage resulting from a Cascadia Subduction Zone earthquake. There would be catastrophic impacts to systems throughout the City. Because of this, additional requirements have been added by the State to complete a seismic risk assessment and mitigation plan as a part of five year updates to the Water System Master Plans. We started that risk assessment in the 2017 Water Master Plan which identified the need for a redundant water supply and a more detailed analysis of the Water Treatment Plant and system. This analysis will provide recommendations to make our system more resilient.

As in the past a great portion of the focus of the wastewater program is to aggressively repair and/or replace inadequate portions of the wastewater system. Although costs to repair the aging wastewater collection system will be significant, it can no longer be postponed. Several projects were completed in the last several years and there has been a noticeable reduction in Inflow and Infiltration in those basins already. The City will continue upgrades to the Wastewater Treatment Plant with roofing repairs, rotor replacements, structural repairs to the existing oxidation ditches, remodel of the office building and studies addressing the capacity of the plant.

The Public Works Engineering Division works closely with Public Works Operations and Maintenance Divisions to complete the identified projects on an annual basis. The fiscal year 2019-2020 Capital Improvement Program implements the planning, design, and construction of the capital infrastructure needs of the City by prioritizing projects based on an analysis of the master plans and other studies in combination with the availability of funding. The scheduled projects in the years beyond FY 2019-2020 are not intended to be a spending commitment, but are included to show a proposed plan for the projects that are considered to be a priority at this particular snapshot in time.

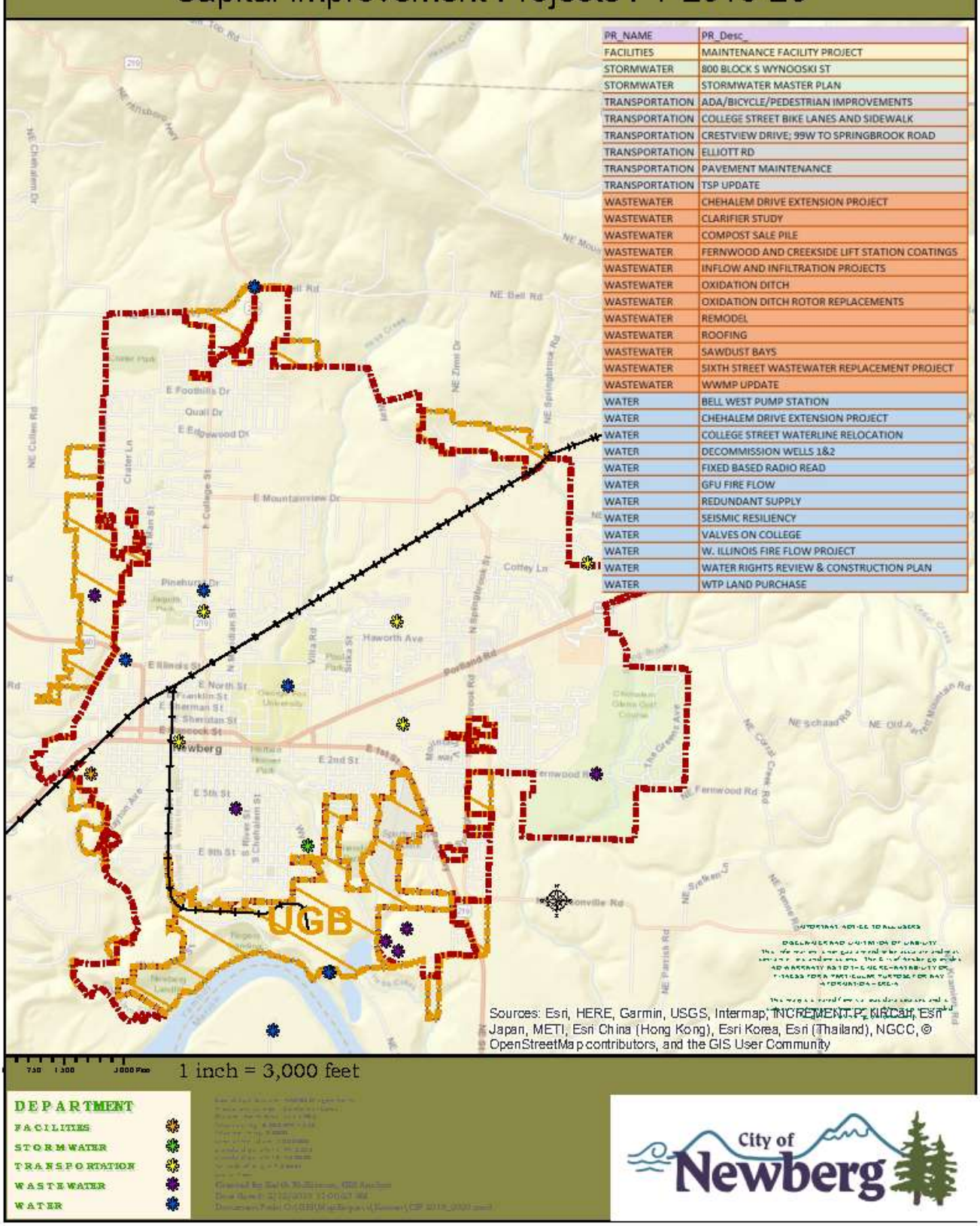
There are a couple of changes to the program since last year:

- The costs noted are costs that have an inflation factor of 3% per year added.
- The projects that have multiple funding sources/elements have been combined into one project sheet and are now shown in the Multi-Funded Project section.
- Future years are years beyond 2023/2024.

A map of the Capital Improvement Projects for FY 2019-2020 is shown on the following page.

Capital Improvement Projects FY 2019-20

PR_NAME	PR_Desc_
FACILITIES	MAINTENANCE FACILITY PROJECT
STORMWATER	800 BLOCK S WYNOOSKI ST
STORMWATER	STORMWATER MASTER PLAN
TRANSPORTATION	ADA/BICYCLE/PEDESTRIAN IMPROVEMENTS
TRANSPORTATION	COLLEGE STREET BIKE LANES AND SIDEWALK
TRANSPORTATION	CRESTVIEW DRIVE; 99W TO SPRINGBROOK ROAD
TRANSPORTATION	ELLIOTT RD
TRANSPORTATION	PAVEMENT MAINTENANCE
TRANSPORTATION	TSP UPDATE
WASTEWATER	CHEHALEM DRIVE EXTENSION PROJECT
WASTEWATER	CLARIFIER STUDY
WASTEWATER	COMPOST SALE PILE
WASTEWATER	FERNWOOD AND CREEKSIDE LIFT STATION COATINGS
WASTEWATER	INFLOW AND INFILTRATION PROJECTS
WASTEWATER	OXIDATION DITCH
WASTEWATER	OXIDATION DITCH ROTOR REPLACEMENTS
WASTEWATER	REMODEL
WASTEWATER	ROOFING
WASTEWATER	SAWDUST BAYS
WASTEWATER	SIXTH STREET WASTEWATER REPLACEMENT PROJECT
WASTEWATER	WWMP UPDATE
WATER	BELL WEST PUMP STATION
WATER	CHEHALEM DRIVE EXTENSION PROJECT
WATER	COLLEGE STREET WATERLINE RELOCATION
WATER	DECOMMISSION WELLS 1&2
WATER	FIXED BASED RADIO READ
WATER	GFU FIRE FLOW
WATER	REDUNDANT SUPPLY
WATER	SEISMIC RESILIENCY
WATER	VALVES ON COLLEGE
WATER	W. ILLINOIS FIRE FLOW PROJECT
WATER	WATER RIGHTS REVIEW & CONSTRUCTION PLAN
WATER	WTP LAND PURCHASE



Multi – Funded Projects

The following project summary sheets were developed from a variety of sources. The projects affect all of the enterprise funds and include things like improvements to facilities and major software purchases. This section also includes infrastructure projects that have funding from multiple utilities.

Multi – Funded Project

Maintenance Facility Project

PROJECT SUMMARY SHEET

Fiscal Year	Costs	Criteria Met:	
2019/2020	$85,000	☒	Safety/Liability
		☐	Council Goals
2020/2024	$2,160,000	☒	Maintenance
		☐	Required per Regulation
Future Years	N/A	☐	Coordinates with Larger Project
		☒	Existing Capacity
Project Total	*$2,245,000*	☒	Cost Reduction
		☒	Future Capacity

PROJECT DESCRIPTION:

A master plan has been completed on what the newly expanded maintenance yard could look like. The proposed improvements for next fiscal year include consultant services. The rest of the improvements include major site work, fleet building and eventually a new administration building. A fully functional maintenance facility is critical to serve the existing and long term day to day needs of the City and to adequately respond to natural disasters with the needed man power and equipment.

PROPOSED FUNDING SOURCES:

The project is to be funded by utility funds, and system development charges.

