CLACKAMAS COUNTY BOARD OF COUNTY COMMISSIONERS

Sitting/Acting as the
Governing Body of Clackamas Water Environment Services

Policy Session Worksheet

Presentation Date: 7 Dec 22 **Approx. Start Time:** 10:30AM **Approx. Length:** 60 min

Presentation Title: Water Environment Services 2022-2027 Capital Improvement Plan

Department: Water Environment Services (WES)

Presenters: Greg Geist, WES Director; Lynne Chicoine, PE, Consultant (former Capital Program Manager)

Other Invitees: N/A

WHAT ACTION ARE YOU REQUESTING FROM THE BOARD?

Adoption of the WES 2022-2027 (Fiscal Years 2022/23 - 2026/27) Capital Improvement Plan (CIP).

EXECUTIVE SUMMARY:

WES operates and maintains more than 350 miles of sanitary sewers, interceptors and force mains, twenty-one wastewater pumping stations, and five water resource recovery facilities (WRRFs). WES is also responsible for surface water management facilities within its fifty-eight square mile service area and coordinating with partner jurisdictions who are co-permittees under a jointly-issued MS4 permit.

WES' CIP is a rolling five-year plan that identifies and prioritizes wastewater and stormwater construction projects and major equipment purchases. Updated annually, the CIP provides planning level schedules, budget estimates, and identifies funding sources for projects. The CIP puts forward a prioritized plan that will maintain existing facilities, allow efficient, cost-effective operations and support service area growth while continuing to protect public health and water quality. The plan includes the full wastewater capital plan and a previously-approved stormwater capital plan with the addition of three projects that were recently allocated American Rescue Plan funding by this Board. A future update of the CIP will include the full recommendations of the recently completed Storm System Master Plan.

The WES FY 22/23-26/27 CIP was presented to the WES Advisory Committee for consideration in October 2022 and November 2022. The Advisory Committee unanimously recommended adoption of the plan.

The proposed five-year CIP for the wastewater system is estimated at $192 million and includes the recommendations of several planning documents prepared by WES capital delivery staff and their consultants. The proposed five-year CIP for surface water is $9.2 million.

FINANCIAL IMPLICATIONS (current year and ongoing):

Is this item in your current budget? ☒ YES ☐ NO

What is the cost? The projected cost of the five-year Wastewater CIP is $192M and the projected cost of the five-year Surface Water CIP is $9.2M.
What is the funding source? Existing construction and system development charge reserves would be utilized to the fund the first four years of the plan. It is projected that debt financing will be needed for wastewater capital projects starting in FY 2026/27.

STRATEGIC PLAN ALIGNMENT:

- How does this item align with your Department's Strategic Business Plan goals?

This is consistent with WES' Performance Clackamas strategic plan for the Capital Program which is to develop a CIP that will estimate cost and implementation schedule for major investments necessary to support partner communities and economic development over the next 20 years.

- How does this item align with the County's Performance Clackamas goals?
  Supports the County's strategic priority of building strong infrastructure.

LEGAL/POLICY REQUIREMENTS: An adopted CIP is a prerequisite for the establishment of system development charges per ORS 223.309 "Preparation of a plan for capital improvements financed by system development charges".

PUBLIC/GOVERNMENTAL PARTICIPATION: Presentation to WES Advisory Committee (WESAC) on 13 October 2022 and unanimous support for adoption by the WESAC on 10 Nov 2022.

OPTIONS:

1. Adopt as proposed. Provide wastewater and surface water infrastructure required to support economic growth and protect water quality and human health for the next 20 years.
2. Do not adopt and request modifications thereby accepting potential risks to growth, water quality and human health.

RECOMMENDATION: Option 1. Adopt as proposed. Provide wastewater and surface water infrastructure required to support economic growth and protect water quality and human health for the next 20 years.

ATTACHMENTS:
Water Environment Services 2022-2027 Capital Improvement Plan.

SUBMITTED BY:
Division Director/Head Approval _____
Department Director/Head Approval _____
County Administrator Approval _____

For information on this issue or copies of attachments, please contact Chris Koontz @ 503-679-4034

DRAFT - REV. 10/27/2022

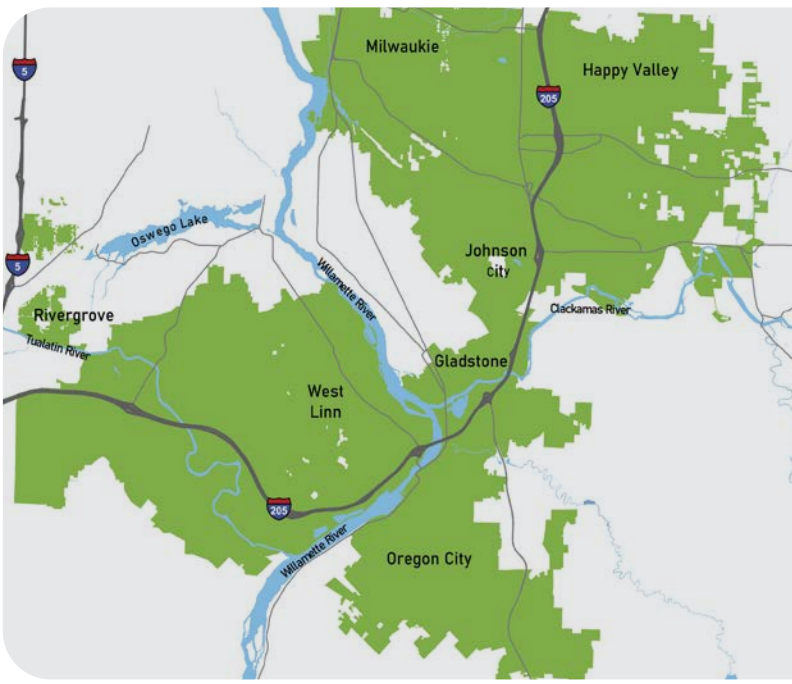
2022 - 2027

CAPITAL IMPROVEMENT PLAN

Water Environment Services

CLACKAMAS COUNTY

CLACKAMAS WATER ENVIRONMENT SERVICES



Clackamas

Water Environment Services

Fiscal Years 2022/23 - 2026/27

DRAFT Capital Improvement Plan, REV. 10/27/2022

Clackamas County Board of Commissioners

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Lauren Haney, Administration

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Amanda Keller, Legal Counsel

Terrance Romaine (Acting), Environmental Services

Shelly Parini-Runge, External Affairs

Jeff Stallard, Capital

CLACKAMAS

WATER ENVIRONMENT SERVICES

Clackamas Water Environment Services

Clackamas Water Environment Services (WES) produces clean water, protects water quality and recovers renewable resources. We do this by providing wastewater services, stormwater management, and environmental education. It is our job to protect public health and support the vitality of our communities, natural environment and economy.

WES lines of business and associated programs include the following:

Business Services

- Account Services
- Administrative Services
- Financial Management

Environmental Services

- Environmental Monitoring
- Permit Services
- Watershed Protection

Operations

- Plant Operations and Maintenance
- Resource Recovery
- Field Operations and Maintenance

Capital

- Planning and Capital Delivery
- Asset Management

Clackamas County Performance Clackamas

Performance Clackamas, the county strategic business plan focuses on five strategic priorities:

- **Build public trust through good government**
- **Grow a vibrant economy**
- **Build a strong infrastructure**
- **Ensure safe, healthy and secure communities**
- **Honor, utilize, promote and invest in our natural resources**

WES has developed strategic results specific to our business that align with the countywide strategic priorities. The Fiscal Year 2022/23 - 2026/27 (FY 22/23 - 26/27) Capital Improvement Plan (CIP) was developed to support WES in meeting our strategic results. The CIP puts forward a prioritized plan to maintain existing facilities, allow efficient, cost-effective operations and provide new infrastructure to protect human health and clean water, today and into the future.

Table of Contents

Page

CAPITAL IMPROVEMENT PROGRAM OVERVIEW

INTRODUCTION

The Clackamas County Board of Commissioners adopt the annual budget for WES. The goal of this document is to provide context and continuity for the budget and capital needs for the next five years.

A capital project is any physical asset acquired, constructed, financed, modified or replaced with a total capital cost of $5,000 or more and a useful life of 1 year or more. All capital projects have a definitive beginning and end. All costs needed to acquire, construct, finance or modify a physical asset are included in the estimate of a capital project's total cost, including engineering and project implementation costs. Expenses must be directly related to and primarily benefit a single capital project to be considered project costs.

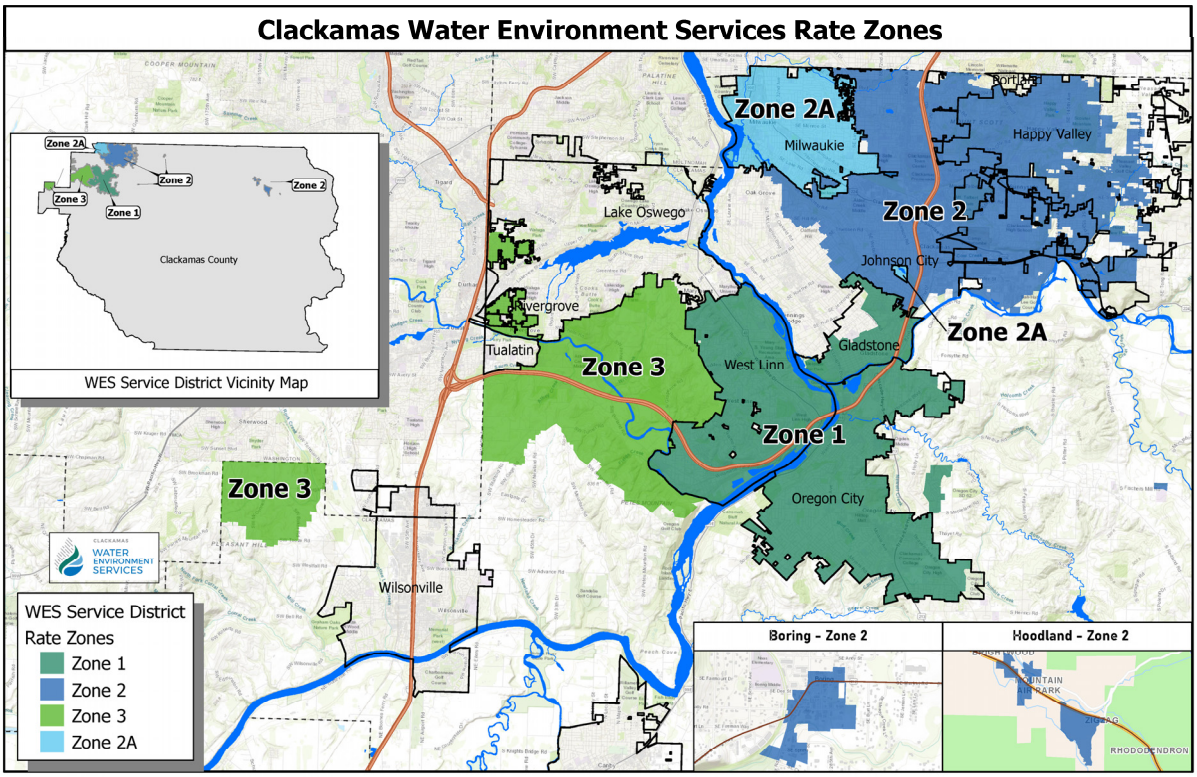
BACKGROUND

On behalf of our customers, WES operates and maintains more than 360 miles of sanitary sewer pipelines, interceptors and force mains, 21 wastewater pumping stations, five Water Resource Recovery Facilities (WRRFs), and the local collection system in Happy Valley and unincorporated areas within the service area. Each of the treatment facilities hold individual permits, four of which are National Pollution Discharge Elimination System (NPDES) permits that allow wastewater that is treated and cleaned to be discharged (effluent) to rivers in the state of Oregon. WES treats 6 billion gallons of wastewater per year and complies with all of the terms of its permits.

WES is also responsible for surface water management facilities. Though, WES owns a limited amount of surface water infrastructure, it operates the vast majority of surface water infrastructure constructed with transportation systems and residential subdivisions. This includes hundreds of miles of storm pipe, thousands of inlets, and over 300 water quality treatment facilities, in public right-of-ways and on private property. State and federal water quality regulations require that the public surface water system be adequately inspected, maintained, expanded and repaired.

The WES service area is shown in Figure 1. The service areas encompasses 63 square miles.

Figure 1. WES Service Area



RATE ZONE 1

Rate Zone 1 includes the Cities of Gladstone, Oregon City, West Linn and a small number of retail customers.

RATE ZONE 2

Rate Zone 2 includes four separate, noncontiguous sewer service areas including the unincorporated areas of Clackamas County, the City of Happy Valley, the western edges of Damascus, the communities of Hoodland, Boring, and Fischer's Forest Park, as well as a surface water management service area within the City of Happy Valley and in unincorporated Clackamas County. Rate Zone 2A includes the Cities of Milwaukie and Johnson City as wholesale customers.

RATE ZONE 3

Rate Zone 3 includes the City of Rivergrove and portions of unincorporated Clackamas County draining into the Tualatin River.

Sanitary Sewer and Wastewater Treatment

WES provides retail sanitary sewer services (administration, operation, and maintenance of the collection and conveyance systems including pipes and pump stations), to the cities of Happy Valley and Boring, to unincorporated portions of North Clackamas County, a portion of the former city of Damascus, the communities of the Highway 26 Hoodland Recreational Corridor including Wemme and Welches, Fischer's Forest Park near Redland and a small retail population outside of Oregon City. WES provides wholesale services (operation and maintenance of the water resource recovery facilities that treat and clean wastewater and return it to the rivers and streams) to the cities of Milwaukie, Johnson City, Oregon City, West Linn and Gladstone. Revenues derived from customer rates and development fees fund WES services. WES operates five wastewater treatment facilities: Tri-City Water Resource Recovery Facility (Tri-City WRRF), Kellogg Creek Water Resource Recovery Facility (Kellogg Creek WRRF), Hoodland Water Resource Recovery Facility (Hoodland WRRF), Boring Water Resource Recovery Facility (Boring WRRF) and Fischer's Forest Park Water Resource Recovery Facility (Fischer's Forest Park WRRF).

Tri-City WRRF, located in Oregon City, provides treatment for wastewater from the Zone 1 service area and for wastewater flow diverted from the Zone 2 service area, and then discharges effluent into the Willamette River. The liquid capacity of the treatment facility was expanded with a state-of-the-art membrane bioreactor system in 2012 to treat some wastewater diverted from the Zone 2 service area and is capable of producing effluent that meets Oregon's highest reclaimed water standards. The solids processing capacity of the facility was expanded in 2021. Digested sludge from the Kellogg Creek WRRF is also dewatered at the Tri-City WRRF until dewatering facilities are constructed at the Kellogg Creek WRRF.