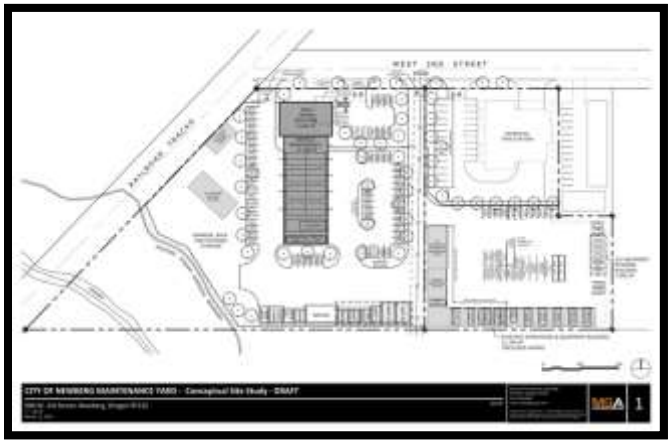


FIGURE 1 CONCEPTUAL PUBIC WORKS MAINTENANCE YARD PLAN

Multi – Funded Project

N College Street Bike Lanes and Sidewalks/Waterline Relocation/Additional Valves

PROJECT SUMMARY SHEET

Fiscal Year	Costs	Criteria Met:	
2019/2020	$616,000	☒	Safety/Liability
		☒	Council Goals
2020/2024	N/A	☐	Maintenance
		☐	Required per Regulation
Future Years	N/A	☒	Coordinates with Larger Project
		☒	Existing Capacity
Project Total	*$616,000*	☐	Cost Reduction
		☒	Future Capacity

PROJECT DESCRIPTION:

The 2007 ADA/Pedestrian/Bike Route Improvement Plan identified the project as a primary critical pedestrian and bikeway route. The incomplete sidewalk connections are unsafe as it forces pedestrians onto the roadway shoulders. This project will be a continuation of the project that was completed 4 years ago. The City has entered into an Intergovernmental Agreement with ODOT on this project. Design and right-of-way acquisition will be underway soon.

As a part of this project the City's existing water line will need to be lowered as it is too shallow. This work is scheduled to begin soon and will be coordinated with the waterline valve project. The waterline project will utilize ODOT's topographic survey. One of the reasons for the massive amount of flooding in 2014 when the waterline in College Street broke was the lack of valves on the existing line to shut the flow of water off. This project would add valves in strategic locations to minimize future problems.

PROPOSED FUNDING SOURCES:

The project will be funded by ODOT Surface Transportation Project Fund (STP), gas tax revenues, and water monthly rates.

FIGURE 2 LOOKING NORTH ON COLLEGE STREET

Multi – Funded Project

E Crestview Drive; 99W to Springbrook Road

PROJECT SUMMARY SHEET

Fiscal Year	Costs	Criteria Met:	
2019/2020	$3,218,900	☒	Safety/Liability
		☒	Council Goals
2020/2024	N/A	☒	Maintenance
		☐	Required per Regulation
Future Years	N/A	☒	Coordinates with Larger Project
		☒	Existing Capacity
Project Total	*$3,218,900*	☐	Cost Reduction
		☒	Future Capacity

PROJECT DESCRIPTION:

E Crestview Drive is an important transportation link to the north portion of the City. It will connect 99W at Providence Drive to N Springbrook Road. The two sections on either end of the alignment have not been constructed. The City's portion of the improvement replaces the gravel roadway & substandard pavement and will include curbs, gutters, bike lanes and sidewalks from the City Limits to N Springbrook Road.

It makes sense that the utilities will be installed at the same time. This will construct approximately 2900' of wastewater pipe in E Crestview Drive. This will construct approximately 3000' of non-potable water pipe in E Crestview Drive along with improvements at Otis Springs to advance the non-potable water plan. These improvements along with the installation of pipe by developers will allow for non-potable water to be used in the north area of the City. This will construct approximately 700' of water pipe in E Crestview Drive.

PROPOSED FUNDING SOURCES:

The transportation system development charges fund will contribute $1,100,000.00, the state will contribute $740,000.00, and the balance of the roadway will be funded by Springbrook Properties and JT Smith's Crestview Crossing Planned Unit Development. The water and wastewater lines will be funded by monthly utility rates and system development charges.

FIGURE 3 CRESTVIEW DRIVE LOOKING EAST

Multi – Funded Project

N Elliott Road; 99W to Newberg High School

PROJECT SUMMARY SHEET

Fiscal Year	Costs	Criteria Met:	
2019/2020	$1,095,675	☒	Safety/Liability
		☒	Council Goals
2020/2024	$1,023,000	☒	Maintenance
		☐	Required per Regulation
Future Years	N/A	☐	Coordinates with Larger Project
		☒	Existing Capacity
Project Total	*$2,118,675*	☐	Cost Reduction
		☒	Future Capacity

PROJECT DESCRIPTION:

The Transportation System Plan has identified this project as a high priority as it provides direct access to the high school. This project will construct full street improvements to include sidewalks and bike lanes. It will also include storm drainage improvements and street lighting.

PROPOSED FUNDING SOURCES:

The project will be funded by gas tax revenues, stormwater monthly fees and system development charges.

FIGURE 4 LOOKING SOUTH ON ELLIOTT ROAD

Multi-Funded Project

N Springbrook Road

POJECT SUMMARY SHEET

Fiscal Year	Costs	Criteria Met:	
2021/2022	$225,000	☒	Safety/Liability
		☐	Council Goals
2022/2024	$2,163,500	☐	Maintenance
		☐	Required per Regulation
Future Years	N/A	☐	Coordinates with Larger Project
		☒	Existing Capacity
Project Total	*$2,388,500*	☐	Cost Reduction
		☒	Future Capacity

PROJECT DESCRIPTION:

This project will provide sidewalks and bike lanes north of 99W. It will also install a signal at the intersection of E Haworth and N Springbrook Road. This project will also install storm drainage.

PROPOSED FUNDING SOURCES:

This project will be funded by gas taxes, stormwater monthly fees and transportation system development charges.

FIGURE 5 INTERSECTION OF SPRINGBROOK AND HAWORTH

Multi-Funded Project

NE Chehalem Drive Water & Wastewater Extension Project

PROJECT SUMMARY SHEET

Fiscal Year	Costs	Criteria Met:	
2019/2020	$1,552,000	☐	Safety/Liability
		☐	Council Goals
2020/2024	N/A	☐	Maintenance
		☐	Required per Regulation
Future Years	N/A	☒	Coordinates with Larger Project
		☐	Existing Capacity
Project Total	*$1,552,000*	☐	Cost Reduction
		☒	Future Capacity

PROJECT DESCRIPTION:

This project extends the public wastewater line from the existing terminus on the east side of Chehalem Creek in Hwy 240 to NE Chehalem Drive and then north in NE Chehalem Drive to just south of the intersection with E Columbia Drive.

This project (M-18) would extend the public water line from the existing terminus on the east side of Chehalem Creek in Hwy 240 to NE Chehalem Drive. The new waterline will connect with an existing waterline in NE Chehalem Drive south of Hwy 240. A future project (M-19) would extend the waterline in NE Chehalem Drive to E Columbia Drive.

There have been several development inquiries in this area and the wastewater and water line extensions would allow for orderly future development.

PROPOSED FUNDING SOURCES:

This will be paid for out of system development charges.

FIGURE 6 EXTENDING THE PUBLIC WASTEWATER LINE

Transportation Projects

The Transportation Program provides planning, engineering, and construction for improvements to the City's transportation systems that preserve existing infrastructure, increase roadway capacity, improve safety mobility and/or enhance neighborhood livability.

The funding sources for the roadway maintenance budget is the City's share of the state gas tax revenue and the transportation utility fee (TUF). A secondary funding source for roadway improvements is system development charges (SDC), and can only be used for new roadway construction, not maintenance projects.

The following project summary sheets were developed from the Transportation System Plan (TSP) and associated studies while considering the available funds from state gas tax revenue, surface transportation program (federal funds exchange), the TUF and SDC.

Transportation Program

ADA/Bicycle/Pedestrian Improvements

PROJECT SUMMARY SHEET

Fiscal Year	Costs	Criteria Met:	
2019/2020	$27,000	☒	Safety/Liability
		☒	Council Goals
2020/2024	$315,610	☐	Maintenance
		☒	Required per Regulation
Future Years	$35,000/year	☐	Coordinates with Larger Project
		☐	Existing Capacity
Project Total	*$382,000*	☐	Cost Reduction
		☐	Future Capacity

PROJECT DESCRIPTION:

City Council adopted the ADA/Pedestrian/Bike Plan in 2007. This plan was then incorporated into the Transportation System Plan. There have been over 86,000 feet of new sidewalks and over 200 new ADA ramps constructed since 2007.

Projects are selected based on the City's need and available funding for each fiscal year. Current utility maintenance projects include replacement or installation of ADA accessible barriers identified in the plan.

PROPOSED FUNDING SOURCES:

This project is funded by the gas taxes that the City receives from the State of Oregon. A portion (1%) of the gas tax the City receives must be spent on bicycle projects in the right-of-way. The funding is split in the budget between the street capital fund and the street maintenance fund.

FIGURE 7 CURB RAMP NEEDED

Transportation Program

Pavement Preservation

PROJECT SUMMARY SHEET

Fiscal Year	Costs	Criteria Met:	
2019/2020	$1,700,000	☒	Safety/Liability
		☒	Council Goals
2020/2024	$6,151,150	☒	Maintenance
		☐	Required per Regulation
Future Years	$1,350,000/year	☐	Coordinates with Larger Project
		☐	Existing Capacity
Project Total	*$8,330,000*	☐	Cost Reduction
		☐	Future Capacity

PROJECT DESCRIPTION:

The Transportation Utility Fee (TUF) was implemented in the summer of FY17/18. The goal is to maintain the Pavement Condition Index of 73 over a ten year horizon. The pavement preservation projects proposed over the next five years are shown on the map below.

Prioritization of the projects in the five year plan was based on: existing pavement condition, functional classification, traffic volumes, neighborhood grouping, and proximity to schools, business districts, or civic corridors, subsurface utility conditions, treatment costs and funding amounts.

PROPOSED FUNDING SOURCES:

Anticipated TUF revenue is approximately $1,200,000 per year. Additional gas taxes are also utilized to implement the plan.

FIGURE 8 PAVEMENT PRESERVATION PROJECT MAP

Transportation Project

Update the Transportation System Plan

PROJECT SUMMARY SHEET

Fiscal Year	Costs	Criteria Met:	
2019/2020	$50,000	☐	Safety/Liability
		☐	Council Goals
2021/2024	N/A	☐	Maintenance
		☒	Required per Regulation
Future Years	N/A	☐	Coordinates with Larger Project
		☒	Existing Capacity
Project Total	*$50,000*	☐	Cost Reduction
		☒	Future Capacity

PROJECT DESCRIPTION:

As the Riverfront Master Plan is adopted, the recommendations from that plan will need to be incorporated into the existing Transportation System Plan.

PROPOSED FUNDING SOURCES:

Gas tax revenue and system development charges.

FIGURE 9 TRANSPORTATION SYSTEM PLAN

Transportation Project

N Main Street/E Illinois Street Intersection Study

PROJECT SUMMARY SHEET

Fiscal Year	Costs	Criteria Met:	
2020/2021	$500,000	☒	Safety/Liability
		☒	Council Goals
2021/2024	N/A	☐	Maintenance
		☐	Required per Regulation
Future Years	N/A	☐	Coordinates with Larger Project
		☒	Existing Capacity
Project Total	*$500,000*	☐	Cost Reduction
		☒	Future Capacity

PROJECT DESCRIPTION:

This is project I14 in the Transportation System Plan. This project would perform a special study to determine the appropriate intersection improvements to address safety and mobility needs. Realignment of the intersection may be required.

PROPOSED FUNDING SOURCES:

Gas tax revenue and system development charges.

FIGURE 10 N MAIN INTERSECTION AT ILLINOIS STREET

Transportation Project

N Main Street Collector

PROJECT SUMMARY SHEET

Fiscal Year	Costs	Criteria Met:	
2023/2024	$600,000	☒	Safety/Liability
		☒	Council Goals
		☐	Maintenance
		☐	Required per Regulation
Future Years	$750,000	☐	Coordinates with Larger Project
		☒	Existing Capacity
Project Total	*$1,350,000*	☐	Cost Reduction
		☒	Future Capacity

PROJECT DESCRIPTION:

This is project S12 in the Transportation System Plan. This project would construct N Main Street to collector standards including sidewalks and bikelanes.

PROPOSED FUNDING SOURCES:

Gas tax revenue and system development charges.

FIGURE 11 N MAIN STREET

Stormwater Projects

The Stormwater Program provides planning, design and construction of improvements for the City's public storm drainage system. This program includes the conveyance system, water quality, and stormwater detention systems.

The 2014 Drainage Master Plan Update is used to plan for improvements to the overall City storm drainage system. This plan will be updated in FY 2019-2020. Funding for the stormwater program is provided through stormwater utility rates and system development charges.

Stormwater Program

S Blaine Street; E Hancock to E Eleventh Street

PROJECT SUMMARY SHEET

Fiscal Year	Costs	Criteria Met:	
2022/2023	$395,000	☒	Safety/Liability
		☐	Council Goals
2023/2024	$695,000	☒	Maintenance
		☒	Required per Regulation
Future Years	N/A	☐	Coordinates with Larger Project
		☒	Existing Capacity
Project Total	*$1,090,000*	☒	Cost Reduction
		☐	Future Capacity

PROJECT DESCRIPTION:

Flooding occurs in the system during the 10 year storm event including S Second Street, Howard Street and at E Sixth Street and S Blaine Street. Large segments of the existing pipe are constructed of corrugated metal and are near end of life. The project will decommission the existing stormwater pipes (shown in green below) and construct a new 24" stormwater mainline (shown in red) along S Blaine and E Second Streets. Sections of the existing piping system will also be upsized to convey existing and future flows (shown in gold). This project will also include the storm system adjacent to 99W and the Second Street Parking Lot.

Due to funding constraints, the project is scheduled to be constructed in phases over several fiscal years. The first two phases of construction are complete.

PROPOSED FUNDING SOURCES:

This project is funded by the stormwater utility fee and a small amount of system development charges.

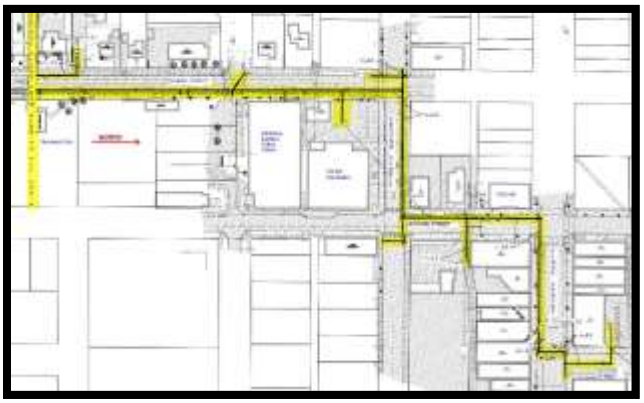


FIGURE 12 STORMWATER UTILITY LINES

Stormwater Program

800 Block of NE Wynooski Street

PROJECT SUMMARY SHEET

Fiscal Year	Costs	Criteria Met:	
2019/2020	$90,000	☒	Safety/Liability
		☐	Council Goals
2020/2024	N/A	☒	Maintenance
		☐	Required per Regulation
Future Years	N/A	☐	Coordinates with Larger Project
		☐	Existing Capacity
Project Total	*$90,000*	☐	Cost Reduction
		☐	Future Capacity

PROJECT DESCRIPTION:

The current pipe and outfall have severely eroded the area east of NE Wynooski Street. This project would extend the outfall further down the slope to reduce erosion.

PROPOSED FUNDING SOURCES:

This project will be paid for out of utility rates.

FIGURE 13 CURRENT PIPE AND OUTFALL

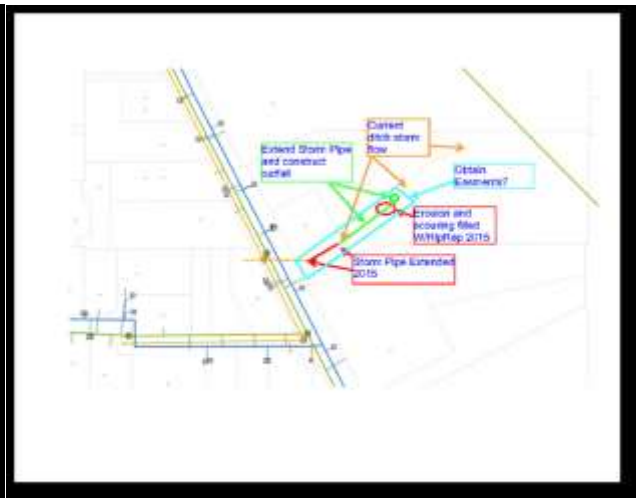


FIGURE 14 PROPOSED PLAN

Stormwater Project

Update the Stormwater Master Plan

PROJECT SUMMARY SHEET

Fiscal Year	Costs	Criteria Met:	
2019/2020	$100,000	☐	Safety/Liability
		☐	Council Goals
2020/2024	N/A	☐	Maintenance
		☒	Required per Regulation
Future Years	N/A	☐	Coordinates with Larger Project
		☒	Existing Capacity
Project Total	*$100,000*	☐	Cost Reduction
		☒	Future Capacity

PROJECT DESCRIPTION:

As the Riverfront Master Plan is developed, the recommendations from the adopted plan will need to be incorporated into the Stormwater Master Plan. Additionally, the existing Stormwater Master Plan was adopted in 2014, Ordinance indicates that it should be updated not less than every 5 years.

PROPOSED FUNDING SOURCES:

This project will be paid for by the stormwater rate revenue.

FIGURE 15 STORMWATER MASTER PLAN

Wastewater Projects

The Wastewater Program provides planning, design and construction of improvements for the City's public wastewater utility system. This program area includes the lift stations, wastewater treatment plant, and wastewater collection and conveyance system.

The following project list was developed from the 2018 Wastewater Master Plan and other associated studies, while considering the available funds from the wastewater utility rates and system development charges.