Kellogg Creek WRRF, located in Milwaukie, began operation in 1974. Because of its constrained site, it cannot be expanded as its Zone 2 and Zone 2A service areas grow. Between 2008 and 2012, WES spent $124 million to construct an intertie pump station and pipeline to convey new wastewater flow to the Tri-City WRRF and expanded liquids handling capacity at the Tri-City WRRF. Currently, up to 12.5 million gallons per day (mgd) can be diverted from the Kellogg Creek WRRF Zone 2 service area to the Tri-City WRRF.

Hoodland WRRF, located in Welches, began operation in 1982 and serves the Highway 26 Hoodland Recreational Corridor including Wemme and Welches. The service area includes six pump stations, 22 miles of pipelines and serves a population of approximately 4,000. The facility provides secondary treatment with a capacity of 0.9 mgd. and discharges effluent to the Sandy River.

Boring WRRF, serves 60 households and businesses within the city of Boring. The facility consists of lagoons and a sand filter to provide tertiary treatment for up to 20,000 gallons per day.

Fischer's Forest Park WRRF began operation in 1971. It is the smallest of the treatment facilities serving 26 single-family homes in a subdivision in the Redland area. Unlike the other WES treatment facilities, this facility does not discharge to a river, but has a permitted sub-surface discharge via a gravity drain field.

Surface Water Program

Clackamas Water Environment Services performs surface and stormwater management for the purpose of providing nonpoint source pollution controls to meet state and federal regulations. This includes the construction of capital improvements to address surface water quality and quantity, conducting basin analyses and other studies to locate and prioritize necessary capital improvements, and to engage in non-structural solutions including, but not limited to; maintenance of surface water facilities, public education, water quality monitoring programs, and preparation of intergovernmental agreements for a regional approach to surface water quality and quantity matters.

WES administers a surface water program to protect surface water and groundwater resources from polluted storm runoff, and to coordinate compliance with state and federal water pollution laws and cleanup plans. Primary responsibilities of this program include planning and building stormwater control facilities, water quality monitoring of stormwater runoff and streams, public education and outreach on watershed health, development and enforcement of water quality regulations, coordination with other municipalities and maintenance of the public stormwater systems within our service area.

As the service area's population continue to increase, WES is committed to responsible stormwater management to keep our waterways clean for people, fish, and wildlife. Unfortunately, many past drainage and stormwater management practices and regulations have proven inadequate to prevent runoff impacts to streams and groundwater. Thousands of developed acres in Clackamas County currently contribute to problems in streams, lakes, and rivers. Expanding and improving the stormwater management infrastructure are the primary means of controlling runoff from areas of new growth and for improving problems caused by uncontrolled runoff from existing developed areas.

Impacts of stormwater runoff on surface water are well-documented and widespread. In Clackamas County, runoff contributes to impaired stream health, diminished fish populations and degraded habitat conditions. These impacts have been observed in the WES Watershed Action Plans, in various environmental studies over the past 10 years and documented in Oregon's list of impaired water bodies.

Stormwater runoff impacts water bodies in two critical ways; water quality and water quantity. Stormwater runoff from roads, fields, rooftops, parking lots, and yards carries with it a variety of pollutants deposited by everyday activities. Fertilizers, oil, grease, heavy metals, pesticides, chemicals, soil, and animal wastes can make their way to water bodies in stormwater runoff. These pollutants degrade stream water quality, posing risks to both human health and stream life. Hard surfaces and cleared areas increase the amount and speed of runoff flowing into streams. The result is often streams that have too much flow during storms and too little flow during non-storm periods. Left unchecked, this leads to increased erosion during storms, decreased habitat quality, and negative impacts to groundwater recharge, stream life, and overall water quality. Keeping existing stormwater facilities in good repair, updating old facilities, constructing new projects to remove pollutants or slow down runoff, planting trees, preserving intact forested or streamside habitats and rehabilitating stream channels are ways WES and our performance partners can help reduce the impacts of stormwater runoff. These activities and projects are the WES Stormwater Capital Program.

INDEX OF CAPITAL FUNDS

Capital expenditures are attributed to one or more capital funds depending on the purpose and location of the asset.

Fund	Fund Title	Description
632	WES Sanitary Sewer System Development Charge (SDC) Fund	Provides for construction of sanitary sewer projects attributable to growth and therefore eligible for SDC funding.
639	WES Sanitary Sewer Construction Fund	Provides for construction of sanitary sewer projects financed either by bond proceeds, grants, general fund revenues or other resources.
642	WES Surface Water System Development Charge Fund	Provides for construction of surface water projects attributable to growth and therefore eligible for SDC funding.
649	WES Surface Water Construction Fund	Provides for construction of surface water projects financed either by bond proceeds, grants, general fund revenues or other resources

SANITARY SEWER PROJECTS

SANITARY SEWER PROJECT SUMMARY

WES is finalizing a wastewater comprehensive plan to set forth capital needs for the next 20 years and consolidate recommendations from several ongoing planning efforts. Future five-year CIPs will reflect the results of those plans. The FY 22/23 - FY 26/27 CIP was developed as a result of coordination between the capital planning team and operations and maintenance staff. The engineering, asset management and operations teams met several times to itemize ongoing and anticipated projects, then prioritized the projects according to the following criteria:

- Health and Safety
- Regulatory Compliance
- Risk Reduction
- Reliability
- Innovation
- Implementation Complexity

Projects that received the highest scores when ranked against these criteria were funded and will be carried forward in subsequent years of the CIP until completion.

SANITARY SEWER CIP

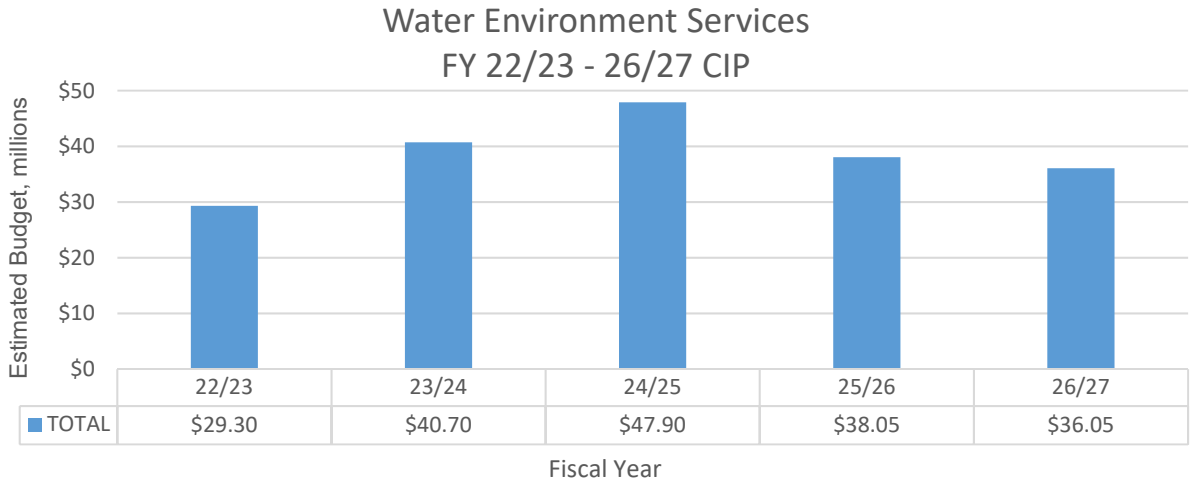
For sanitary sewer projects, projects are organized according to their location and/or function. Project types are Treatment (Tri-City, Kellogg Creek, Hoodland, Boring, Fischer's Forest Park), Collection System, Fleet, Asset Management and Pump Stations. Collection System projects include those for facilities designed, owned and maintained by WES. Asset Management projects include itemizing and characterizing the condition of our assets and prioritizing replacement needs.

Categories of projects and their corresponding projected costs for the next five fiscal years are shown in Table 1 and Figure 2.

Table 1. Sanitary Sewer Capital Budget by Project Type/Location

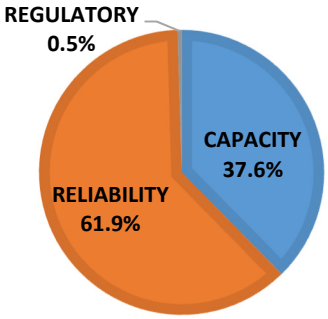
Project Type	Capital Budget, $ Million				
	22/23	**23/24**	**24/25**	**25/26**	**26/27**
Tri-City WRRF	$ 9.1	$ 23.6	$ 23.8	$ 14.4	$ 9.5
Kellogg Creek WRRF	$ 4.4	$ -	$ 0.55	$ 1.5	$ 2.5
Hoodland WRRF	$ -	$ -	$ -	$ -	$ -
Boring WRRF	$ -	$ -	$ -	$ -	$ -
Fischer Forest Park WRRF	$ 0.8	$ -	$ -	$ -	$ -
Collection System	$ 12.55	$ 15.4	$ 21.8	$ 20.4	$ 22.2
Fleet	$ 0.7	$ 0.75	$ 0.8	$ 0.8	$ 0.8
OM Asset Management	$ 0.8	$ 0.8	$ 0.8	$ 0.8	$ 0.8
Pump Stations	$ 0.5	$ 0.05	$ 0.05	$ 0.05	$ 0.05
Water Quality Lab	$ 0.8	$ -	$ -	$ -	$ 0.1
Development Review	$ 0.1	$ 0.1	$ 0.1	$ 0.1	$ 0.1
Total	**$ 29.30**	**$ 40.70**	**$ 47.90**	**$ 38.05**	**$ 36.05**

Figure 2. Sanitary Sewer Capital Budget ($ Million)



Some of the CIP projects will provide capacity for growth and are eligible to be funded, in whole or part, by system development charges (SDCs). Some projects are required to maintain the reliability and operability of our infrastructure. Figure 3 shows the breakdown of the CIP by project driver in terms of dollars. SDC-eligible project expenses may initially be funded with debt proceeds from the construction fund and the principal and interest on the debt subsequently paid from the SDC fund.

Figure 3. Sanitary Sewer Capital Budget Breakdown by Project Driver



FISCAL YEAR 2022-23 MAJOR PROJECTS

Of the $29.2 million in the FY 22/23 capital budget, nearly $19 million is expected to be spent on the following projects:

Tri-City WRRF Wet Weather Outfall Project - $6.5 million

Projected flows to the Tri-City WRRF were developed as part of the Collection System Master Plan (CSMP) and are expected to be approximately 176 MGD under build-out conditions if I/I reductions recommended in the CSMP are achieved. The capacity of the existing Tri-City WRRF outfall is approximately 75 MGD and is expected to be exceeded as flows increase as projected in the CSMP. The capacity of the new outfall will be higher, provide improved mixing over the existing outfall and have sufficient capacity for decades to come. At buildout, peak wet weather capacity will be met using both the new and existing outfall. The project is expected to be complete in FY 2025. Total capital project cost is estimated at $54.6M

Multiple Pump Station Upgrade Project - $3.5 million

Several pump stations are in need of rehabilitation; and a variety of upgrades to improve reliability and condition including safety, structural, mechanical, electrical and control system improvements. The pump stations include Sieben Lane, South Welches, Golf Course Terrace, Gladstone, Clackamas, 82nd Drive, Bolton, River Street and Timberline Rim. The project provides the opportunity for greater efficiencies by developing standards for pump station design and construction. The work will be designed as one project and construction will occur in phases over several years and under separate construction contracts. High priority work will be constructed in FY 22/23. Estimated total capital cost is $10.8M.

Clackamas Interceptor Capacity Improvements Project - $1.65 million

The Clackamas Interceptor is lacking capacity to serve current and future ratepayers and needs rehabilitation in some areas. Conceptual design has been completed and design is underway. Construction will be phased over the next decade in three or four phases and will include the Mt Scott Interceptor and the Upper, Middle and Lower Clackamas Interceptor. The total capital cost of the project is estimated at $39.1M.

Kellogg Creek WRRF Projects - $4.4 million

Work to upgrade the Kellogg Creek Facility is continuing with construction on three projects:

- Influent Pump Station Pumps 2 and 4 – Replaces the two larger (14 MGD) pumps, motors and drives.
- Secondary Clarifier Mechanisms and Weirs – Recoats concrete and equipment and replaces drives. Weirs were leveled in FY 21/22 which improved treatment performance.
- Aeration Basin Improvements – Replaces aging instrumentation and valves to improve blower control which saves energy and improves process performance.

Regional Infiltration/Inflow (I/I) Control Cost Share - $2.9 million

The WES sanitary capital plan is based on a 65% reduction of I/I in 19 key basins. To help achieve this reduction, WES has or is pursuing Intergovernmental Agreements (IGA) with five partner cities. With the IGAs, WES will provide 33% funding for approved I/I reduction projects. Three projects were approved for FY 22/23.

FISCAL YEAR 2021-22 PROJECT PROGRESS

WES staff is continuously looking at future needs. The WES capital team is also concurrently managing the design and construction of numerous projects. In FY 21/22 construction of two major projects were completed while many more were in the design phase. Below are several highlights of our work:

COMPLETED: Tri-City WRRF Solids Handling Improvement Project – Construction Spent/Budget $35.5 million

WES expanded and refurbished the solids handling processes at the Tri-City WRRF. The project included a third anaerobic digester, upgraded dewatering facilities, electrical distribution upgrades, a digester feed tank, digested sludge storage, a cake storage and load out facility, centrate storage, biogas utilization and upgrades to existing facilities. Construction began in 2018 and was completed on budget.

COMPLETED: Kellogg WRRF Improvements Project – Construction Spent/Budget: $17.4 million

Asset renewal and replacement at the Kellogg WRRF had been deferred for many years while a determination was made regarding the future of the facility. When it was determined that the facility would continue its service, but with a capped capacity, several areas of the facility required upgrades to ensure a reliable functional facility. This project included new W3 pumps, replacement aeration blowers, polymer system for the thickening process, odor control improvements, flow management, an upgraded power distribution system, retrofit of the return sludge pump station, influent pump station improvements, and associated yard piping. Construction began in 2017 and was completed under budget.

Kellogg Creek WRRF Projects: Estimated Spent to Date $0.8M

Work continues at Kellogg Creek with design and bidding of three projects in FY 21/22. The two larger (14 MGD) influent pump station pumps are being replaced, along with their motors and drives. Weirs on the secondary clarifiers were out of level due to settling of the tanks. They were leveled which greatly improved performance. During construction WES engineers became aware of the need for replacing the drives. New coatings are also being applied while the tanks are down. Finally, WES completed a design project to re-coat the aeration basin concrete, replace gates and rehabilitate the aeration system. When complete, the project will significantly improve process performance and save energy.

Fischer's Forest Park (FFP) Improvements – Estimated Spent to Date $0.26M

The system consists of a collection system and discharges to a treatment system similar to a septic system. Both the collection and treatment systems are in need of significant rehabilitation. WES staff and consultants have completed the design process. The first phase of construction is underway and will replace pipes in the collection system to reduce peak flows. The treatment system will be replaced during the 2023 dry season.