Wastewater Program

Dehydration Unit Burner Rebuild

PROJECT SUMMARY SHEET

Fiscal Year	Costs	Criteria Met:	
2021/2022	$74,000	☐	Safety/Liability
		☐	Council Goals
2022/2024	N/A	☒	Maintenance
		☐	Required per Regulation
Future Years	N/A	☐	Coordinates with Larger Project
		☐	Existing Capacity
Project Total	*$74,000*	☐	Cost Reduction
		☐	Future Capacity

PROJECT DESCRIPTION:

The dehydration unit at the Waste Water Treatment Plant is used to dry sawdust for our composting process. The burner on the dehydration unit provides the heat for drying the sawdust, and typically runs around 1,400 degrees. The burner is a steel tower structure that is filled with fire brick on the inside to protect the steel from the high heat environment. The rebuild involves removing all the existing brick, stacking new brick and installing a coating over the top of it which reduces the erosion of the brick and extends the life. The Dehydration Unit went online in December 2009, the burner had to be rebuilt in 2012 as it did not originally include protective coating. Based upon the most recent inspection in 2018, it is still in good condition.

PROPOSED FUNDING SOURCES:

This project will be paid by the wastewater rate revenue.

FIGURE 16 DEHYDRATION UNIT BURNER BEFORE AND AFTER CONDITION

Wastewater Program

Oxidation Ditch Rotor Replacements

PROJECT SUMMARY SHEET

Fiscal Year	Costs	Criteria Met:	
2019/2020	$85,000	☒	Safety/Liability
		☐	Council Goals
2020/2024	N/A	☒	Maintenance
		☐	Required per Regulation
Future Years	N/A	☐	Coordinates with Larger Project
		☐	Existing Capacity
Project Total	*$85,000*	☐	Cost Reduction
		☐	Future Capacity

PROJECT DESCRIPTION:

There are a total of 8 brush rotor aerators in our two oxidation ditches at the Wastewater Treatment Plant. The brush rotors are key in mixing and aeration of the wastewater, enabling the bacteria to complete their work. This project involves replacing the remaining 7 original rotors which have been in operation since the plant startup in 1987. These rotors are 30 years old as of 2017, have an expected 25-30 year lifespan, and we experienced our first rotor failure in 2015. All of the rotors are inspected annually and will be replaced based on the need determined by those inspections.

PROPOSED FUNDING SOURCES:

This project will be paid for by the wastewater rate revenue.

FIGURE 17 OLD ROTOR (LEFT) NEW ROTOR (RIGHT)

Wastewater Program

Fernwood and Creekside Lift Station Coatings

PROJECT SUMMARY SHEET

Fiscal Year	Costs	Criteria Met:	
2019/2020	$160,000	☒	Safety/Liability
		☒	Council Goals
2020/2024	N/A	☒	Maintenance
		☐	Required per Regulation
Future Years	N/A	☐	Coordinates with Larger Project
		☒	Existing Capacity
Project Total	*$160,000*	☐	Cost Reduction
		☐	Future Capacity

PROJECT DESCRIPTION:

This project is to fix inflow and infiltration (I/I), concrete corrosion, and grout problems at these two lift stations. The project will involve bypass pumping around each station for a period of time for cleaning of the wetwell and applying the coating material. In addition to solving the above issues, it will also provide for much easier cleaning and maintenance as there will no longer be a porous surface for the grease and debris to attach to.

PROPOSED FUNDING SOURCES:

This project will be paid by the wastewater rate revenue funds.

FIGURE 18 INFLOW & INFILTRATION AT THE FERNWOOD & CREEKSIE LIFT STATION

Wastewater Program

Sawdust Bays at the Wastewater Treatment Plant

PROJECT SUMMARY SHEET

Fiscal Year	Costs	Criteria Met:	
2019/2020	$372,000	☒	Safety/Liability
		☐	Council Goals
2020/2024	N/A	☒	Maintenance
		☐	Required per Regulation
Future Years	N/A	☐	Coordinates with Larger Project
		☒	Existing Capacity
Project Total	*$372,000*	☐	Cost Reduction
		☒	Future Capacity

PROJECT DESCRIPTION:

The current compost cure bay setup is configured to allow us to use three (3) of the covered storage bays as curing bays. They are equipped with blowers and temperature probes that enable us to use them as cure compost to meet our class A temperature requirements. The sawdust currently fills the two remaining bays of the five total bays available. The sawdust needs to be in 2 bays to protect it from the weather, but also to allow us to turn over our sawdust supply and reduce the risk of fires. This additional 4 bay structure will allow us to move the sawdust over closer to where we use it, will provide us an additional 2 bays that we can use for compost curing, and still leave us two additional bays to use to keep either recycled compost or sale compost dry during the winter.

PROPOSED FUNDING SOURCES:

This project will be paid by the wastewater rate revenue funds.

FIGURE 19 EXISTING CURING BAYS

Wastewater Program

Inflow and Infiltration Projects

PROJECT SUMMARY SHEET

Fiscal Year	Costs	Criteria Met:	
2019/2020	$637,000	☒	Safety/Liability
		☒	Council Goals
2020/2024	$1,880,000	☒	Maintenance
		☐	Required per Regulation
Future Years	$390,000-490,000/year	☐	Coordinates with Larger Project
		☒	Existing Capacity
Project Total	*N/A*	☒	Cost Reduction
		☒	Future Capacity

PROJECT DESCRIPTION:

The 2015 Inflow and Infiltration (I/I) Report identified the need for significant replacements/rehabilitation of the older sections of the wastewater collections system throughout the City. The goal of the project is to rehabilitate or replace the aging pipe infrastructure to reduce the maintenance costs and the stormwater I/I into the system based on the priorities listed in the 2015 report. This report was validated by the Wastewater Master Plan that was adopted in 2018.

This year's projects are mainline lining, rehabilitation of manholes, and replacement of a few laterals. The projects for next year include: S River from E Fourth to E Second, Church from E Second to E Third, and Howard from East Third to E Sixth.

PROPOSED FUNDING SOURCES:

This will be paid for out of wastewater rate and system development charge funds.

FIGURE 20 INFLOW & INFILTRATION PROGRAM

Wastewater Program

Operations Remodel Project

PROJECT SUMMARY SHEET

Fiscal Year	Costs	Criteria Met:	
2019/2020	$425,000	☐	Safety/Liability
		☐	Council Goals
2020/2024	N/A	☒	Maintenance
		☐	Required per Regulation
Future Years	$500,000	☐	Coordinates with Larger Project
		☐	Existing Capacity
Project Total	*$925,000*	☒	Cost Reduction
		☐	Future Capacity

PROJECT DESCRIPTION:

The existing treatment plant administration building was constructed in 1987 has a lot of underutilized space. The proposed remodel will allow for staff work stations and a staff Lunch and meeting room other than utilizing the main conference room as well as a small conference room and additional office space.

PROPOSED FUNDING SOURCES:

This project is funded through the wastewater funds.

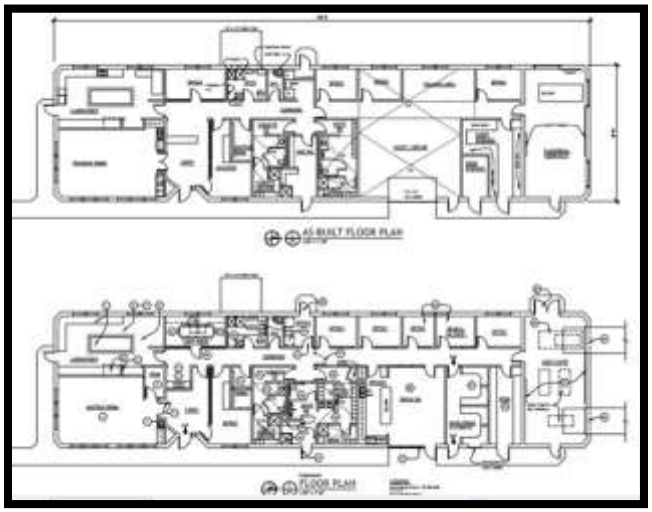


FIGURE 21 PUBLIC WORKS OPERATION REMODEL PRELIMINARY SKETCH

Wastewater Program

Existing Oxidation Ditches

PROJECT SUMMARY SHEET

Fiscal Year	Costs	Criteria Met:	
2019/2020	$265,000	☒	Safety/Liability
		☐	Council Goals
2020/2024	$601,000	☒	Maintenance
		☒	Required per Regulation
Future Years	N/A	☐	Coordinates with Larger Project
		☒	Existing Capacity
Project Total	*$866,000*	☒	Cost Reduction
		☒	Future Capacity

Click here to enter text.

PROJECT DESCRIPTION:

The two existing oxidation ditches were constructed in 1987 and need rehabilitation work to remain in service. Rehabilitation to oxidation ditch #2 was completed summer of 2017. Only one ditch can be offline at any one time, therefore, ditch #1 will be under construction in summer of 2020.

PROPOSED FUNDING SOURCES:

This will be paid for out of wastewater rate and system development charge funds.