Tri-City Outfall Project – Estimated Spent to Date: $1.9 Million

Projected flows to the Tri- City WRRF were developed as part of the CSMP and are expected to be approximately 176-MGD under buildout conditions if I/I reduction recommended in the CSMP are achieved. The capacity of the existing Tri-City WRRF outfall is approximately 75 MGD and is at capacity. The new outfall, along with the existing outfall will provide capacity for buildout conditions. Work completed to date includes the routing study, conceptual design and significant environmental permit submittals. A progressive design build contractor is under contract to complete the detailed design.

SANITARY SEWER PROJECT LIST BY PROJECT AREA

The following tables summarize funded projects listed in the CIP by project area. Individual project sheets for all projects are included in Appendix A. As a part of our annual budget and CIP development process, project planning estimates will be updated to reflect our most current information and market conditions. Projected budget beyond the next five years may be subject to change.

TABLE 2. TRI-CITY WRRF PROJECT SUMMARY

FUNDING SOURCE	FY 22/23 BUDGET $	FY 23/24 PROJECTED $	FY 24/25 PROJECTED $	FY 25/26 PROJECTED $	FY 26/27 PROJECTED $	FY 22/23-26/27 PROJECTED $	FY 27/28-34/35 PROJECTED $	TOTAL FY 22/23-34/35 PROJECTED, $
CONST	6,820,000	18,870,000	18,544,000	11,392,000	3,576,250	59,202,250	27,139,250	86,341,500
SDC	2,280,000	4,710,000	5,256,000	3,008,000	5,936,250	21,190,250	29,186,250	50,376,500
TOTAL	9,100,000	23,580,000	23,800,000	14,400,000	9,512,500	80,392,500	56,325,500	136,718,000

TABLE 3. KELLOGG CREEK WRRF PROJECT SUMMARY

FUNDING SOURCE	FY 22/23 BUDGET $	FY 23/24 PROJECTED $	FY 24/25 PROJECTED $	FY 25/26 PROJECTED $	FY 26/27 PROJECTED $	FY 22/23-26/27 PROJECTED $	FY 27/28-34/35 PROJECTED $	TOTAL FY 22/23-34/35 PROJECTED, $
CONST	4,400,000	-	561,000	1,522,000	2,522,000	9,005,000	32,475,000	41,480,000
SDC	-	-	-	-	-	-	-	-
TOTAL	4,400,000	-	561,000	1,522,000	2,522,000	9,005,000	32,475,000	41,480,000

TABLE 4. HOODLAND CREEK WRRF PROJECT SUMMARY

FUNDING SOURCE	FY 22/23 BUDGET $	FY 23/24 PROJECTED $	FY 24/25 PROJECTED $	FY 25/26 PROJECTED $	FY 26/27 PROJECTED $	FY 22/23-26/27 PROJECTED $	FY 27/28-34/35 PROJECTED $	TOTAL FY 22/23-34/35 PROJECTED, $
CONST	-	-	-	-	-	-	5,250,000	5,250,000
SDC	-	-	-	-	-	-	5,250,000	5,250,000
TOTAL	-	-	-	-	-	-	10,500,000	10,500,000

TABLE 5. BORING WRRF PROJECT SUMMARY

FUNDING SOURCE	FY 22/23 BUDGET $	FY 23/24 PROJECTED $	FY 24/25 PROJECTED $	FY 25/26 PROJECTED $	FY 26/27 PROJECTED $	FY 22/23-26/27 PROJECTED $	FY 27/28-34/35 PROJECTED $	TOTAL FY 22/23-34/35 PROJECTED, $
CONST	-	-	-	-	-	-	10,000,000	10,000,000
SDC	-	-	-	-	-	-	-	-
TOTAL	-	-	-	-	-	-	10,000,000	10,000,000

TABLE 6. FISCHER FOREST PARK WRRF PROJECT SUMMARY

FUNDING SOURCE	FY 22/23 BUDGET $	FY 23/24 PROJECTED $	FY 24/25 PROJECTED $	FY 25/26 PROJECTED $	FY 26/27 PROJECTED $	FY 22/23-26/27 PROJECTED $	FY 27/28-34/35 PROJECTED $	TOTAL FY 22/23-34/35 PROJECTED, $
CONST	800,000	-	-	-	-	800,000	-	800,000
SDC	-	-	-	-	-	-	-	-
TOTAL	800,000	-	-	-	-	800,000	-	800,000

TABLE 7. COLLECTION SYSTEM PROJECT SUMMARY

FUNDING SOURCE	FY 22/23 BUDGET $	FY 23/24 PROJECTED $	FY 24/25 PROJECTED $	FY 25/26 PROJECTED $	FY 26/27 PROJECTED $	FY 22/23-26/27 PROJECTED $	FY 27/28-34/35 PROJECTED $	TOTAL FY 22/23-34/35 PROJECTED, $
CONST	7,133,000	7,001,250	8,882,250	8,970,000	9,470,000	41,456,500	25,716,000	67,172,500
SDC	5,423,772	8,406,600	12,921,100	11,392,000	12,740,000	50,883,472	35,644,000	86,527,472
TOTAL	12,556,772	15,407,850	21,803,350	20,362,000	22,210,000	92,339,972	61,360,000	153,699,972

TABLE 8. FLEET SUMMARY

FUNDING SOURCE	FY 22/23 BUDGET $	FY 23/24 PROJECTED $	FY 24/25 PROJECTED $	FY 25/26 PROJECTED $	FY 26/27 PROJECTED $	FY 22/23-26/27 PROJECTED $	FY 27/28-34/35 PROJECTED $	TOTAL FY 22/23-34/35 PROJECTED, $
CONST	700,000	750,000	800,000	830,000	805,000	3,885,000	-	3,885,000
SDC	-	-	-	-	-	-	-	-
TOTAL	700,000	750,000	800,000	830,000	805,000	3,885,000	-	3,885,000

TABLE 9. OM ASSET MANAGEMENT PROJECT SUMMARY

FUNDING SOURCE	FY 22/23 BUDGET $	FY 23/24 PROJECTED $	FY 24/25 PROJECTED $	FY 25/26 PROJECTED $	FY 26/27 PROJECTED $	FY 22/23-26/27 PROJECTED $	FY 27/28-34/35 PROJECTED $	TOTAL FY 22/23-34/35 PROJECTED, $
CONST	800,000	800,000	800,000	800,000	800,000	4,000,000	5,600,000	9,600,000
SDC	-	-	-	-	-	-	-	-
TOTAL	800,000	800,000	800,000	800,000	800,000	4,000,000	5,600,000	9,600,000

TABLE 10. PUMP STATION PROJECT SUMMARY

FUNDING SOURCE	FY 22/23 BUDGET $	FY 23/24 PROJECTED $	FY 24/25 PROJECTED $	FY 25/26 PROJECTED $	FY 26/27 PROJECTED $	FY 22/23-26/27 PROJECTED $	FY 27/28-34/35 PROJECTED $	TOTAL FY 22/23-34/35 PROJECTED, $
CONST	50,000	50,000	50,000	50,000	50,000	250,000	350,000	600,000
SDC	-	-	-	-	-	-	-	-
TOTAL	50,000	50,000	50,000	50,000	50,000	250,000	350,000	600,000

TABLE 11. WATER QUALITY LAB PROJECT SUMMARY

FUNDING SOURCE	FY 22/23 BUDGET $	FY 23/24 PROJECTED $	FY 24/25 PROJECTED $	FY 25/26 PROJECTED $	FY 26/27 PROJECTED $	FY 22/23-26/27 PROJECTED $	FY 27/28-34/35 PROJECTED $	TOTAL FY 22/23-34/35 PROJECTED, $
CONST	773,000	-	-	-	100,000	873,000	700,000	1,573,000
SDC	-	-	-	-	-	-	-	-
TOTAL	773,000	-	-	-	100,000	873,000	700,000	1,573,000

SURFACE WATER PROJECTS

SURFACE WATER PROGRAM SUMMARY

The Policy for the stormwater capital program is to:

- Meet the Phase 1 Municipal Stormwater Permit requirements through stormwater capital planning and capital construction.

WES goals for stormwater capital projects include:

- Protect and enhance streams and wetlands through planning and constructing modifications to the stormwater infrastructure.
- Minimize the degradation of receiving waters from impacts attributable to stormwater runoff in existing developed areas.
- Maximize benefits of public land where appropriate by providing multiple uses including recreation, and by leveraging funding from multiple sources.
- Provide stormwater facilities for future development and redevelopment.

In support of WES policies and goals, the capital planning process strives to:

- Prioritize projects with the greatest potential to support multiple programs and goals, including local and regional fish recovery, habitat enhancement and water cleanup goals.
- Ensure a reliable scientific and engineering basis for projects.
- Establish that each project in the plan is needed, feasible and cost-effective.
- Focus limited resources on the most pressing concerns and the most efficient solutions.
- Incorporate environmental benefits into needed infrastructure repair projects.
- Maintain a sufficient list of potential projects to enable replacement of any projects that become infeasible, and to take advantage of funding opportunities.

Prioritization

A robust capital planning program identifies more projects than can be implemented in a five-year plan. Prioritization is the process of determining which of the feasible projects of each type best meet program goals and provide the most cost-effective solutions. Within the constraints of regulatory requirements and available funding, the subsequent programming step strives to implement higher-priority projects. Each project type requires slightly different prioritization criteria; in all cases, criteria are intended to be simple yet meaningful. The benefit screen provides an initial prioritization step for all project types by forwarding only those that appear to provide significant natural resource benefits. Another key consideration goes beyond the parameters of stormwater management: in all cases, priority is given to projects that also meet other related city and county goals.

Project Types

Surface water capital projects come in many shapes and sizes, which are grouped into six basic types for evaluation and prioritization purposes.

Capital Repairs

Capital repair projects are stormwater facility repairs that substantially extend the life of the facility. Repairs of this kind are required under the municipal stormwater permit; however, due to the often-high costs associated with repair work, the permit does not set a time limit for completion. Typical repair activities include replacing pipes and flow control structures, removing large amounts of accumulated sediment or vegetation, addressing drainage problems and replacing retaining walls or access roads.

Repairing and maintaining existing infrastructure is a priority. Routine inspection of WES owned or operated stormwater facilities identifies repair needs. Given regulatory requirements and funding constraints, WES intends to address as many of the existing list of repair projects as feasible.

Repair projects are required, and therefore cannot truly be subjected to a screening process; however, screening scores along with watershed assessment information and engineering judgment may be used to prioritize those projects where continued malfunction poses the most serious problems, particularly threatening property and safety.

Water Quality Retrofits

A retrofit is like a remodel. Water quality retrofits include a variety of modifications to existing stormwater infrastructure to add or enhance water quality treatment, including installation of cartridge filter systems, conversion of swales to rain gardens or wet ponds, and other improvements to stormwater facilities or conveyance systems where water quality treatment is either inadequate or can be significantly improved.

Water quality retrofits typically qualify for the permit-required strategy, so a significant annual investment in these projects is expected. Water quality retrofits are located primarily in areas that have been urbanized for many years, as these areas were often developed with little or no water quality treatment and contribute disproportionately to water quality degradation. The focus is on areas with no treatment, followed by those with outdated treatment facilities.

Water quality retrofit projects are prioritized based on the severity of the project need and the value they provide.

Hydrology Improvement Facilities

Hydrology improvement facilities address problems from too much runoff. These improvements include new facilities, retrofits focused on providing detention or retention, and structural low impact development practices aimed at reducing the volume of runoff.

Hydrology improvement facilities are needed to meet obligations under permit conditions and total maximum daily load (TMDLs). These projects often address significant stormwater runoff impacts. Hydrology improvement facilities are focused on urbanizing areas where streams are still in the process of adjusting to development and increased runoff. In these areas, increased flow control can slow ongoing stream degradation, reduce pollutant loads discharged to waterways and help promote the eventual recovery of aquatic systems.

Hydrology improvement facilities are prioritized based on the severity of the project need and the value they provide.

Underground Injection Control (UIC) Retrofits

UIC retrofit projects improve stormwater infiltration systems that are a demonstrated threat to groundwater quality. Improvements typically include the addition of upstream treatment devices or the replacement of failing infiltration wells with stormwater retention facilities. Improvements may also include installation of spill-containment structures to mitigate the impact of accidental discharges of pollutants.

Under state regulatory requirements, WES has identified UICs and is currently assessing each one's risk of polluting groundwater. The Districts' obligations to retrofit failing or at-risk facilities is site-specific and situational. Some UIC retrofit projects may also satisfy municipal stormwater permit requirements for the retrofits strategy.

UIC retrofits are prioritized based on value and the results of a risk analysis.

Restoration

WES enhances public and private properties with native vegetation and trees. These projects maximize the ecological and stormwater benefits of the properties, supporting numerous local and regional environmental goals. In-stream habitat improvement projects typically include channel enhancements or stabilization, floodplain reconnections or culvert/fish barrier removal.

Tree planting projects provide stormwater benefits that often qualify for permit required controls, so they may be included in stormwater capital plans; however, these projects represent only a subset of the overall restoration program. Habitat improvement projects are usually very cost effective methods to improve stream habitat and function where past impacts have been significant. In-stream habitat improvement projects often rely on the availability of grant funding or use remaining budget after regulatory requirements have been met.

Tree planting projects typically have a fairly constant per-acre cost across all projects, so a cost/benefit analysis does not provide significant basis for prioritization. Priority is therefore given to projects that

directly benefit streams where the Oregon Department of Environmental Quality (DEQ) has established water cleanup plans to address elevated water temperatures. At both levels, projects that support multiple program goals are given priority. In-stream habitat improvements are prioritized based on value, applicability to recovery plans, and the degree to which the project complements other planned stormwater projects within a drainage area.

Property Acquisition for Stormwater Benefit

Occasionally, WES purchases sites with existing high-quality habitat along streams, in wetlands, or in forested upland areas. Preservation of these areas provides significant long-term watershed benefits, including stormwater control. Property purchases are often costly and are dependent on the availability of willing sellers; however, preventing stormwater problems before they occur is among the most cost-beneficial means of managing stormwater impacts.

Property acquisitions are prioritized and pursued as opportunities are available. When possible, WES seeks to leverage capital funds with grant funds, and with partnership funds, such as from parks and open space programs. Selection and prioritization of property acquisitions is coordinated through various performance partners including the WES sanitary sewer utilities, parks and open space programs, and watershed councils.

SURFACE WATER CIP

Categories of projects and their corresponding projected costs for the next five fiscal years are shown in the following table. Costs shown are for funded projects; unfunded projects are not included.
See project detail sheets in Appendix B for more information.

Table 12. Surface Water Project Budgets by Project Area.

Project Type	Capital Budget, $ Million				
	22/23 AMENDED	23/24	24/25	25/26	26/27
3-Creeks Water Quality Project	$ 0.25	$ 0.25	$ 1.5	$ 1.5	$ 0.1
Carli Creek Water Quality Retrofit	$ 0.04	$ 0.05	$ -	$ -	$ -
Small Projects – Drainage System Modifications	$ 0.5	$ 0.25	$ 0.1	$ 0.1	$ 0.1
Detention Pond Repair/Rehab	$ 0.1	$ 0.1	$ 0.2	$ 0.2	$ 0.2
Small Storm System – Emergency Repairs	$ 0.1	$ 0.1	$ 0.1	$ 0.1	$ 0.1
Aldercrest Culvert Replacement & Kellogg Creek Restoration	$ 0.1	$ 0.23	$ 0.77	$ 0.77	$ -
Thiessen Culvert Replacement & Kellogg Creek Restoration	$ 0.05	$ 0.06	$ 0.34	$ 0.34	$ -
SE Clackamas Rd Drainage Infrastructure	$ 0.04	$ 0.04	$ 0.21	$ 0.21	$ -
Total	$ 1.18	$ 1.08	$ 3.22	$ 3.22	$ 0.5

SURFACE WATER PROJECT LIST BY FUNDING SOURCE

TABLE 13. SUMMARY OF FUNDED SURFACE WATER PROJECTS

FUNDING SOURCE	FY 22/23 AMENDED BUDGET $	FY 23/24 PROJECTED $	FY 24/25 PROJECTED $	FY 25/26 PROJECTED $	FY 26/27 PROJECTED $	FY 22/23-26/27 PROJECTED $	FY 27/28-34/35 PROJECTED $	TOTAL FY 22/23-34/35 PROJECTED, $
CONST	1,180,000	1,083,000	3,223,000	3,223,000	500,000	9,209,000	-	9,209,000
SDC	-	-	-	-	-	-	-	-
TOTAL	1,180,000	1,083,000	3,223,000	3,223,000	500,000	9,209,000	-	9,209,000

Appendix A

Sanitary Sewer Project Detail Sheets

PROJECT DETAIL

Project Name: MBR Cassette Replacement

Project Number: TBD

Project Subprogram: Capital Delivery/Tri-City WRRF

Fund: 639

Project Status: Not Active

Project Description:

The Membrane Bioreactor (MBR) was the centerpiece of the $132 million capacity management program that was completed in 2012. MBR cassettes require periodic replacement. This project will replace a portion of the cassettes in the MBR when the cassettes reach the end of their useful life. The cost is based on cassettes that utilize a new aeration system developed by GE Water Process Technology which claims to reduce air requirements by 25-30%. An evaluation of alternatives will be performed as part of the project.

Project Costs:

FUNDING SOURCE	ESTIMATED SPENT TO DATE	FY 22/23 BUDGET	FY 23/24 PROJECTED	FY 24/25 PROJECTED	FY 25/26 PROJECTED	FY 26/27 PROJECTED	TOTAL FY 22-27 PROJECTED	TOTAL FY 28-34 PROJECTED	TOTAL PROJECT
CONST								$ 630,000	$ 630,000
SDC									
TOTAL								$ 630,000	$ 630,000

PROJECT DETAIL

Project Name: TC WRRF Wet Weather Expansion

Project Number: TBD

Project Subprogram: Capital Delivery/Tri-City WRRF

Fund: 632/639

Project Status: Not Active

Project Description:

The results of the Collection System Master Plan show that peak wet weather flow to the TC WRRF currently exceeds its hydraulic capacity. Current hydraulic capacity is 70 MGD. Projected 2040 peak flow is 105 MGD assuming I/I reduction goals (65% in 19 basins) are met. The Willamette Facilities Plan (WFP) recommends an expansion of the hydraulic capacity to include new headworks, high-rate clarification and disinfection. **Capital cost of the recommended facilities is estimated at $49M and will continue beyond FY 27.**

Project Costs:

FUNDING SOURCE	ESTIMATED SPENT TO DATE	FY 22/23 BUDGET	FY 23/24 PROJECTED	FY 24/25 PROJECTED	FY 25/26 PROJECTED	FY 26/27 PROJECTED	TOTAL FY 22-27 PROJECTED	TOTAL FY 28-34 PROJECTED	TOTAL PROJECT
CONST						$ 2,436,250	$ 2,436,250	$ 21,936,250	$ 24,372,500
SDC						$ 2,436,250	$ 2,436,250	$ 21,936,250	$ 24,372,500
TOTAL						$ 4,872,500	$ 4,872,500	$ 43,872,500	$ 48,745,000

PROJECT DETAIL

Project Name: Tri-City WRRF Headworks Rehabilitation

Project Number: TBD

Project Subprogram: Capital Delivery/Tri-City WRRF

Fund: 639

Project Status: Not Active

Project Description:

The Willamette Facilities Plan identified the need to refurbish the existing headworks at the Tri-City Water Resource Recovery Facility. Project costs include construction and engineering services during construction. The refurbishments to be considered include replacing existing mechanical bar screens, rehabilitating piping and gates, repairing channel concrete, and rehabilitating the headworks structural building.

Project Costs:

FUNDING SOURCE	ESTIMATED SPENT TO DATE	FY 22/23 BUDGET	FY 23/24 PROJECTED	FY 24/25 PROJECTED	FY 25/26 PROJECTED	FY 26/27 PROJECTED	TOTAL FY 22-27 PROJECTED	TOTAL FY 28-34 PROJECTED	TOTAL PROJECT
CONST								$ 2,223,000	$ 2,223,000
SDC									
TOTAL								$ 2,223,000	$ 2,223,000

PROJECT DETAIL

Project Name: Relocate Tri-City Maintenance Building

Project Number: TBD

Project Subprogram: Capital Delivery/Tri-City WRRF

Fund: 639

Project Status: Not Active

Project Description:
The Tri-City Administration Building is in need of a remodel to address generally outdated and deteriorated spaces and create workspaces for current and future staff. Currently, the building houses a garage for several large trucks that require overnight freeze protection. Relocating the garage is relatively lower cost than constructing new admin space and will allow the admin space to be more effectively used. Cost shown does not include property.

Project Costs:

FUNDING SOURCE	ESTIMATED SPENT TO DATE	FY 22/23 BUDGET	FY 23/24 PROJECTED	FY 24/25 PROJECTED	FY 25/26 PROJECTED	FY 26/27 PROJECTED	TOTAL FY 22-27 PROJECTED	TOTAL FY 28-34 PROJECTED	TOTAL PROJECT
CONST		$ 600,000	$ 600,000				$ 1,200,000		$ 1,200,000
SDC									
TOTAL		$ 600,000	$ 600,000				$ 1,200,000		$ 1,200,000

PROJECT DETAIL

Project Name: Landfill Grading and Fill Removal

Project Number: 70022305

Project Subprogram: Capital Delivery/Tri-City WRRF

Fund: 632

Project Status: Active

Project Description:
During a previous project excess fill was stockpiled on WES-owned property to the south of the current facility. The fill needs to be removed to comply with Land Use approval for the previous project. This project includes grubbing the site, and the removal of approximately 35,000 cubic yards of excess fill dirt and grading the site.

Project Costs:

FUNDING SOURCE	ESTIMATED SPENT TO DATE	FY 22/23 BUDGET	FY 23/24 PROJECTED	FY 24/25 PROJECTED	FY 25/26 PROJECTED	FY 26/27 PROJECTED	TOTAL FY 22-27 PROJECTED	TOTAL FY 28-34 PROJECTED	TOTAL PROJECT
CONST									
SDC	$ 15,000	$ 400,000					$ 400,000		$ 415,000
TOTAL	$ 15,000	$ 400,000					$ 400,000		$ 415,000

PROJECT DETAIL

Project Name: Recoat Chlorine Contact Basins and Replace Gates

Project Number: 700222312

Project Subprogram: Capital Delivery/Tri-City WRRF

Fund: 639

Project Status: Active

Project Description:

The Willamette Facilities Plan Condition Assessment identified two items related to the chlorine contact basins (CCB). The first is the concrete inside the chlorine contact basins is showing signs of deterioration and recommended the surface be repaired and coated. The second item is the replacement of the influent gates. This project will be addressed in two phases, starting with the influent gate and actuator replacement in FY 22/23. The concrete surface repair work will be further evaluated to develop a final plan for addressing this condition item identified by the WFP and to extend the life of the basins.

Project Costs:

FUNDING SOURCE	ESTIMATED SPENT TO DATE	FY 22/23 BUDGET	FY 23/24 PROJECTED	FY 24/25 PROJECTED	FY 25/26 PROJECTED	FY 26/27 PROJECTED	TOTAL FY 22-27 PROJECTED	TOTAL FY 28-34 PROJECTED	TOTAL PROJECT
CONST	$ 30,000	$ 100,000				$ 540,000	$ 640,000		$ 670,000
SDC									
TOTAL	$ 30,000	$ 100,000				$ 540,000	$ 640,000		$ 670,000

PROJECT DETAIL

Project Name: Primary Sludge Thickening

Project Number: TBD

Project Subprogram: Capital Delivery/Tri-City WRRF

Fund: 632/639

Project Status: Not Active

Project Description:
The Willamette Facilities Plan projects that the current hydraulic digester capacity will be met prior to the organic loading capacity. Currently primary sludge is not thickened. Thickening primary sludge will extend current hydraulic digester capacity beyond 2040. An evaluation of he preferred thickening process will be evaluated during preliminary design.

Project Costs:

FUNDING SOURCE	ESTIMATED SPENT TO DATE	FY 22/23 BUDGET	FY 23/24 PROJECTED	FY 24/25 PROJECTED	FY 25/26 PROJECTED	FY 26/27 PROJECTED	TOTAL FY 22-27 PROJECTED	TOTAL FY 28-34 PROJECTED	TOTAL PROJECT
CONST			$ 170,000				$ 170,000	$ 1,250,000	$ 1,420,000
SDC			$ 510,000				$ 510,000	$ 3,750,000	$ 4,260,000
TOTAL			$ 680,000				$ 680,000	$ 5,000,000	$ 5,680,000

PROJECT DETAIL

Project Name: Primary Clarifier Rehabilitation

Project Number: 700221323 / P632324

Project Subprogram: Capital Delivery/Tri-City WRRF

Fund: 639

Project Status: Active

Project Description:

This project provides a replacement of the mechanical equipment associated with the primary sedimentation basins and rehabilitation of the concrete basin walls, which had deteriorated following exposure to continuous wear from grit and hydrogen sulfide. The mortar repair will help maintain the integrity of the structure and the mechanical rehab will provide an upgrade of equipment that is original to the plant. There are six primary sedimentation basins, two of which can be off-line at a time. The plan is to work on two tanks/year.

Project Costs:

FUNDING SOURCE	ESTIMATED SPENT TO DATE	FY 22/23 BUDGET	FY 23/24 PROJECTED	FY 24/25 PROJECTED	FY 25/26 PROJECTED	FY 26/27 PROJECTED	TOTAL FY 22-27 PROJECTED	TOTAL FY 28-34 PROJECTED	TOTAL PROJECT
CONST	$ 82,000		$ 2,000,000	$ 2,000,000	$ 2,000,000		$ 6,000,000		$ 6,082,000
SDC									
TOTAL	$ 82,000		$ 2,000,000	$ 2,000,000	$ 2,000,000		$ 6,000,000		$ 6,082,000

PROJECT DETAIL

Project Name: WES Administration Building Remodel

Project Number: 700221310 / P632310

Project Subprogram: Capital Delivery/Tri-City WRRF

Fund: 639

Project Status: Not Active

Project Description:
The Tri-City Administration Building is in need of a remodel to address generally outdated and deteriorated spaces and create workspaces for current and future staff. Conceptual design has been completed.

Project Costs:

FUNDING SOURCE	ESTIMATED SPENT TO DATE	FY 22/23 BUDGET	FY 23/24 PROJECTED	FY 24/25 PROJECTED	FY 25/26 PROJECTED	FY 26/27 PROJECTED	TOTAL FY 22-27 PROJECTED	TOTAL FY 28-34 PROJECTED	TOTAL PROJECT
CONST	$ 79,000	$ 600,000	$ 3,500,000	$ 200,000			$ 4,300,000		$ 4,379,000
SDC									
TOTAL	$ 79,000	$ 600,000	$ 3,500,000	$ 200,000			$ 4,300,000		$ 4,379,000

PROJECT DETAIL

Project Name: Aeration Basin Improvements

Project Number: TBD

Project Subprogram: Capital Delivery/Tri-City WRRF

Fund: 639

Project Status: Not Active

Project Description:

The aeration basins are original to the facility. The aeration system consists of valves and instrumentation to control the delivery of oxygen to the biological process. The aeration system in the TC conventional basins and the programming that controls it is antiquated and needs to be replaced/updated. Doing so will vastly improve process performance and increase efficiency, significantly reducing power demand by the blowers. The aeration basin structural concrete and other ancillary systems will also be repaired and rehabilitated.

Project Costs:

FUNDING SOURCE	ESTIMATED SPENT TO DATE	FY 22/23 BUDGET	FY 23/24 PROJECTED	FY 24/25 PROJECTED	FY 25/26 PROJECTED	FY 26/27 PROJECTED	TOTAL FY 22-27 PROJECTED	TOTAL FY 28-34 PROJECTED	TOTAL PROJECT
CONST					$ 500,000	$ 600,000	$ 1,100,000	$ 1,100,000	$ 2,200,000
SDC									
TOTAL					$ 500,000	$ 600,000	$ 1,100,000	$ 1,100,000	$ 2,200,000

PROJECT DETAIL

Project Name: Tri-City WRRF Wet Weather Outfall

Project Number: 700218312 / P632241

Project Subprogram: Capital Delivery/Tri-City WRRF

Fund: 632/639

Project Status: Active

Project Description:
Projected flows to the Tri-City WRRF were developed as part of the Collection System Master Plan (CSMP) and are expected to be approximately 176-MGD under build-out conditions and assuming I/I is reduced to levels recommended in the CSMP. The capacity of the existing TC WRRF outfall is approximately 75 MGD, the current peak flow to the facility. The capacity of the new outfall alone will be sufficient for decades to come. The new outfall, along with the existing outfall will provide capacity for buildout flows.

Project Costs:

FUNDING SOURCE	ESTIMATED SPENT TO DATE	FY 22/23 BUDGET	FY 23/24 PROJECTED	FY 24/25 PROJECTED	FY 25/26 PROJECTED	FY 26/27 PROJECTED	TOTAL FY 22-27 PROJECTED	TOTAL FY 28-34 PROJECTED	TOTAL PROJECT
CONST	$ 950,500	$ 5,070,000	$11,700,000	$15,444,000	$ 8,892,000		$ 41,106,000		$ 42,056,500
SDC	$ 950,500	$ 1,430,000	$ 3,300,000	$ 4,356,000	$ 2,508,000		$ 11,594,000		$ 12,544,500
TOTAL	$ 1,901,000	$ 6,500,000	$15,000,000	$19,800,000	$11,400,000		$ 52,700,000		$ 54,601,000

PROJECT DETAIL

Project Name: Rossman Landfill Mitigation Project

Project Number: TBD

Project Subprogram: Capital Delivery/Tri-City WRRF

Fund: 632

Project Status: Not Active

Project Description:
Rossman Landfill was to be mitigated as part of the MBR (Membrane Bio-Reactor) Phase 1 construction project but the work was not performed. Thus, this project, like the MBR project is 100% SDC eligible. The cost for this project is a placeholder and includes studies to assess methods and schedule for mitigation. This project is scheduled to be complete prior to the TC Wet Weather Expansion to reduce risk/uncertainty from that project.