FIGURE 22 OXIDATION DITCH

Wastewater Program

Roofing Replacement at the Wastewater Treatment Plant

PROJECT SUMMARY SHEET

Fiscal Year	Costs	Criteria Met:	
2019/2020	$159,000	☒	Safety/Liability
		☐	Council Goals
2022/2024	$159,000	☒	Maintenance
		☐	Required per Regulation
Future Years	N/A	☐	Coordinates with Larger Project
		☐	Existing Capacity
Project Total	*$318,000*	☒	Cost Reduction
		☐	Future Capacity

PROJECT DESCRIPTION:

The maintenance of roofs and gutters on the existing buildings at the 1980's treatment plant buildings was deferred by prior administrations. The building roof and gutter replacements completed to date include: compost mixing building, and the effluent building. The next in line for replacement is the operations building which will coincide with the remodel of that building, and will be followed by roofs on the secondary building, and compost tunnels in future years.

PROPOSED FUNDING SOURCES:

This will be paid for out of wastewater rate funds.

FIGURE 23 ROOF MAINTENANCE AT WASTEWATER TREATMENT PLANT

Wastewater Project

Secondary Clarifier Re-rating Study

PROJECT SUMMARY SHEET

Fiscal Year	Costs	Criteria Met:	
2019/2020	$64,000	☐	Safety/Liability
		☐	Council Goals
2020/2024	N/A	☒	Maintenance
		☒	Required per Regulation
Future Years	N/A	☐	Coordinates with Larger Project
		☒	Existing Capacity
Project Total	*$64,000*	☒	Cost Reduction
		☒	Future Capacity

PROJECT DESCRIPTION:

The recommendation for this study was made in the 2018 Wastewater Master Plan Update. Currently our clarifiers are working well, and are able to handle the peak flow events that we see a few times a year. The clarifiers are rated for 1,200 gallons per day per square foot, which is an old industry standard, and based on the loading on these clarifiers during these occasional peak flow events we would need to add additional clarifier capacity soon. This project would allow us to increase the allowable loading on the clarifiers and delay the need for additional clarifiers.

PROPOSED FUNDING SOURCES:

This project will be paid by the wastewater rate revenue and 22% SDC funds.

FIGURE 24 EXISTING CLARIFIER

Wastewater Project

Compost Sale Pile Cover

PROJECT SUMMARY SHEET

Fiscal Year	Costs	Criteria Met:	
2019/2020	$159,000	☐	Safety/Liability
		☐	Council Goals
2020/2024	N/A	☒	Maintenance
		☐	Required per Regulation
Future Years	N/A	☐	Coordinates with Larger Project
		☒	Existing Capacity
Project Total	*$159,000*	☒	Cost Reduction
		☐	Future Capacity

PROJECT DESCRIPTION:

This project is to install a cover over the compost that accumulates over the winter months on our sale pile. There are several benefits to covering this compost. The first is to prevent the rain from washing solids out of the compost pile and back into the plant, which then requires us to send those solids back through the treatment process. The second is that it would provide a higher quality product for our customers that come in during the spring, which is our busiest time of year for compost sales. A third potential benefit is that some of this dry compost could be used for dry recycle during the wet months and allowing us to increase our composting efficiency in the winter months when dry recycle is hard to come by.

PROPOSED FUNDING SOURCES:

This project will be paid by the wastewater rate revenue funds.

FIGURE 25 COMPOST PILE

FIGURE 26 EXAMPLE OF COVER

Wastewater Program

E Sixth Street Rehabilitation

PROJECT SUMMARY SHEET

Fiscal Year	Costs	Criteria Met:	
2019/2020	$300,000	☒	Safety/Liability
		☐	Council Goals
2020/2024	N/A	☒	Maintenance
		☐	Required per Regulation
Future Years	N/A	☒	Coordinates with Larger Project
		☒	Existing Capacity
Project Total	*$300,000*	☐	Cost Reduction
		☐	Future Capacity

PROJECT DESCRIPTION:

The existing pipe in E Sixth Street is 70-80 years old. The pipe is made of clay and the manholes are brick. The project is to replace the section between S School and S Columbia Streets. E Sixth Street will be paved in the summer of 2020.

PROPOSED FUNDING SOURCES:

This project will be funded by the wastewater rate funds.

FIGURE 27 PIPE MADE OUT OF CLAY

Wastewater Program

Programmable Logic Controller Study and Replacement

PROJECT SUMMARY SHEET

Fiscal Year	Costs	Criteria Met:	
2020/2021	$1,640,000	☒	Safety/Liability
		☐	Council Goals
2021/2024	N/A	☒	Maintenance
		☐	Required per Regulation
Future Years	N/A	☐	Coordinates with Larger Project
		☒	Existing Capacity
Project Total	*$1,640,000*	☒	Cost Reduction
		☐	Future Capacity

PROJECT DESCRIPTION:

The Programmable Logic Controller (PLC) is the system which provides the ability to run the treatment plant in an automatic mode. The Siemens PLC was installed in the late 1990's and is nearing its life expectancy. The PLC which we currently use is no longer being made by Siemens. Currently we are relying on a 3rd party to support the PLC but they could stop production at any time making our system obsolete. We will first look at all of the options and then come back to purchase the new system.

PROPOSED FUNDING SOURCES:

This project will be funded using the wastewater rate funds.

FIGURE 28 PCL

Wastewater Program

Inflow and Infiltration Report

PROJECT SUMMARY SHEET

Fiscal Year	Costs	Criteria Met:	
2020/2021	$200,000	☒	Safety/Liability
		☐	Council Goals
2021/2024	N/A	☒	Maintenance
		☐	Required per Regulation
Future Years	N/A	☐	Coordinates with Larger Project
		☒	Existing Capacity
Project Total	*$200,000*	☒	Cost Reduction
		☒	Future Capacity

PROJECT DESCRIPTION:

An Inflow and Infiltration (I & I) study was completed for the Dayton and Wynooski Basins in 2015. Data has been recently gathered in the Springbrook and Hess Creek Basins. This data will be used to complete a full report of the pipe performance in these basins and will evaluate the work that the City has completed over the last several years.

PROPOSED FUNDING SOURCES:

This project will be funded by the wastewater rate and SDC funds.

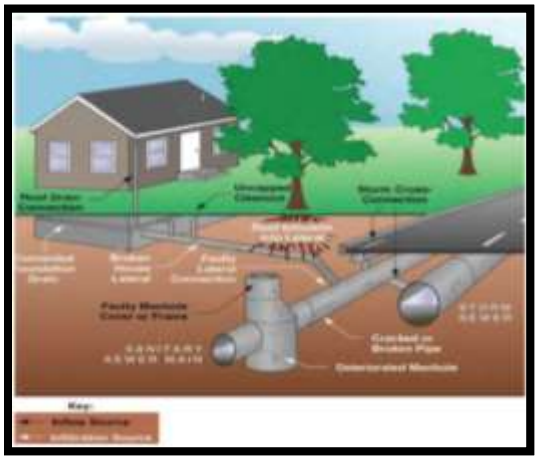


FIGURE 29 I&I ENTERING THE BASINS

Wastewater Project

Lift Station Short Term Improvements

PROJECT SUMMARY SHEET

Fiscal Year	Costs	Criteria Met:	
2022/2023	$110,000	☒	Safety/Liability
		☐	Council Goals
2023/2024	N/A	☒	Maintenance
		☐	Required per Regulation
Future Years	N/A	☐	Coordinates with Larger Project
		☒	Existing Capacity
Project Total	*$110,000*	☐	Cost Reduction
		☐	Future Capacity

PROJECT DESCRIPTION:

This project includes minor improvements to Charles, Chehalem, Creekside, Fernwood, Highway 240, and Sheridan lift stations. Examples of the improvements include; adding safety grating to valve vaults, installing bollards for traffic protection, installing additional fencing to stations that don't have it, repainting of building doors, and replacing heaters and heat taping for freeze protection, and various other improvement identified in the 2018 Wastewater Master Plan update.

PROPOSED FUNDING SOURCES:

Wastewater rate revenue funds and 1% SDC funds.

FIGURE 30 FERNWOOD VALVE VAULT

FIGURE 31 CHARLES LS WITHOUT BOLLARDS

Wastewater Project

WWTP Hydraulic Improvements

PROJECT SUMMARY SHEET

Fiscal Year	Costs	Criteria Met:	
2021/2022	$500,000	☐	Safety/Liability
		☐	Council Goals
2022/2024	N/A	☒	Maintenance
		☒	Required per Regulation
Future Years	N/A	☐	Coordinates with Larger Project
		☒	Existing Capacity
Project Total	*$500,000*	☐	Cost Reduction
		☒	Future Capacity

PROJECT DESCRIPTION:

Wastewater Treatment Plant (WWTP) Hydraulic Improvements are a group of projects to improve the hydraulic flow through the WWTP that were identified in the 2018 Wastewater Master Plan update. They include modifications to the clarifier distribution box, the effluent weirs, and installation of a second (parallel) pipe from the clarifier effluent to the chlorine contact basin.

PROPOSED FUNDING SOURCES:

Wastewater rate revenue along with 14% SDC funds.

FIGURE 32 INSTALLATION OF A SECOND (PARALLEL) PIPE FROM THE CLARIFIER EFFLUENT TO THE CHLORINE CONTACT BASIN

Wastewater Project

Upper Portion of Hess Creek Trunk Line

PROJECT SUMMARY SHEET

Fiscal Year	Costs	Criteria Met:	
2019/2020	$1,060,000	☒	Safety/Liability
		☐	Council Goals
2020/2024	N/A	☒	Maintenance
		☐	Required per Regulation
Future Years	N/A	☒	Coordinates with Larger Project
		☒	Existing Capacity
Project Total	*$1,060,000*	☐	Cost Reduction
		☒	Future Capacity

PROJECT DESCRIPTION:

This project is C1.A in the 2018 Wastewater Master Plan update and is priority project. Currently the access to Hess Creek is limited and undersized in some locations. This project will line the upper portion of the Hess Creek trunk line to reduce I/I influence and extend the life of the pipe. Flow monitoring will also be implemented after the lining to inform the design phase of Hess Creek Phase 2.

PROPOSED FUNDING SOURCES:

This project will be funded by the wastewater rate revenue and 2% SDC funds.

FIGURE 33 HESS CREEK TRUNK LINE

Wastewater Project

Parallel Line to Lower Portion of Hess Creek Trunk Line

PROJECT SUMMARY SHEET

Fiscal Year	Costs	Criteria Met:	
2023/2024	$2,390,000	☒	Safety/Liability
		☐	Council Goals
N/A	N/A	☒	Maintenance
		☐	Required per Regulation
Future Years	$1,850,000	☒	Coordinates with Larger Project
		☒	Existing Capacity
Project Total	*$4,240,000*	☐	Cost Reduction
		☒	Future Capacity

PROJECT DESCRIPTION:

This project is C1.b in the 2018 Wastewater Master Plan Update and is a priority project. The limits of this project are from E Fulton to the Wastewater Treatment Plant. This project will construct a gravity main line parallel to Hess Creek Canyon and reduce the flow going into the trunk line. The new lift station in the Phase 3 project will discharge to this new pipe.

PROPOSED FUNDING SOURCES:

This project will be paid for by the wastewater rate revenue and 2% SDC funds.

FIGURE 34 AREA OF E FULTON TO THE WASTEWATER TREATMENT PLANT

WASTEWATER PROJECT

W Pinehurst Court Wastewater

PROJECT SUMMARY SHEET

Fiscal Year	Costs	Criteria Met:	
2020/2021	$300,000	☒	Safety/Liability
		☐	Council Goals
2021/2024	N/A	☒	Maintenance
		☐	Required per Regulation
Future Years	N/A	☐	Coordinates with Larger Project
		☒	Existing Capacity
Project Total	*$300,000*	☐	Cost Reduction
		☐	Future Capacity

PROJECT DESCRIPTION:

The 2018 Wastewater Master Plan identified this location as a possible overflow site due to the grade of W Pinehurst Court and the shallow wastewater line. The project (C1.d) will re-direct flow from W Pinehurst Court south to existing lines on W Creekside Court.

PROPOSED FUNDING SOURCES:

This project will be funded by the wastewater rate revenue.

FIGURE 35 AREA OF W PINEHURST CT TO W CREEKSIDE CT

Wastewater Project

Update the Wastewater Master Plan

PROJECT SUMMARY SHEET

Fiscal Year	Costs	Criteria Met:	
2019/2020	$100,000	☐	Safety/Liability
		☐	Council Goals
2020/2024	N/A	☐	Maintenance
		☒	Required per Regulation
Future Years	N/A	☐	Coordinates with Larger Project
		☒	Existing Capacity
Project Total	*$100,000*	☐	Cost Reduction
		☒	Future Capacity

PROJECT DESCRIPTION:

As the Riverfront Master Plan is developed, the recommendations from the adopted plan will need to be incorporated into the existing Wastewater Plan. Additionally, as a part of the 2018 Wastewater Master Plan adoption process the Council asked that the 'surcharge' definition be re-evaluated with the possible addition of necessary projects. Another special area to be re-analyzed is the Springbrook Basin, due to the I & I reductions seen in the area and the possibility of rerouting additional flow further east.

PROPOSED FUNDING SOURCES:

This project will be funded by the wastewater rate revenue.

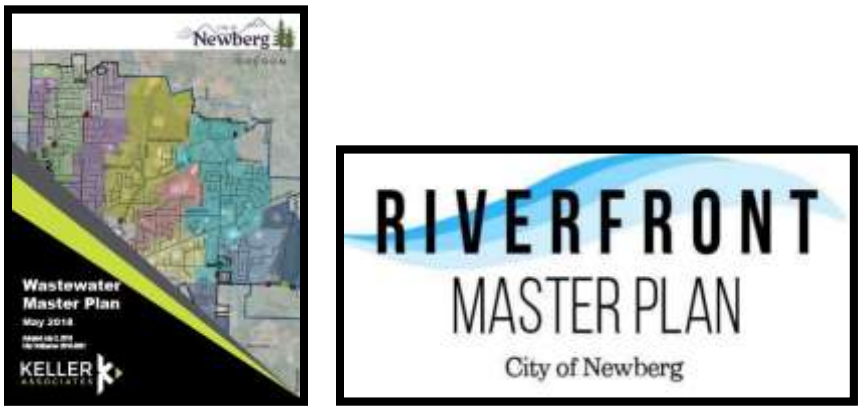


FIGURE 36 WASTEWATER MASTER PLAN

Water Projects

The Water Program provides planning, design and construction of improvements for the City's public water utility system. This program area includes the well field, storage reservoirs, water treatment plant, pump station, and water distribution system.

The following project list was developed from the 2017 Water Master Plan and other associated studies while considering the available funds from the water utility rates and system development charges. As we embark on the redundant water supply project and the water system resiliency study additional projects will be added to this list.

Water Program

Bell West Pump Station

PROJECT SUMMARY SHEET

Fiscal Year	Costs	Criteria Met:	
2019/2020	$1,026,000	☒	Safety/Liability
		☐	Council Goals
2020/2024	$1,000,000	☐	Maintenance
		☐	Required per Regulation
Future Years	N/A	☒	Coordinates with Larger Project
		☐	Existing Capacity
Project Total	*$2,026,000*	☐	Cost Reduction
		☒	Future Capacity

PROJECT DESCRIPTION:

The proposed pump station is needed to supply adequate fire flow and constant service pressure to the Zone 2 expansion area. Once the Bell Road Reservoir is constructed, this pump station will be used to supply a future reservoir.

Additionally, this project extend waterlines from N Terrace Drive to the intersection of N College and N Valley Road and then to the east down Bell Road. This will help supply water for future Zone 2 development.

PROPOSED FUNDING SOURCES:

This project will be funded for out of water rate revenue and system development charge funds.

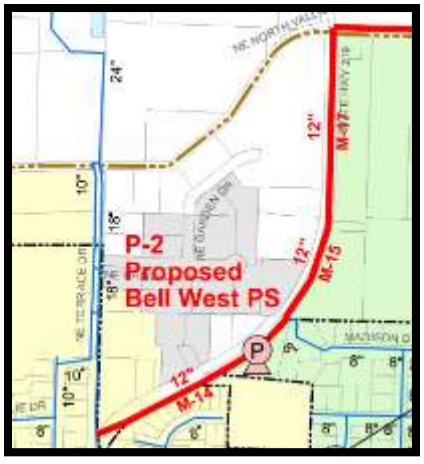


FIGURE 37 PROPOSED PUMP STATION SITE

Water Program

Decommission Wells #1 and #2

PROJECT SUMMARY SHEET

Fiscal Year	Costs	Criteria Met:	
2019/2020	$200,000	☒	Safety/Liability
		☐	Council Goals
2020/2024	N/A	☐	Maintenance
		☒	Required per Regulation
Future Years	N/A	☐	Coordinates with Larger Project
		☐	Existing Capacity
Project Total	*$200,000*	☐	Cost Reduction
		☐	Future Capacity

PROJECT DESCRIPTION:

Wells #1 & #2 have reached the end of life and are not being utilized. This project would properly decommission the wells per state standards.

PROPOSED FUNDING SOURCES:

This will be paid for out of water rate and system development charge funds.

FIGURE 38 DECOMMISSION WELLS 1 & 2

Water Program

Downtown Fire Flow Project

PROJECT SUMMARY SHEET

Fiscal Year	Costs	Criteria Met:	
2020/2021	$552,000	☒	Safety/Liability
		☐	Council Goals
2021/2024	N/A	☐	Maintenance
		☐	Required per Regulation
Future Years	N/A	☒	Coordinates with Larger Project
		☒	Existing Capacity
Project Total	*$552,000*	☐	Cost Reduction
		☒	Future Capacity

PROJECT DESCRIPTION:

This project is to replace several non-looped sections of 1 and 2 inch diameter water mains along Hancock Street through downtown Newberg. Fire flow deficiencies occur in this area and the project will also improve fire hydrant spacing and coverage. This project will coordinate with the adopted 2016 Downtown Improvement Plan.

PROPOSED FUNDING SOURCES:

This project will be paid for out of water rate revenue and system development charge funds.