Project Costs:

FUNDING SOURCE	ESTIMATED SPENT TO DATE	FY 22/23 BUDGET	FY 23/24 PROJECTED	FY 24/25 PROJECTED	FY 25/26 PROJECTED	FY 26/27 PROJECTED	TOTAL FY 22-27 PROJECTED	TOTAL FY 28-34 PROJECTED	TOTAL PROJECT
CONST									
SDC					$ 500,000	$ 3,500,000	$ 4,000,000	$ 3,500,000	$ 7,500,000
TOTAL					$ 500,000	$ 3,500,000	$ 4,000,000	$ 3,500,000	$ 7,500,000

PROJECT DETAIL

Project Name: Influent Pump Station Expansion

Project Number: 700220311 / P632286

Project Subprogram: Capital Delivery/Tri-City WRRF

Fund: 639

Project Status: Active

Project Description:

The Influent Pump Station (IPS) pumps flow that arrives from the sanitary sewer collection system by gravity to the influent screening channel for subsequent treatment through the facility. The pumps are original to the 1985 construction and have a firm (largest pump out of service) hydraulic capacity of 50 MGD. The pumps and variable frequency drives have reached the end of their service life and are due for replacement. The firm capacity has been exceeded during wet weather events in recent years, necessitating the immediate need for expansion. The project will include new pumps and drives sized for projected 2040 influent flows. Pump station mechanical, electrical, and control systems will be replaced as needed to operate the new pumps and extend the life of the facility.

Project Costs:

FUNDING SOURCE	ESTIMATED SPENT TO DATE	FY 22/23 BUDGET	FY 23/24 PROJECTED	FY 24/25 PROJECTED	FY 25/26 PROJECTED	FY 26/27 PROJECTED	TOTAL FY 22-27 PROJECTED	TOTAL FY 28-34 PROJECTED	TOTAL PROJECT
CONST	$ 9,000	$ 450,000	$ 900,000	$ 900,000			$ 2,250,000		$ 2,259,000
SDC	$ 9,000	$ 450,000	$ 900,000	$ 900,000			$ 2,250,000		$ 2,259,000
TOTAL	$ 18,000	$ 900,000	$ 1,800,000	$ 1,800,000			$ 4,500,000		$ 4,518,000

PROJECT DETAIL

Project Name: Lab

Project Number: Various

Project Subprogram: Capital Delivery/Lab

Fund: 639

Project Status: Active

Project Description:
A conceptual design was performed for a remodel of the WES Lab Building located on the Tri-City campus. The project includes a new roof, a new HVAC system and reconfiguration of office space. Due to the immediate need for the roof and HVAC system, that part of the remodel is budgeted for FY22/23 with the remainder of the remodel to be constructed in the future. The FY 22/23 budget also includes costs to update lab equipment.

Project Costs:

FUNDING SOURCE	ESTIMATED SPENT TO DATE*	FY 22/23 BUDGET	FY 23/24 PROJECTED	FY 24/25 PROJECTED	FY 25/26 PROJECTED	FY 26/27 PROJECTED	TOTAL FY 22-27 PROJECTED	TOTAL FY 28-34 PROJECTED	TOTAL PROJECT
CONST		$ 573,000				$ 100,000	$ 673,000	$ 700,000	$ 1,373,000
SDC									
TOTAL		$ 573,000				$ 100,000	$ 673,000	$ 700,000	$ 1,373,000

**Estimated spent to date is not applicable for programmatic capital costs.*

PROJECT DETAIL

Project Name: Tri-City Laboratory Generator Project

Project Number: 700222303

Project Subprogram: Capital Delivery/Lab

Fund: 639

Project Status: Active

Project Description:

The laboratory at the Tri-City WRRF does not currently have any back up power source. As part of making our treatment facilities more resilient it is important to provide an emergency generator to backup the lab power source. The Tri City WRRF Lab analyzes all of WES's compliance samples for meeting our NPDES permit reporting requirements. This project will include design, installation of the standby generator and automatic transfer switch, and security fencing for the generator.

Project Costs:

FUNDING SOURCE	ESTIMATED SPENT TO DATE	FY 22/23 BUDGET	FY 23/24 PROJECTED	FY 24/25 PROJECTED	FY 25/26 PROJECTED	FY 26/27 PROJECTED	TOTAL FY 22-27 PROJECTED	TOTAL FY 28-34 PROJECTED	TOTAL PROJECT
CONST	$ 8,000	$ 200,000					$ 200,000		$ 208,000
SDC									
TOTAL	$ 8,000	$ 200,000					$ 200,000		$ 208,000

PROJECT DETAIL

Project Name: Secondary Clarifier Rehabilitation

Project Number: 700221335 / P632344

Project Subprogram: Capital Delivery/Kellogg Creek WRRF

Fund: 639

Project Status: Active

Project Description:

This is Phase 2 of a project to rehabilitate the secondary clarifiers. Phase 1 included leveling weirs and replacing the portion of the rotating mechanism that was severely corroded. Phase 2 includes replacing the mechanism's central drive, recoating the portion of the steel mechanism that was not replaced, leveling the mechanism, repairing basin concrete, and replacing the grout floor to improve the efficiency of sludge removal. The basins will be rehabilitated one per year over two years.

Project Costs:

FUNDING SOURCE	ESTIMATED SPENT TO DATE	FY 22/23 BUDGET	FY 23/24 PROJECTED	FY 24/25 PROJECTED	FY 25/26 PROJECTED	FY 26/27 PROJECTED	TOTAL FY 22-27 PROJECTED	TOTAL FY 28-34 PROJECTED	TOTAL PROJECT
CONST	$ 155,000	$ 1,600,000					$ 1,600,000		$ 1,755,000
SDC									
TOTAL	$ 155,000	$ 1,600,000					$ 1,600,000		$ 1,755,000

PROJECT DETAIL

Project Name: Kellogg Creek WRRF Digester Improvements and Dewatering

Project Number: TBD

Project Subprogram: Capital Delivery/Kellogg Creek WRRF

Fund: 639

Project Status: Not Active

Project Description:

Currently, digested sludge from the Kellogg Facility is hauled to, and dewatered at, the Tri-City facility. Dewatered biosolids are hauled to eastern Oregon for beneficial reuse. This project would provide dewatering capabilities at the Kellogg Facility with additional improvements to the digester complex, including updating the biogas utilization system. The budget for this project was increased to include new thickening equipment, the replacement of which was originally in the Kellogg Improvements project but was delayed to be included in this project.

Project Costs:

FUNDING SOURCE	ESTIMATED SPENT TO DATE	FY 22/23 BUDGET	FY 23/24 PROJECTED	FY 24/25 PROJECTED	FY 25/26 PROJECTED	FY 26/27 PROJECTED	TOTAL FY 22-27 PROJECTED	TOTAL FY 28-34 PROJECTED	TOTAL PROJECT
CONST								$ 26,000,000	$ 26,000,000
SDC									
TOTAL								$ 26,000,000	$ 26,000,000

PROJECT DETAIL

Project Name: Primary Sedimentation Basins and Primary Sludge Pump Station Improvements

Project Number: TBD

Project Subprogram: Capital Delivery/Kellogg Creek WRRF

Fund: 639

Project Status: Not Active

Project Description:

The condition assessment performed as part of the Willamette Facilities Plan identified several issues that need to be corrected with the primary sedimentation basins and the primary sludge pump station. The primary basin concrete will be rehabilitated in a manner similar to the secondary clarifiers, and the mechanisms will be recoated as needed. The primary sludge pump station will be rehabilitated, including repair or replacement of the sludge and scum pumps.

Project Costs:

FUNDING SOURCE	ESTIMATED SPENT TO DATE	FY 22/23 BUDGET	FY 23/24 PROJECTED	FY 24/25 PROJECTED	FY 25/26 PROJECTED	FY 26/27 PROJECTED	TOTAL FY 22-27 PROJECTED	TOTAL FY 28-34 PROJECTED	TOTAL PROJECT
CONST					$ 400,000	$ 1,060,000	$ 1,460,000	$ 1,875,000	$ 3,335,000
SDC									
TOTAL					$ 400,000	$ 1,060,000	$ 1,460,000	$ 1,875,000	$ 3,335,000

PROJECT DETAIL

Project Name: Headworks/Grit Loading Improvements

Project Number: TBD

Project Subprogram: Capital Delivery/Kellogg Creek WRRF

Fund: 639

Project Status: Not Active

Project Description:
The headworks and grit loading systems at Kellogg are original to the 1980s construction of the facility and are in need of an update to provide reliable treatment. Planned improvements include replacing two existing mechanical bar screens and accessories, rehabilitating the grit removal system, and updating the electrical, instrumentation, and control systems.

Project Costs:

FUNDING SOURCE	ESTIMATED SPENT TO DATE	FY 22/23 BUDGET	FY 23/24 PROJECTED	FY 24/25 PROJECTED	FY 25/26 PROJECTED	FY 26/27 PROJECTED	TOTAL FY 22-27 PROJECTED	TOTAL FY 28-34 PROJECTED	TOTAL PROJECT
CONST						$ 340,000	$ 340,000	$ 1,100,000	$ 1,440,000
SDC									
TOTAL						$ 340,000	$ 340,000	$ 1,100,000	$ 1,440,000

PROJECT DETAIL

Project Name: Administration Building Remodel

Project Number: 700221311 / P632311

Project Subprogram: Capital Delivery/Kellogg Creek WRRF

Fund: 639

Project Status: Active

Project Description:
This project remodels the Administration Building at the Kellogg Facility to update the lab, provide locker rooms, a kitchen/lunchroom and offices for staff. It would include a conference room for community use. A conceptual design has been completed. This project needs to be completed prior to construction of the Digestion and Dewatering Project at KC as that project includes demolishing the current staff locker rooms and kitchen/lunchroom.

Project Costs:

FUNDING SOURCE	ESTIMATED SPENT TO DATE	FY 22/23 BUDGET	FY 23/24 PROJECTED	FY 24/25 PROJECTED	FY 25/26 PROJECTED	FY 26/27 PROJECTED	TOTAL FY 22-27 PROJECTED	TOTAL FY 28-34 PROJECTED	TOTAL PROJECT
CONST	$ 34,000							$ 3,500,000	$ 3,534,000
SDC									
TOTAL	$ 34,000							$ 3,500,000	$ 3,534,000

PROJECT DETAIL

Project Name: IPS Pumps 2 and 4 Replacement

Project Number: 700221305 / P632305

Project Subprogram: Capital Delivery/Kellogg Creek WRRF

Fund: 639

Project Status: Active

Project Description:
The Kellogg WRRF Improvements Project replaced Pumps 1 and 3, the two smaller pumps at the IPS, each at 5.5 MGD. This project will complete the refurbishment of the IPS with replacement of the two 14 MGD pumps, motors and drives.

Project Costs:

FUNDING SOURCE	ESTIMATED SPENT TO DATE	FY 22/23 BUDGET	FY 23/24 PROJECTED	FY 24/25 PROJECTED	FY 25/26 PROJECTED	FY 26/27 PROJECTED	TOTAL FY 22-27 PROJECTED	TOTAL FY 28-34 PROJECTED	TOTAL PROJECT
CONST	$ 312,000	$ 1,300,000					$ 1,300,000		$ 1,612,000
SDC									
TOTAL	$ 312,000	$ 1,300,000					$ 1,300,000		$ 1,612,000

PROJECT DETAIL

Project Name: UV Replacement

Project Number: TBD

Project Subprogram: Capital Delivery/Kellogg Creek WRRF

Fund: 639

Project Status: Not Active

Project Description:

Treated wastewater at the Kellogg Facility is disinfected with ultraviolet (UV) light. A chlorination/dechlorination system provides back up and supplemental disinfection. The Willamette Facilities Plan identified the disinfection system replacement at the KC WRRF as a required project to address reliability of the disinfection system. The UV equipment is at the end of it's useful life. This project will provide an evaluation and selection of the most cost effective disinfection system, then provide design and construction of the recommended system.

Project Costs:

FUNDING SOURCE	ESTIMATED SPENT TO DATE	FY 22/23 BUDGET	FY 23/24 PROJECTED	FY 24/25 PROJECTED	FY 25/26 PROJECTED	FY 26/27 PROJECTED	TOTAL FY 22-27 PROJECTED	TOTAL FY 28-34 PROJECTED	TOTAL PROJECT
CONST				$ 561,000	$ 1,122,000	$ 1,122,000	$ 2,805,000		$ 2,805,000
SDC									
TOTAL				$ 561,000	$ 1,122,000	$ 1,122,000	$ 2,805,000		$ 2,805,000

PROJECT DETAIL

Project Name: Aeration Basin Improvements

Project Number: 700221314 / P632314

Project Subprogram: Capital Delivery/Kellogg Creek WRRF

Fund: 639

Project Status: Active

Project Description:

The aeration system conveys air from the blowers to microorganisms in the aeration basins. The aeration system consists of piping, valves, and instrumentation. The blowers are the largest power consumers in the facility and it is important that the amount of air delivered matches demand. Not enough air means the water isn't treated properly. Too much air is a waste of energy and money. The aeration system ensures that the right amount of air is delivered to the process. The existing aeration equipment is outdated and not operating properly. This project replaces the equipment and updates software to provide efficient delivery of air to the secondary process.

Project Costs:

FUNDING SOURCE	ESTIMATED SPENT TO DATE	FY 22/23 BUDGET	FY 23/24 PROJECTED	FY 24/25 PROJECTED	FY 25/26 PROJECTED	FY 26/27 PROJECTED	TOTAL FY 22-27 PROJECTED	TOTAL FY 28-34 PROJECTED	TOTAL PROJECT
CONST	$ 339,000	$ 1,500,000					$ 1,500,000		$ 1,839,000
SDC									
TOTAL	$ 339,000	$ 1,500,000					$ 1,500,000		$ 1,839,000

PROJECT DETAIL

Project Name: Hoodland Secondary Treatment Upgrade

Project Number: TBD

Project Subprogram: Capital Delivery/Hoodland WRRF

Fund: 632/639

Project Status: Not Active

Project Description:
Secondary treatment at the Hoodland Facility is provided by rotating biological contactors (RBCs) that are original to the facility. The technology is old and at some point will not be supported. In addition, the facility is at capacity and will need to be expanded when growth occurs. This project will replace the RBCs with state of the art technology selected from an evaluation of alternatives using life cycle cost and non-cost criteria and expand capacity of the facility.