FIGURE 39 REPLACING DEFICIENT PIPE AND INADEQUATE FIRE HYDRANTS ON HANCOCK STREET

Water Program

Fixed Based Radio Read

PROJECT SUMMARY SHEET

Fiscal Year	Costs	Criteria Met:	
2019/2020	$371,000	☐	Safety/Liability
		☐	Council Goals
2020/2024	$810,000	☒	Maintenance
		☐	Required per Regulation
Future Years	N/A	☐	Coordinates with Larger Project
		☐	Existing Capacity
Project Total	*$1,181,000*	☒	Cost Reduction
		☐	Future Capacity

PROJECT DESCRIPTION:

The existing meter reading system requires that someone drive through the entire city to read the meters. The fixed based system will allow for the meters to be read from utility billing office in real time. This will cut down on labor costs and could detect a leak sooner. Rate payers will also have the ability to gain access to hourly real-time and historical water use information. Operations and treatment plant staff have access to real time data.

PROPOSED FUNDING SOURCES:

This project will be paid for out of water rate and SDC funds.

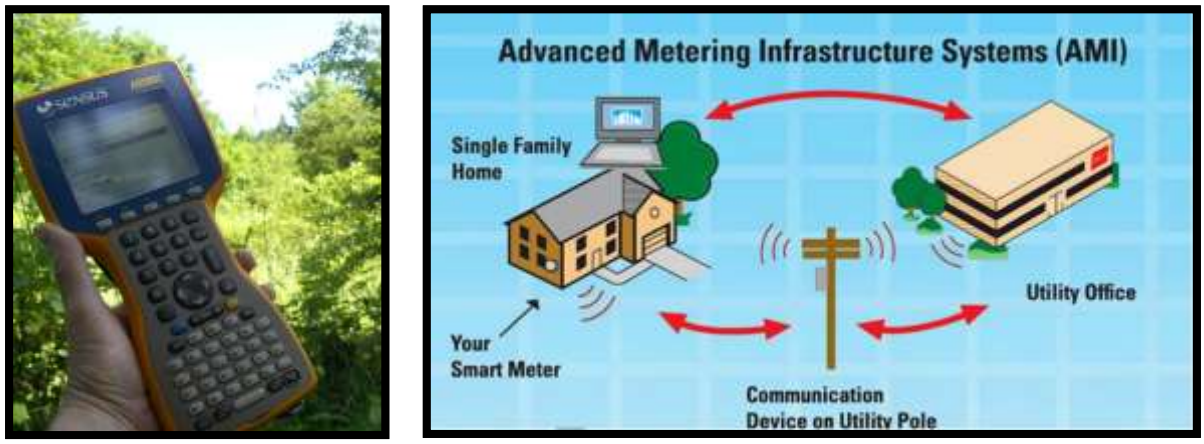


FIGURE 40 READING METERS CURRENTLY (LEFT) VS ADVANCED WATER METERING READING INFRASTRUCTURE SYSTEM (RIGHT)

Water Program

George Fox Fire Flow

PROJECT SUMMARY SHEET

Fiscal Year	Costs	Criteria Met:	
2019/2020	$233,000	☒	Safety/Liability
		☐	Council Goals
2020/2024	N/A	☒	Maintenance
		☐	Required per Regulation
Future Years	N/A	☒	Coordinates with Larger Project
		☒	Existing Capacity
Project Total	*$233,000*	☐	Cost Reduction
		☒	Future Capacity

PROJECT DESCRIPTION:

The water modeling in the recent master plan update revealed that this area has a fire flow and pressure deficiency under existing conditions and future growth. The installation of 1410 lineal feet of 8" waterlines will address this deficiency.

PROPOSED FUNDING SOURCES:

This will be paid for out of water rate revenue and SDC funds.

FIGURE 41 FIRE HYDRANT WATER FLOW

Water Program

Redundant Supply

PROJECT SUMMARY SHEET

Fiscal Year	Costs	Criteria Met:	
2019/2020	$487,000	☒	Safety/Liability
		☒	Council Goals
2020/2024	$3,428,000	☐	Maintenance
		☐	Required per Regulation
Future Years	N/A	☐	Coordinates with Larger Project
		☒	Existing Capacity
Project Total	*$3,915,000*	☐	Cost Reduction
		☒	Future Capacity

PROJECT DESCRIPTION:

The City's current water supply is the well field on the south side of the Willamette River. To address supply vulnerability and long-term water resiliency, per the water system master plan the City should pursue another source north of the River. The redundant supply should have an approximate capacity of 2 million gallons per day. This project would include water rights, exploration, property acquisition and potentially the construction of a secondary treatment plant.

PROPOSED FUNDING SOURCES:

This will be paid for out of water rate revenue and SDC funds.

FIGURE 42 EXPLORING FUTURE WATER SUPPLY

Water Program

Seismic Resiliency Project

PROJECT SUMMARY SHEET

Fiscal Year	Costs	Criteria Met:	
2019/2020	$185,000	☒	Safety/Liability
		☒	Council Goals
2020/2024	N/A	☒	Maintenance
		☒	Required per Regulation
Future Years	N/A	☐	Coordinates with Larger Project
		☒	Existing Capacity
Project Total	*$185,000*	☒	Cost Reduction
		☒	Future Capacity

PROJECT DESCRIPTION:

This project will evaluate the seismic resiliency of the entire water system and evaluate the seismic hazards of the existing water treatment plant using the latest seismic modeling for a Cascadia subduction zone earthquake. This will help the city's water system become more resilient in the case of major seismic event.

PROPOSED FUNDING SOURCES:

This will be paid for out of both water rate and SDC funds.

FIGURE 43 WATER TREATMENT FACILITY SEISMIC RESILIENCY

Water Program

Vittoria Square Fire Flow

PROJECT SUMMARY SHEET

Fiscal Year	Costs	Criteria Met:	
2019/2020	$147,000	☒	Safety/Liability
		☐	Council Goals
2020/2024	N/A	☐	Maintenance
		☐	Required per Regulation
Future Years	N/A	☒	Coordinates with Larger Project
		☒	Existing Capacity
Project Total	*$147,000*	☐	Cost Reduction
		☒	Future Capacity

PROJECT DESCRIPTION:

The recent water master plan update revealed that this area has a fire flow and pressure deficiency under existing conditions and future growth. The installation of 600 lineal feet of 8" waterlines will address this deficiency.

PROPOSED FUNDING SOURCES:

This will be paid for out of water rate revenue and SDC funds.

FIGURE 44 EXPANDING WATERLINE TO ELIMINATE DEFICIENT WATER FLOW AND FOR FUTURE GROWTH

Water Program

W Illinois Fire Flow

PROJECT SUMMARY SHEET

Fiscal Year	Costs	Criteria Met:	
2019/2020	$141,000	☒	Safety/Liability
		☐	Council Goals
2020/2024	N/A	☐	Maintenance
		☐	Required per Regulation
Future Years	N/A	☒	Coordinates with Larger Project
		☒	Existing Capacity
Project Total	*$141,000*	☐	Cost Reduction
		☒	Future Capacity

PROJECT DESCRIPTION:

The 2017 Water Master Plan update revealed that this area has a fire flow and pressure deficiency under existing conditions and future growth. The installation of an 8" waterline connecting with the existing waterline in NE Chehalem Drive south of Hwy 240 will address this deficiency.

PROPOSED FUNDING SOURCES:

This will be paid for out of water rate revenue and SDC funds.

FIGURE 45 EXPANDING WATERLINE TO ELIMINATE WATER DEFICIENCY AND FOR FUTURE GROWTH

Water Program

Water Rights Review, Reconfiguration and Water Management Conservation Plan

PROJECT SUMMARY SHEET

Fiscal Year	Costs	Criteria Met:	
2019/2020	$45,000	☐	Safety/Liability
		☐	Council Goals
2020/2024	N/A	☐	Maintenance
		☒	Required per Regulation
Future Years	N/A	☐	Coordinates with Larger Project
		☐	Existing Capacity
Project Total	*$45,000*	☐	Cost Reduction
		☒	Future Capacity

PROJECT DESCRIPTION:

This project is intended to take a comprehensive view of our existing water rights, make sure they are correctly proportioned and reconfigure if necessary. The water right work will be used in our update of our required Water Management Conservation Plan the following year.

PROPOSED FUNDING SOURCES:

This will be paid for out of water rate and SDC funds.

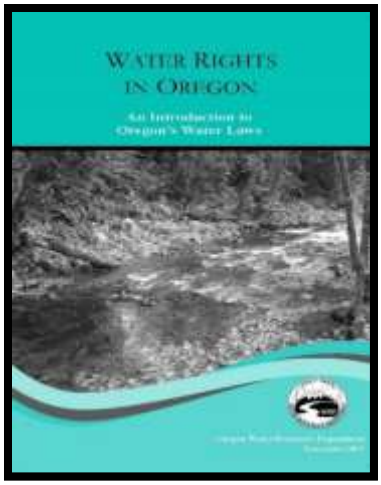


FIGURE 46 COMPREHENSIVE STUDY OF THE CITY'S EXISTING WATER RIGHTS

Water Program

Bell East Pump Station

PROJECT SUMMARY SHEET

Fiscal Year	Costs	Criteria Met:	
2022/2023	$840,000	☒	Safety/Liability
		☐	Council Goals
2023/2024	$865,000	☐	Maintenance
		☒	Required per Regulation
Future Years	$900,000	☐	Coordinates with Larger Project
		☒	Existing Capacity
Project Total	*$2,605,000*	☐	Cost Reduction
		☒	Future Capacity

PROJECT DESCRIPTION:

This project in in the 2017 Water Master Plan and is needed as development occurs north of and along Zimri Drive.