Project Costs:

FUNDING SOURCE	ESTIMATED SPENT TO DATE	FY 22/23 BUDGET	FY 23/24 PROJECTED	FY 24/25 PROJECTED	FY 25/26 PROJECTED	FY 26/27 PROJECTED	TOTAL FY 22-27 PROJECTED	TOTAL FY 28-34 PROJECTED	TOTAL PROJECT
CONST								$ 5,250,000	$ 5,250,000
SDC								$ 5,250,000	$ 5,250,000
TOTAL								$ 10,500,000	$ 10,500,000

PROJECT DETAIL

Project Name: Boring Upgrades

Project Number: 700221313 / P632313

Project Subprogram: Capital Delivery/Boring WRRF

Fund: 639

Project Status: Active

Project Description:

The facility is not able to meet its NPDES permit for a significant portion of the year. It cannot meet its ammonia limit for four months in the cold weather months requiring hauling of influent flow to avoid discharge. It cannot meet temperature limits in the summer months during which time on-site irrigation is performed. Currently, compliance is achieved in the winter months by hauling influent to a WES manhole for conveyance to the Willamette Facilities (Kellogg Creek and Tri-City WRRFs). In the summer months, compliance is achieved by irrigating the Boring WRRF property with a portion of the effluent. A Facilities Plan was prepared for the facility, and recommends the facility be converted to a pump station to convey flow to another facility for treatment. A preliminary design was prepared. The cost estimate for the recommended plan increased to the point that the project was postponed until additional funding sources can be secured or to a later date that will be more feasible. Until then, WES will continue with the current program of hauling in the winter months and irrigating in summer months to achieve compliance.

Project Costs:

FUNDING SOURCE	ESTIMATED SPENT TO DATE	FY 22/23 BUDGET	FY 23/24 PROJECTED	FY 24/25 PROJECTED	FY 25/26 PROJECTED	FY 26/27 PROJECTED	TOTAL FY 22-27 PROJECTED	TOTAL FY 28-34 PROJECTED	TOTAL PROJECT
CONST	$ 215,000							$ 10,000,000	$ 10,215,000
SDC									
TOTAL	$ 215,000							$ 10,000,000	$ 10,215,000

PROJECT DETAIL

Project Name: Fischer Forest Park Rehab

Project Number: 700220304 / P632278

Project Subprogram: Capital Delivery/Fischer Forest Park WRRF

Fund: 639

Project Status: Active

Project Description:

Fischer's Forest Park is a septic system serving 26 residential customers near Redland. The system was built in 1970 and the system requires renovation. This project will address condition issues identified in 2019 including; rehabilitating the collection system, conveyance lines, manholes and pump station entry points, and replacing gravity conveyance lines and septic tanks. The project will also address deficiencies in the existing drain fields and update the effluent distribution system. When completed, the system will be more resilient, more efficient, and should be capable of providing effective sewer treatment for the foreseeable future.

Project Costs:

FUNDING SOURCE	ESTIMATED SPENT TO DATE	FY 22/23 BUDGET	FY 23/24 PROJECTED	FY 24/25 PROJECTED	FY 25/26 PROJECTED	FY 26/27 PROJECTED	TOTAL FY 22-27 PROJECTED	TOTAL FY 28-34 PROJECTED	TOTAL PROJECT
CONST	$ 255,000	$ 800,000					$ 800,000		$ 1,055,000
SDC									
TOTAL	$ 255,000	$ 800,000					$ 800,000		$ 1,055,000

PROJECT DETAIL

Project Name: Pipe and Manhole Rehabilitation and Replacement

Project Number: Various

Project Subprogram: Capital Delivery/Collection System

Fund: 632/639

Project Status: Active

Project Description:

Sanitary sewer pipe and manholes are subject to degraded condition through exposure to chemicals, organic growths, and soil movement. This degradation leads to defects in pipe which can result in surface water and groundwater infiltration into the collection system, straining treatment capacities and increasing risk of pipe failure. WES tracks manhole and pipe condition through our asset management program. Projects are prioritized and each year, some work is planned to be done where budget allows. This project will repair and/or replace damaged and aging pipelines utilizing methods including pipe-lining, pipe bursting and replacement. This project will also rehabilitate aging manholes which have degraded condition through normal exposure to chemical and biological components and soil movement. Rehabilitation efforts to reduce risk will range from cleaning and spray lining to complete manhole replacement depending upon the degree of wear.

Project Costs:

FUNDING SOURCE	ESTIMATED SPENT TO DATE*	FY 22/23 BUDGET	FY 23/24 PROJECTED	FY 24/25 PROJECTED	FY 25/26 PROJECTED	FY 26/27 PROJECTED	TOTAL FY 22-27 PROJECTED	TOTAL FY 28-34 PROJECTED	TOTAL PROJECT
CONST		$ 1,000,000	$ 500,000	$ 500,000		$ 500,000	$ 2,500,000	$ 1,500,000	$ 4,000,000
SDC		$ 1,000,000	$ 500,000	$ 500,000		$ 500,000	$ 2,500,000	$ 1,500,000	$ 4,000,000
TOTAL		$ 2,000,000	$ 1,000,000	$ 1,000,000		$ 1,000,000	$ 5,000,000	$ 3,000,000	$ 8,000,000

**Estimated spent to date is not applicable for programmatic capital costs.*

PROJECT DETAIL

Project Name: I/I Reduction Program

Project Number: N/A

Project Subprogram: Capital Delivery/Collection System

Fund: 632

Project Status: Active

Project Description:

Inflow and Infiltration (I/I) is clean groundwater and/or rainwater that enters the sewer system through direct connections such as roof drains or area drains or defects such as leaking joints or manholes. When the amount of I/I becomes excessive it can cause capacity deficiencies in the sewer system and possible overflows. When the amount of I/I becomes excessive it is more cost effective to remove the I/I than upsize infrastructure or treatment facilities to transport and treat the extraneous clean water. The Sanitary Sewer System Master Plan (2019) recommended removal of excessive I/I in 19 basins in WES and member city systems. All future WES planning assumes removal of the I/I. WES initiated a five year program to assist member cities with the cost of removal of I/I in basins identified in their systems. This project includes those costs and assumes ongoing costs through the planning period.

Project Costs:

FUNDING SOURCE	ESTIMATED SPENT TO DATE*	FY 22/23 BUDGET	FY 23/24 PROJECTED	FY 24/25 PROJECTED	FY 25/26 PROJECTED	FY 26/27 PROJECTED	TOTAL FY 22-27 PROJECTED	TOTAL FY 28-34 PROJECTED	TOTAL PROJECT
CONST									
SDC		$ 2,906,772	$ 3,529,350	$ 3,974,850	$ 3,762,000	$ 2,310,000	$ 16,482,972	$ 7,000,000	$ 23,482,972
TOTAL		$ 2,906,772	$ 3,529,350	$ 3,974,850	$ 3,762,000	$ 2,310,000	$ 16,482,972	$ 7,000,000	$ 23,482,972

**Estimated spent to date is not applicable for programmatic capital costs.*

PROJECT DETAIL

Project Name: Permanent Flow Metering Program

Project Number: Various

Project Subprogram: Capital Delivery/Collection System

Fund: 639

Project Status: Active

Project Description:
WES uses approximately 25 permanent flow meters in the gravity collection system. The data collected at the flow meter locations is used to track I/I reduction and evaluate system capacity.

Project Costs:

FUNDING SOURCE	ESTIMATED SPENT TO DATE	FY 22/23 BUDGET	FY 23/24 PROJECTED	FY 24/25 PROJECTED	FY 25/26 PROJECTED	FY 26/27 PROJECTED	TOTAL FY 22-27 PROJECTED	TOTAL FY 28-34 PROJECTED	TOTAL PROJECT
CONST		$ 100,000					$ 100,000	$ 200,000	$ 300,000
SDC									
TOTAL		$ 100,000					$ 100,000	$ 200,000	$ 300,000

**Estimated spent to date is not applicable for programmatic capital costs.*

PROJECT DETAIL

Project Name: Hoodland Pump Stations Property Acquisition

Project Number: TBD

Project Subprogram: Capital Delivery/Collection System

Fund: 639

Project Status: Not Active

Project Description:
Timberline and Sandy River Lane Pump Stations are located near the Sandy River in a hazard zone. They are in danger if the Sandy River should migrate and need to be relocated. These funds are to be used to acquire property for construction of relocated pump stations. One property has been acquired.

Project Costs:

FUNDING SOURCE	ESTIMATED SPENT TO DATE	FY 22/23 BUDGET	FY 23/24 PROJECTED	FY 24/25 PROJECTED	FY 25/26 PROJECTED	FY 26/27 PROJECTED	TOTAL FY 22-27 PROJECTED	TOTAL FY 28-34 PROJECTED	TOTAL PROJECT
CONST		$ 100,000					$ 100,000		$ 100,000
SDC									
TOTAL		$ 100,000					$ 100,000		$ 100,000

PROJECT DETAIL

Project Name: Timberline Rim and Sandy River Land Pump Stations with Forcemain

Project Number: 700218306 / P632232

Project Subprogram: Capital Delivery/Collection System

Fund: 639

Project Status: Active

Project Description:
Timberline and Sandy River Lane Pump Stations are located near the Sandy River in a hazard zone. They are in danger if the Sandy River should migrate and need to be relocated. These funds will be used to design and construct new pump stations located further away from the Sandy River. **Construction of these improvements are scheduled to occur beyond 2025 unless conditions with the Sandy River require they be constructed earlier. The amount shown is for design only.**

Project Costs:

FUNDING SOURCE	ESTIMATED SPENT TO DATE	FY 22/23 BUDGET	FY 23/24 PROJECTED	FY 24/25 PROJECTED	FY 25/26 PROJECTED	FY 26/27 PROJECTED	TOTAL FY 22-27 PROJECTED	TOTAL FY 28-34 PROJECTED	TOTAL PROJECT
CONST	$ 114,000							$ 3,760,000	$ 3,874,000
SDC									
TOTAL	$ 114,000							$ 3,760,000	$ 3,874,000

PROJECT DETAIL

Project Name: Multiple Pump Station Upgrades

Project Number: 700219315 / P632265

Project Subprogram: Capital Delivery/Collection System

Fund: 639

Project Status: Active

Project Description:

Several pump stations are in need of rehabilitation. The type of upgrades include, but are not limited to pumps and electrical, HVAC and structural components. By designing the project one time and constructing in phases, WES is providing consistency across our facilities and being efficient with design costs. The pump stations include Sieben Lane, South Welches, Golf Course Terrace, Gladstone, Clackamas, 82nd Drive, Bolton, River Street, and Timberline Rim.

Project Costs:

FUNDING SOURCE	ESTIMATED SPENT TO DATE	FY 22/23 BUDGET	FY 23/24 PROJECTED	FY 24/25 PROJECTED	FY 25/26 PROJECTED	FY 26/27 PROJECTED	TOTAL FY 22-27 PROJECTED	TOTAL FY 28-34 PROJECTED	TOTAL PROJECT
CONST	$ 1,462,000	$ 3,800,000	$ 1,500,000			$ 1,500,000	$ 6,800,000	$ 2,500,000	$ 10,762,000
SDC									
TOTAL	$ 1,462,000	$ 3,800,000	$ 1,500,000			$ 1,500,000	$ 6,800,000	$ 2,500,000	$ 10,762,000

PROJECT DETAIL

Project Name: Lower Willamette Interceptor Rehab

Project Number: TBD

Project Subprogram: Capital Delivery/Collection System

Fund: 632/639

Project Status: Not Active

Project Description:
The Sanitary Sewer System Master Plan (2019) identified the Lower Willamette Interceptor as needing rehabilitation. The interceptor receives flows from the Willamette Pump Station and gravity flow from West Linn. This project includes evaluation and rehabilitation of manholes and the interceptor.

Project Costs:

FUNDING SOURCE	ESTIMATED SPENT TO DATE	FY 22/23 BUDGET	FY 23/24 PROJECTED	FY 24/25 PROJECTED	FY 25/26 PROJECTED	FY 26/27 PROJECTED	TOTAL FY 22-27 PROJECTED	TOTAL FY 28-34 PROJECTED	TOTAL PROJECT
CONST								$ 5,900,000	$ 5,900,000
SDC								$ 5,900,000	$ 5,900,000
TOTAL								$ 11,800,000	$ 11,800,000

PROJECT DETAIL

Project Name: Oregon City Interceptor Rehab

Project Number: TBD

Project Subprogram: Capital Delivery/Collection System

Fund: 632/639

Project Status: Not Active

Project Description:
The Sanitary Sewer System Master Plan (2019) identified the Oregon City Interceptor as needing rehabilitation. The interceptor is located in Oregon City and receives flows from the Bolton and River Street Pump Stations in West Linn. This project includes evaluation and rehabilitation of the manholes and the interceptor.

Project Costs:

FUNDING SOURCE	ESTIMATED SPENT TO DATE	FY 22/23 BUDGET	FY 23/24 PROJECTED	FY 24/25 PROJECTED	FY 25/26 PROJECTED	FY 26/27 PROJECTED	TOTAL FY 22-27 PROJECTED	TOTAL FY 28-34 PROJECTED	TOTAL PROJECT
CONST								$ 750,000	$ 750,000
SDC								$ 750,000	$ 750,000
TOTAL								$ 1,500,000	$ 1,500,000

PROJECT DETAIL

Project Name: Willamette Pump Station and Forcemain Capacity and Condition Improvements

Project Number: 700221303 / P632303
700221336 / P632336

Project Subprogram: Capital Delivery/Collection System

Fund: 632/639

Project Status: Active

Project Description:
The Willamette Pump Station collects flow from the Willamette area of West Linn and conveys it to the Willamette Interceptor. The Sanitary Sewer System Master Plan (2019) and a subsequent detailed evaluation showed the pump station and force main are at capacity and in need of expansion. Condition issues also need to be addressed. The Willamette Facilities Plan (2022) included a an evaluation that resulted in a confirmation that the current configuration and use of the pump station and force main will continue as into the future. WES took advantage of the Abernethy Bridge Expansion Project and contracted with ODOT to suspend a portion of the forcemain from the bridge at a cost savings to rate payers. The remainder of the project includes expansion or replacement of the Willamette Pump Station and an upsized forcemain from the pump station to the Abernethy Bridge to accommodate planned future flows.

Project Costs:

FUNDING SOURCE	ESTIMATED SPENT TO DATE	FY 22/23 BUDGET	FY 23/24 PROJECTED	FY 24/25 PROJECTED	FY 25/26 PROJECTED	FY 26/27 PROJECTED	TOTAL FY 22-27 PROJECTED	TOTAL FY 28-34 PROJECTED	TOTAL PROJECT
CONST	$ 444,000	$ 500,000	$ 3,314,250	$ 4,814,250	$ 2,500,000	$ 2,100,000	$ 13,228,500		$ 13,672,500
SDC	$ 444,000	$ 500,000	$ 3,314,250	$ 4,814,250	$ 2,500,000	$ 2,100,000	$ 13,228,500		$ 13,672,500
TOTAL	$ 888,000	$ 1,000,000	$ 6,628,500	$ 9,628,500	$ 5,000,000	$ 4,200,000	$ 26,457,000		$ 27,345,000

PROJECT DETAIL

Project Name: IT2 Pump Station Expansion and 30 IN Forcemain

Project Number: 700221325 / 632326

Project Subprogram: Capital Delivery/Collection System

Fund: 632/639

Project Status: Active

Project Description:
The Intertie Pump Station diverts flow in excess of Kellogg WRRF capacity to the Tri-City WRRF. The pump station is at capacity and was constructed so that pump(s) can be added to increase capacity. The 30 IN forcemain from the pump station to Tri-City WRRF was partially constructed in past years. This project will complete construction of the forcemain. The pump station is scheduled for a second expansion beyond 2030.

Project Costs:

FUNDING SOURCE	ESTIMATED SPENT TO DATE	FY 22/23 BUDGET	FY 23/24 PROJECTED	FY 24/25 PROJECTED	FY 25/26 PROJECTED	FY 26/27 PROJECTED	TOTAL FY 22-27 PROJECTED	TOTAL FY 28-34 PROJECTED	TOTAL PROJECT
CONST	$ 169,480	$ 608,000	$ 912,000	$ 1,368,000	$ 3,420,000	$ 1,520,000	$ 7,828,000	$ 2,356,000	$ 10,353,480
SDC	$ 53,520	$ 192,000	$ 288,000	$ 432,000	$ 1,080,000	$ 480,000	$ 2,472,000	$ 744,000	$ 3,269,520
TOTAL	$ 223,000	$ 800,000	$ 1,200,000	$ 1,800,000	$ 4,500,000	$ 2,000,000	$ 10,300,000	$ 3,100,000	$ 13,623,000

PROJECT DETAIL

Project Name: Rock Creek Interceptor Extension

Project Number: 700220316 / P632295

Project Subprogram: Capital Delivery/Collection System

Fund: 632

Project Status: Active

Project Description:
A Preliminary Routing Analysis was completed in 2007 for the extension of the Rock Creek Interceptor. It is anticipated that the interceptor will be extended to the north and east. The schedule for implementation will need to be balanced against available downstream conveyance and treatment capacity.

Project Costs:

FUNDING SOURCE	ESTIMATED SPENT TO DATE	FY 22/23 BUDGET	FY 23/24 PROJECTED	FY 24/25 PROJECTED	FY 25/26 PROJECTED	FY 26/27 PROJECTED	TOTAL FY 22-27 PROJECTED	TOTAL FY 28-34 PROJECTED	TOTAL PROJECT
CONST									
SDC	$ 12,000			$ 1,000,000	$ 1,000,000	$ 3,500,000	$ 5,500,000	$ 3,500,000	$ 9,012,000
TOTAL	$ 12,000			$ 1,000,000	$ 1,000,000	$ 3,500,000	$ 5,500,000	$ 3,500,000	$ 9,012,000

PROJECT DETAIL

Project Name: Clackamas Interceptor Capacity Improvements

Project Number: 700219323 / P632274

Project Subprogram: Capital Delivery/Collection System

Fund: 632/639

Project Status: Active

Project Description:
The Clackamas Interceptor has been shown in past studies, and in the Sanitary Sewer System Master Plan (2019) to be lacking in capacity to serve the current and future service areas. Parts of the interceptor require rehabilitation. A conceptual design has been completed. Improvements along the length of the interceptor will be designed as one system to assure cohesiveness, then construction will be phased over several years and multiple projects to best meet capacity needs and funding resources.

Project Costs:

FUNDING SOURCE	ESTIMATED SPENT TO DATE	FY 22/23 BUDGET	FY 23/24 PROJECTED	FY 24/25 PROJECTED	FY 25/26 PROJECTED	FY 26/27 PROJECTED	TOTAL FY 22-27 PROJECTED	TOTAL FY 28-34 PROJECTED	TOTAL PROJECT
CONST	$ 94,500	$ 825,000	$ 775,000	$ 2,200,000	$ 3,050,000	$ 3,850,000	$ 10,700,000	$ 8,750,000	$ 19,544,500
SDC	$ 94,500	$ 825,000	$ 775,000	$ 2,200,000	$ 3,050,000	$ 3,850,000	$ 10,700,000	$ 8,750,000	$ 19,544,500
TOTAL	$ 189,000	$ 1,650,000	$ 1,550,000	$ 4,400,000	$ 6,100,000	$ 7,700,000	$ 21,400,000	$ 17,500,000	$ 39,089,000

PROJECT DETAIL

Project Name: Sieben Lane Pump Station Alternatives (Rose Creek)

Project Number: 700219307 / P632257

Project Subprogram: Capital Delivery/Collection System

Fund: 632/639

Project Status: Active

Project Description:

In the early 1990s the District planned a collection system project to construct a main line interceptor (Sieben Lane Interceptor) to serve the Sieben creek drainage basin. Due to external circumstances, the interceptor was not constructed. Instead, in 1993 a pump station was constructed to serve development. The Sanitary Sewer System Master Plan (2019) determine the Sieben Lane pump station should be maintained and it is not feasible to extend the interceptor. Rose Creek borders the pump station and is undercutting its banks. This project is to do creek restoration to protect the pump station.

Project Costs:

FUNDING SOURCE	ESTIMATED SPENT TO DATE	FY 22/23 BUDGET	FY 23/24 PROJECTED	FY 24/25 PROJECTED	FY 25/26 PROJECTED	FY 26/27 PROJECTED	TOTAL FY 22-27 PROJECTED	TOTAL FY 28-34 PROJECTED	TOTAL PROJECT
CONST	$ 30,000	$ 200,000					$ 200,000		$ 230,000
SDC									
TOTAL	$ 30,000	$ 200,000					$ 200,000		$ 230,000

PROJECT DETAIL

Project Name: Linwood Pump Station

Project Number: 700222307

Project Subprogram: Capital Delivery/Collection System

Fund: 632

Project Status: Active

Project Description:

This pump station will convey some portion of the NCRA flows currently flowing to the city of Portland, back to the WES system, freeing up capacity for flow from Happy Valley to the city of Portland. This approach is less costly than constructing a pump station to pump Happy Valley flows directly to the CCSD1 system. WES already owns the pump station site property. The County Development Agency is planning roadway improvements to Linwood Avenue. WES and the County's Development Agency have executed an IGA to include the force main work that will be necessary to pump flows from the new pump station site back into WES's gravity collection system in the Agencies roadway improvement project limiting disturbance to the neighborhood and reducing costs to customers.

Project Costs:

FUNDING SOURCE	ESTIMATED SPENT TO DATE	FY 22/23 BUDGET	FY 23/24 PROJECTED	FY 24/25 PROJECTED	FY 25/26 PROJECTED	FY 26/27 PROJECTED	TOTAL FY 22-27 PROJECTED	TOTAL FY 28-34 PROJECTED	TOTAL PROJECT
CONST									
SDC	$ 4,000							$ 7,500,000	$ 7,504,000
TOTAL	$ 4,000							$ 7,500,000	$ 7,504,000

PROJECT DETAIL

Project Name: Fleet- Heavy Equipment

Project Number: Various

Project Subprogram: Capital Delivery/Fleet

Fund: 639

Project Status: Active

Project Description:
This project pool funds the replacement of aging heavy fleet and equipment used in plant operations, pipeline and infrastructure maintenance, and liquid biosolids transport.

Project Costs:

FUNDING SOURCE	ESTIMATED SPENT TO DATE*	FY 22/23 BUDGET	FY 23/24 PROJECTED	FY 24/25 PROJECTED	FY 25/26 PROJECTED	FY 26/27 PROJECTED	TOTAL FY 22-27 PROJECTED	TOTAL FY 28-34 PROJECTED	TOTAL PROJECT
CONST		$ 330,000	$ 750,000	$ 740,000	$ 775,000	$ 250,000	$ 2,845,000		$ 2,845,000
SDC									
TOTAL		$ 330,000	$ 750,000	$ 740,000	$ 775,000	$ 250,000	$ 2,845,000		$ 2,845,000

**Estimated spent to date is not applicable for programmatic capital costs.*

PROJECT DETAIL

Project Name: Vehicle Replacement

Project Number: Various

Project Subprogram: Capital Delivery/Fleet

Fund: 639

Project Status: Active

Project Description:

This project pool replaces aging fleet including vehicles used for pipeline and facility maintenance, stormwater operations, construction management and district support functions. We are also working to improve fuel economy and reduce carbon emissions. Specific vehicle purchases are prioritized during each fiscal year and are based on an assessment that weighs the costs of maintenance versus the costs of replacement. The assessment includes such screening criteria as miles driven, hours used, age of equipment, and economic life. The goal of this project pool is to systematically replace District vehicles to minimize the impact on rates without adversely impacting service levels.

Project Costs:

FUNDING SOURCE	ESTIMATED SPENT TO DATE*	FY 22/23 BUDGET	FY 23/24 PROJECTED	FY 24/25 PROJECTED	FY 25/26 PROJECTED	FY 26/27 PROJECTED	TOTAL FY 22-27 PROJECTED	TOTAL FY 28-34 PROJECTED	TOTAL PROJECT
CONST		$ 370,000		$ 60,000	$ 55,000	$ 555,000	$ 1,040,000		$ 1,040,000
SDC									
TOTAL		$ 370,000		$ 60,000	$ 55,000	$ 555,000	$ 1,040,000		$ 1,040,000

**Estimated spent to date is not applicable for programmatic capital costs.*

PROJECT DETAIL

Project Name: Asset Management - Renewal and Replacement

Project Number: Various

Project Subprogram: Capital Delivery/Asset Maintenance

Fund: 639

Project Status: Active

Project Description:
These funds are reserved for small projects related to operational assets which are capital in nature, including small pump replacements, minor system and process updates, and small machinery. The intent is to replace or upgrade high risk assets efficiently thereby maintaining effective treatment plant operations. Specific efforts in this fund may include electrical updates, instrumentation upgrades, and process HVAC system improvements.

Project Costs:

FUNDING SOURCE	ESTIMATED SPENT TO DATE*	FY 22/23 BUDGET	FY 23/24 PROJECTED	FY 24/25 PROJECTED	FY 25/26 PROJECTED	FY 26/27 PROJECTED	TOTAL FY 22-27 PROJECTED	TOTAL FY 28-34 PROJECTED	TOTAL PROJECT
CONST		$ 800,000	$ 800,000	$ 800,000	$ 800,000	$ 800,000	$ 4,000,000	$ 5,600,000	$ 9,600,000
SDC									
TOTAL		$ 800,000	$ 800,000	$ 800,000	$ 800,000	$ 800,000	$ 4,000,000	$ 5,600,000	$ 9,600,000

**Estimated spent to date is not applicable for programmatic capital costs.*

PROJECT DETAIL

Project Name: Pump Station Improvements

Project Number: Various

Project Subprogram: Capital Delivery/Collection System

Fund: 639

Project Status: Active

Project Description:
These funds are reserved for renewal and replacement of high risk pump station assets to increase reliability. Specific efforts in this project class include pump rebuilds or replacements.

Project Costs:

FUNDING SOURCE	ESTIMATED SPENT TO DATE*	FY 22/23 BUDGET	FY 23/24 PROJECTED	FY 24/25 PROJECTED	FY 25/26 PROJECTED	FY 26/27 PROJECTED	TOTAL FY 22-27 PROJECTED	TOTAL FY 28-34 PROJECTED	TOTAL PROJECT
CONST		$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 250,000	$ 350,000	$ 600,000
SDC									
TOTAL		$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 250,000	$ 350,000	$ 600,000

**Estimated spent to date is not applicable for programmatic capital costs.*

Appendix B

Surface Water Project Detail Sheets

PROJECT DETAIL

Project Name: 3-Creeks Water Quality Project

Project Number: 700321403 / P642302

Project Subprogram: Watershed Protection

Fund: 649

Project Status: Active

Project Description:

WES owns the 3-Creeks Natural Area where Mt. Scott, Phillips and Deer (Dean) Creeks come together on 89 acres in Northern Clackamas County. WES is working on the final plans to enhance floodplain processes and the existing natural floodplain area, construct wetlands and floodplain terraces to increase flood storage, improve fish and wildlife habitat, restore wetlands, and restore natural floodplain function. The project will improve the creek's water quality by allowing sediments in high water to settle onto the floodplain, and by restoring floodplain processes such as filtration and infiltration. FY 2022-23 work includes pre-design work, permitting, and community involvement. The pre-design work in FY 22/23 is being financed through the DEQ's State Revolving Loan Fund program. Construction is anticipated to begin Summer 2024.

Project Costs:

FUNDING SOURCE	ESTIMATED SPENT TO DATE	FY 22/23 BUDGET	FY 23/24 PROJECTED	FY 24/25 PROJECTED	FY 25/26 PROJECTED	FY 26/27 PROJECTED	TOTAL FY 22-27 PROJECTED	TOTAL FY 28-34 PROJECTED	TOTAL PROJECT
CONST	$ 650,000	$ 250,000	$ 250,000	$ 1,500,000	$ 1,500,000	$ 100,000	$ 3,600,000		$ 4,250,000
SDC									
TOTAL	$ 650,000	$ 250,000	$ 250,000	$ 1,500,000	$ 1,500,000	$ 100,000	$ 3,600,000		$ 4,250,000

PROJECT DETAIL

Project Name: Carli Creek Enhancement and Water Quality Project

Project Number: 700311401 / P641962

Project Subprogram: Watershed Protection

Fund: 649

Project Status: Active

Project Description:

WES constructed the Carli Creek regional water quality facility to remove pollutants in runoff from developed industrial lands in the Clackamas Industrial Area. The project redirected urban runoff through a newly constructed treatment wetland to reduce negative impacts of high storm flows and pollutants in the creek and restored nearly 1,700 linear feet of critical salmon and steelhead rearing habitat. The project was constructed between summer 2017 and 2019. Ongoing work includes monitoring and establishment, both to meet permit requirements and to ensure the facility is functioning as intended. Tasks may include irrigation, weed management, interplanting, removing/managing sediment, managing water flow, vegetation monitoring and statistical analyses, photo-point monitoring, stream surveys, and writing/submitting reports as per permit protocols.

Project Costs:

FUNDING SOURCE	ESTIMATED SPENT TO DATE	FY 22/23 BUDGET	FY 23/24 PROJECTED	FY 24/25 PROJECTED	FY 25/26 PROJECTED	FY 26/27 PROJECTED	TOTAL FY 22-27 PROJECTED	TOTAL FY 28-34 PROJECTED	TOTAL PROJECT
CONST	$ 3,719,000	$ 40,000	$ 50,000				$ 90,000		$ 3,809,000
SDC									
TOTAL	$ 3,719,000	$ 40,000	$ 50,000				$ 90,000		$ 3,809,000

PROJECT DETAIL

Project Name: Small Projects - Drainage System Modifications

Project Number: Various

Project Subprogram: Watershed Protection

Fund: 649

Project Status: Active

Project Description:
Small Projects include small drainage and retrofit projects that restore or enhance the functional capacity of the storm system. Projects may include work to improve drainage issues when flooding is caused by WES owned stormwater infrastructure, installing small low impact development facilities such as rain gardens as retrofits, and repairs to infrastructure such as previously-installed restoration projects.