PROPOSED FUNDING SOURCES:

This project will be funded by SDC funds.

FIGURE 47 WATERLINE

Water Program

Fire Flow - Various

PROJECT SUMMARY SHEET

Fiscal Year	Costs	Criteria Met:	
2021/2022	$481,000	☒	Safety/Liability
		☐	Council Goals
2022/2024	$442,000	☒	Maintenance
		☐	Required per Regulation
Future Years	N/A	☐	Coordinates with Larger Project
		☒	Existing Capacity
Project Total	*$923,000*	☐	Cost Reduction
		☐	Future Capacity

PROJECT DESCRIPTION:

There are several more fire flow upgrades projects noted in the 2017 Water Master Plan. The priorities will be decided based on other projects and opportunities.

PROPOSED FUNDING SOURCES:

These projects will be funded by the SDC and water rate funds.

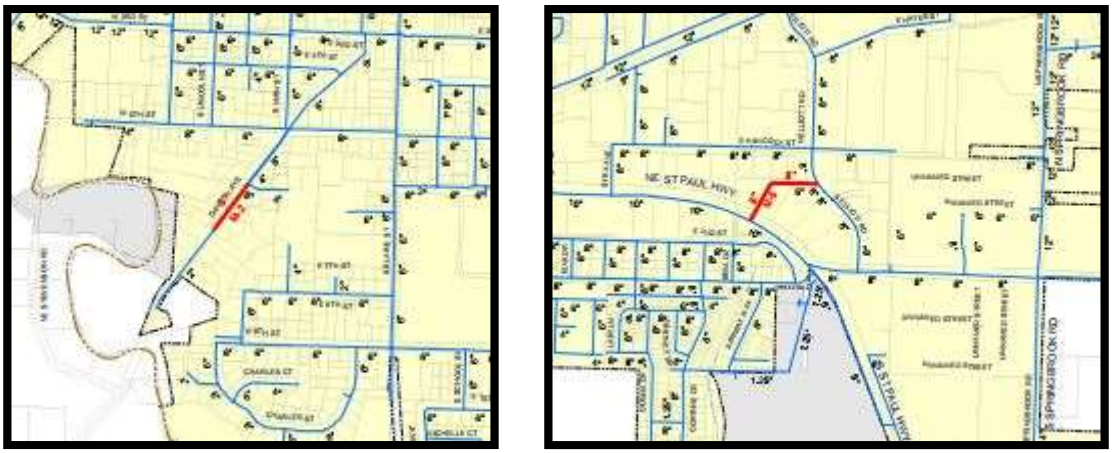


FIGURE 48 FIRE FLOW UPGRADES

Water Project

North Valley Reservoir Driveway

PROJECT SUMMARY SHEET

Fiscal Year	Costs	Criteria Met:	
2021/2022	$218,000	☒	Safety/Liability
		☐	Council Goals
2022/2024	N/A	☒	Maintenance
		☐	Required per Regulation
Future Years	N/A	☐	Coordinates with Larger Project
		☐	Existing Capacity
Project Total	*$218,000*	☒	Cost Reduction
		☐	Future Capacity

PROJECT DESCRIPTION:

The access to the North Valley Reservoirs is currently gravel and has drainage issues. This project would correct the drainage issues and pave the access to allow the City to access this important asset in all-weather situations.

PROPOSED FUNDING SOURCES:

This project will be funded by water rate revenue.

FIGURE 49 NORTH VALLEY RESERVOIR ACCESS ROAD

Water Project

Routine Water Main Replacement

PROJECT SUMMARY SHEET

Fiscal Year	Costs	Criteria Met:	
2019/2020	$318,000	☒	Safety/Liability
		☐	Council Goals
2021/2024	$460,000	☒	Maintenance
		☐	Required per Regulation
Future Years	$100,000-200,000/year	☐	Coordinates with Larger Project
		☒	Existing Capacity
Project Total	*$966,000*	☒	Cost Reduction
		☐	Future Capacity

PROJECT DESCRIPTION:

As existing pipes age and reach the end of life, they need to be replaced. It is better to replace pipes on a routine basis than as an emergency repair.

PROPOSED FUNDING SOURCES:

This project will be funded by water rate revenue.

FIGURE 50 CITY WATER SERVICE

Water Project

Update the Water System Plan

PROJECT SUMMARY SHEET

Fiscal Year	Costs	Criteria Met:	
2019/2020	$50,000	☒	Safety/Liability
		☐	Council Goals
2020/2024	$200,000	☐	Maintenance
		☒	Required per Regulation
Future Years	N/A	☐	Coordinates with Larger Project
		☒	Existing Capacity
Project Total	*$250,000*	☐	Cost Reduction
		☒	Future Capacity

PROJECT DESCRIPTION:

As the Riverfront Master Plan is adopted, the recommendations from that plan will need to be incorporated into the 2017 Water Master Plan. Additionally, per OAR Chapter 333, Division 061-0060(5)(a)(J) the City is required to update the Water Master Plan periodically for resiliency reasons.

PROPOSED FUNDING SOURCES:

Water monthly revenue and system development charges.

FIGURE 51 WATER MASTER PLAN

Water Project

Water Treatment Plant Filter Covers

PROJECT SUMMARY SHEET

Fiscal Year	Costs	Criteria Met:	
2020/2021	$164,000	☒	Safety/Liability
		☐	Council Goals
2021/2024	N/A	☒	Maintenance
		☒	Required per Regulation
Future Years	N/A	☐	Coordinates with Larger Project
		☐	Existing Capacity
Project Total	*$164,000*	☒	Cost Reduction
		☐	Future Capacity

PROJECT DESCRIPTION:

There may be a need to cover the treatment plant filters to meet State requirements for contact time. This project would need to determine the requirements, design and then construct the necessary covering.

PROPOSED FUNDING SOURCES:

This project will be funded by the water rate revenue.

FIGURE 52 WATER FILTER COVERS

Water Project

Water Treatment Plant Property Purchase

PROJECT SUMMARY SHEET

Fiscal Year	Costs	Criteria Met:	
2019/2020	$500,000	☐	Safety/Liability
		☐	Council Goals
2020/2024	N/A	☒	Maintenance
		☐	Required per Regulation
Future Years	N/A	☐	Coordinates with Larger Project
		☐	Existing Capacity
Project Total	*$500,000*	☒	Cost Reduction
		☒	Future Capacity

PROJECT DESCRIPTION:

There is a need to expand the Water Treatment Plant in the future for growth and increased treatment requirements. The City has determined that approximately 2 acres adjacent to the existing plant would be the best alternative. This project would allow for this property purchase.

PROPOSED FUNDING SOURCES:

This project will be funded by the water rate revenue.

FIGURE 53 WEST ROCK PROPERTY PURCHASE SKETCH

Water Project

NE Zimri Drive Water Line

PROJECT SUMMARY SHEET

Fiscal Year	Costs	Criteria Met:	
2023/2024	$413,000	☐	Safety/Liability
		☐	Council Goals
N/A	N/A	☐	Maintenance
		☐	Required per Regulation
Future Years	N/A	☒	Coordinates with Larger Project
		☐	Existing Capacity
Project Total	*$413,000*	☐	Cost Reduction
		☒	Future Capacity

PROJECT DESCRIPTION:

This project will extend a public water line in NE Zimri Drive to provide a water distribution line to serve the upper pressure zones in the City.

PROPOSED FUNDING SOURCES:

Water rate revenue and system development charges.

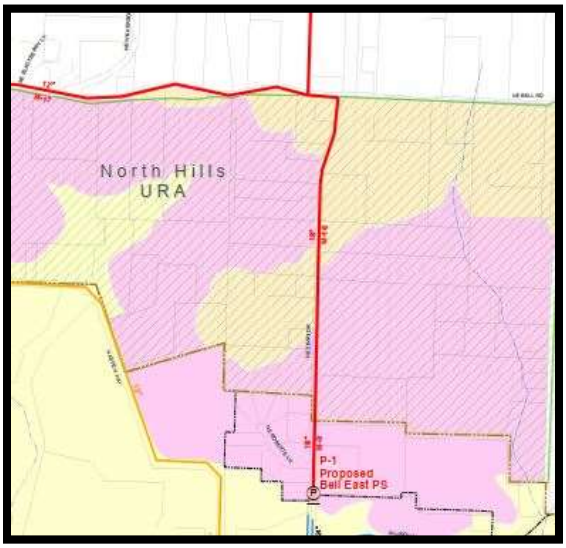


FIGURE 54 NE ZIMRI DRIVE