Project Costs:

FUNDING SOURCE	ESTIMATED SPENT TO DATE*	FY 22/23 BUDGET	FY 23/24 PROJECTED	FY 24/25 PROJECTED	FY 25/26 PROJECTED	FY 26/27 PROJECTED	TOTAL FY 22-27 PROJECTED	TOTAL FY 28-34 PROJECTED	TOTAL PROJECT
CONST		$ 500,000	$ 250,000	$ 100,000	$ 100,000	$ 100,000	$ 1,050,000		$ 1,050,000
SDC									
TOTAL		$ 500,000	$ 250,000	$ 100,000	$ 100,000	$ 100,000	$ 1,050,000		$ 1,050,000

**Estimated spent to date is not applicable for programmatic capital costs.*

PROJECT DETAIL

Project Name: Detention Pond Repair/Rehab

Project Number: Various

Project Subprogram: Watershed Protection

Fund: 649

Project Status: Active

Project Description:
Detention pond repair/rehab includes removing silt and overgrown vegetation from detention ponds to return the ponds to their original design. Since the original installation, many ponds have become overgrown with vegetation. The pond bottoms are filled with vegetation and silt making them ineffective for stormwater treatment.

Project Costs:

FUNDING SOURCE	ESTIMATED SPENT TO DATE*	FY 22/23 BUDGET	FY 23/24 PROJECTED	FY 24/25 PROJECTED	FY 25/26 PROJECTED	FY 26/27 PROJECTED	TOTAL FY 22-27 PROJECTED	TOTAL FY 28-34 PROJECTED	TOTAL PROJECT
CONST		$ 100,000	$ 100,000	$ 200,000	$ 200,000	$ 200,000	$ 800,000		$ 800,000
SDC									
TOTAL		$ 100,000	$ 100,000	$ 200,000	$ 200,000	$ 200,000	$ 800,000		$ 800,000

**Estimated spent to date is not applicable for programmatic capital costs.*

PROJECT DETAIL

Project Name: Small Storm System - Emergency Repairs

Project Number: Various

Project Subprogram: Watershed Protection

Fund: 649

Project Status: Active

Project Description:
This project includes repair of storm infrastructure such as pipes, manholes or catchbasins that break and need immediate repair.

Project Costs:

FUNDING SOURCE	ESTIMATED SPENT TO DATE*	FY 22/23 BUDGET	FY 23/24 PROJECTED	FY 24/25 PROJECTED	FY 25/26 PROJECTED	FY 26/27 PROJECTED	TOTAL FY 22-27 PROJECTED	TOTAL FY 28-34 PROJECTED	TOTAL PROJECT
CONST		$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 500,000		$ 500,000
SDC									
TOTAL		$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 500,000		$ 500,000

**Estimated spent to date is not applicable for programmatic capital costs.*

PROJECT DETAIL

Project Name: Aldercrest Culvert Replacement & Kellogg Creek Restoration

Project Number: N/A

Project Subprogram: Watershed Protection

Fund: 649

Project Status: Active

Project Description:

The purpose of this project is to reduce flooding and improve habitat along Kellogg Creek between SE Clackamas Road and SE Thiessen Road by removing or replacing culverts and stream crossings and naturalizing a concrete channel. Replacement stream crossings will be designed to be fish passable. The project proposes several discrete interventions in this section of Kellogg Creek that could be undertaken as separate projects depending on property owner cooperation and funding availability. At the southern end of the creek section, this project will remove one pair of parallel culverts that appear to serve no purpose, replace a small culvert with a concrete slab driveway bridge, and restore native vegetation along a length of the stream. At the northern end of the creek segment, the project will remove the concrete channel, establish a more natural creek bed and banks, and restore native vegetation within the riparian area. Four driveway crossings will be replaced with concrete slab bridges to accommodate the natural stream form and provide fish passage. The proposed improvements take place entirely on private property and will require the cooperation of multiple property owners along the project reach.

This project will be funded with resources from Clackamas County's American Rescue Plan Act (ARPA) grant award, as approved by the Board of County Commissioners in October 2022.

Project Costs:

FUNDING SOURCE	ESTIMATED SPENT TO DATE	FY 22/23 AMENDED BUDGET	FY 23/24 PROJECTED	FY 24/25 PROJECTED	FY 25/26 PROJECTED	FY 26/27 PROJECTED	TOTAL FY 22-27 PROJECTED	TOTAL FY 28-34 PROJECTED	TOTAL PROJECT
CONST		$ 100,000	$ 230,000	$ 765,000	$ 765,000		$ 1,860,000		$ 1,860,000
SDC									
TOTAL		$ 100,000	$ 230,000	$ 765,000	$ 765,000		$ 1,860,000		$ 1,860,000

PROJECT DETAIL

Project Name: Thiessen Culvert Replacement and Kellogg Creek Restoration

Project Number: N/A

Project Subprogram: Watershed Protection

Fund: 649

Project Status: Active

Project Description:

The purpose of this project is to replace an undersized culvert where SE Thiessen Road crosses Kellogg Creek. The creek currently passes through a 6-foot diameter round culvert which creates a backwater and floods the roadway and private property upstream.

This project will replace the existing undersized round culvert with an arched culvert 14 feet wide and approximately 5 feet tall. The culvert width will accommodate a natural streambed form to be constructed within the culvert. The wider archway will allow the natural movement of water and sediment in this section of the creek to alleviate backwater and allow for fish passage. The area at either end of the culvert will be revegetated to restore the habitat along the stream in the project area. The length of the culvert was designed to accommodate the full width of SE Thiessen Road under the minor arterial designation, although the road is currently narrower.

This project will be funded with resources from Clackamas County's American Rescue Plan Act (ARPA) grant award, as approved by the Board of County Commissioners in October 2022.

Project Costs:

FUNDING SOURCE	ESTIMATED SPENT TO DATE	FY 22/23 AMENDED BUDGET	FY 23/24 PROJECTED	FY 24/25 PROJECTED	FY 25/26 PROJECTED	FY 26/27 PROJECTED	TOTAL FY 22-27 PROJECTED	TOTAL FY 28-34 PROJECTED	TOTAL PROJECT
CONST		$ 50,000	$ 63,000	$ 344,000	$ 344,000		$ 801,000		$ 801,000
SDC									
TOTAL		$ 50,000	$ 63,000	$ 344,000	$ 344,000		$ 801,000		$ 801,000

PROJECT DETAIL

Project Name: SE Clackamas Rd Drainage Infrastructure

Project Number: N/A

Project Subprogram: Watershed Protection

Fund: 649

Project Status: Active

Project Description:
The purpose of this project is to reduce flooding of properties near the SE Clackamas Road-Kellogg Creek crossing without replacing the culvert or disrupting the wetland upstream of the crossing. This will be achieved by replacing the undersized ditch inlet that collects a tributary stream and routing new storm pipes on SE Clackamas Road to a new outfall on the downstream side of the Kellogg Creek crossing instead of into the wetland upstream of the crossing.

This project will be funded with resources from Clackamas County's American Rescue Plan Act (ARPA) grant award, as approved by the Board of County Commissioners in October 2022.

Project Costs:

FUNDING SOURCE	ESTIMATED SPENT TO DATE	FY 22/23 AMENDED BUDGET	FY 23/24 PROJECTED	FY 24/25 PROJECTED	FY 25/26 PROJECTED	FY 26/27 PROJECTED	TOTAL FY 22-27 PROJECTED	TOTAL FY 28-34 PROJECTED	TOTAL PROJECT
CONST		$ 40,000	$ 40,000	$ 214,000	$ 214,000		$ 508,000		$ 508,000
SDC									
TOTAL		$ 40,000	$ 40,000	$ 214,000	$ 214,000		$ 508,000		$ 508,000

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COUNTY

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December 7, 2022

Capital Improvement Plan

For Fiscal Years 2022/23-2026/27

Lynne Chicoine PE, BCEE, Consultant
Greg Geist, Director

Presentation Outline

- Background
- Program Structure
- Performance/Progress
- Planned Work
- Financial Planning and Impact on Rates
- Questions

CLACKAMAS
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PROTECT WATER QUALITY AND PUBLIC HEALTH

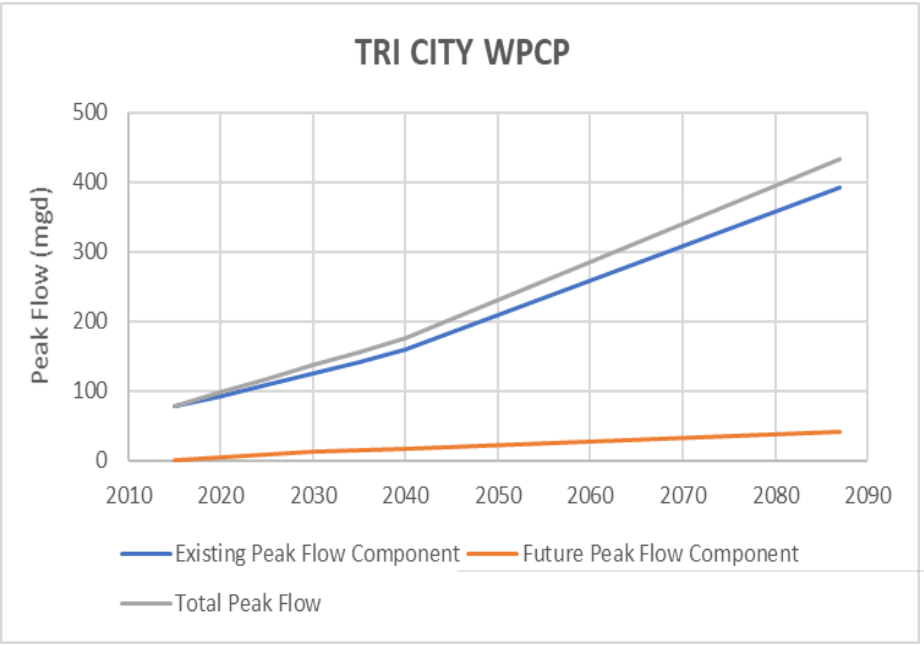
CLACKAMAS
WATER ENVIRONMENT SERVICES

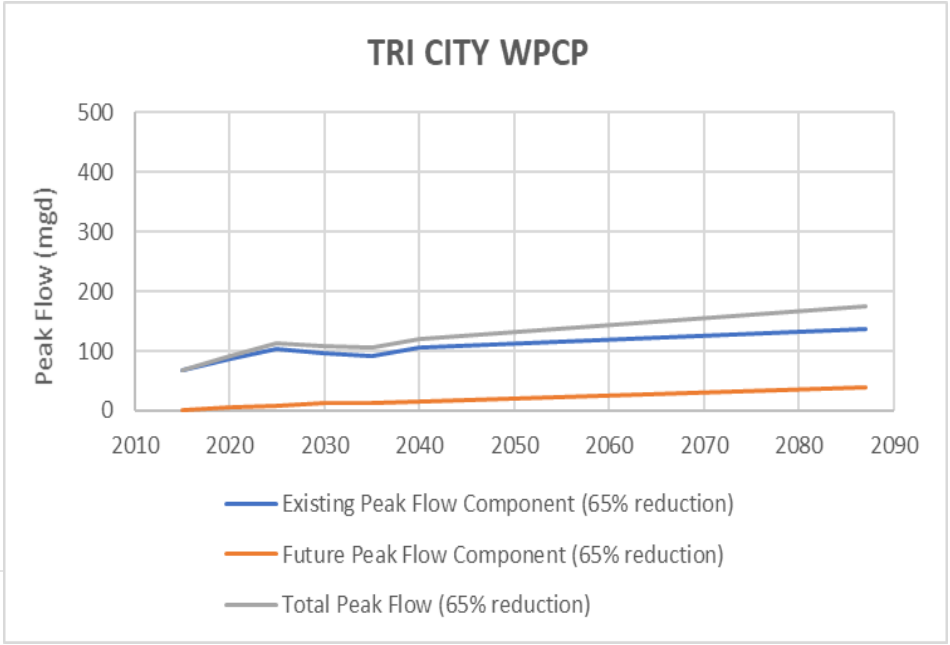
WES' CIP is Based On Thoughtful Planning

CLACKAMAS WATER ENVIRONMENT SERVICES

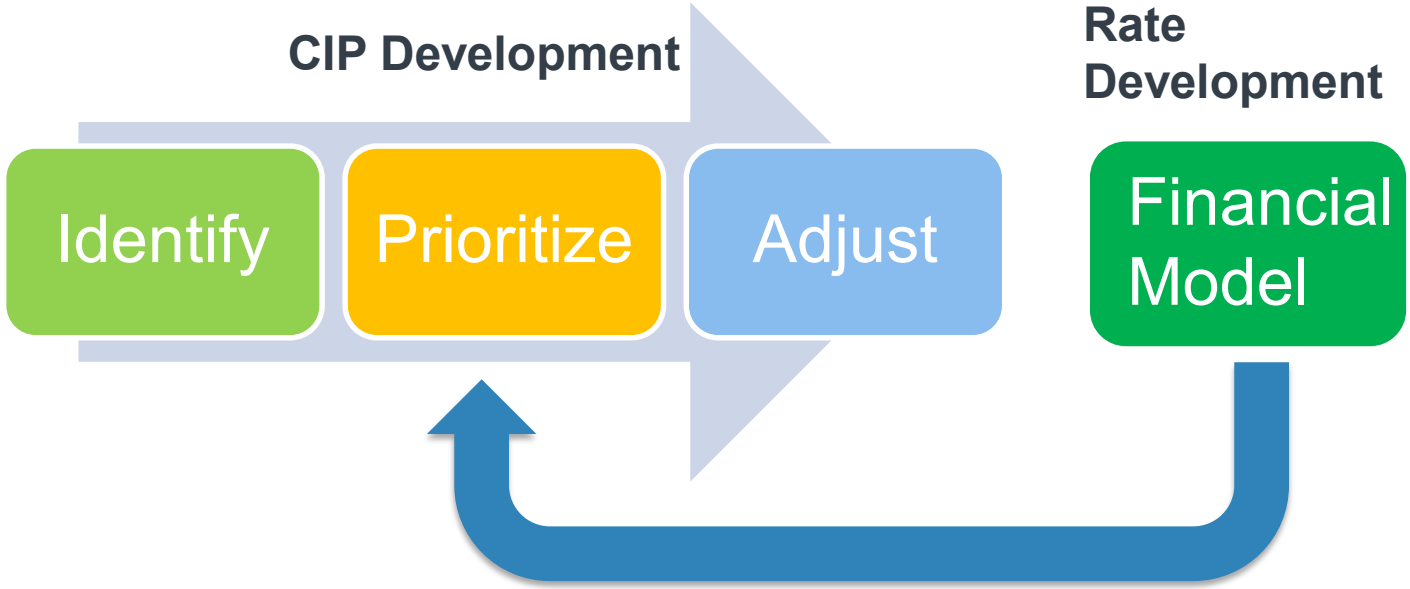
CIP Assumes I&I Reduction is Achieved

65-percent I&I Reduction Applied to 19 Cost Effective Sub-Basins



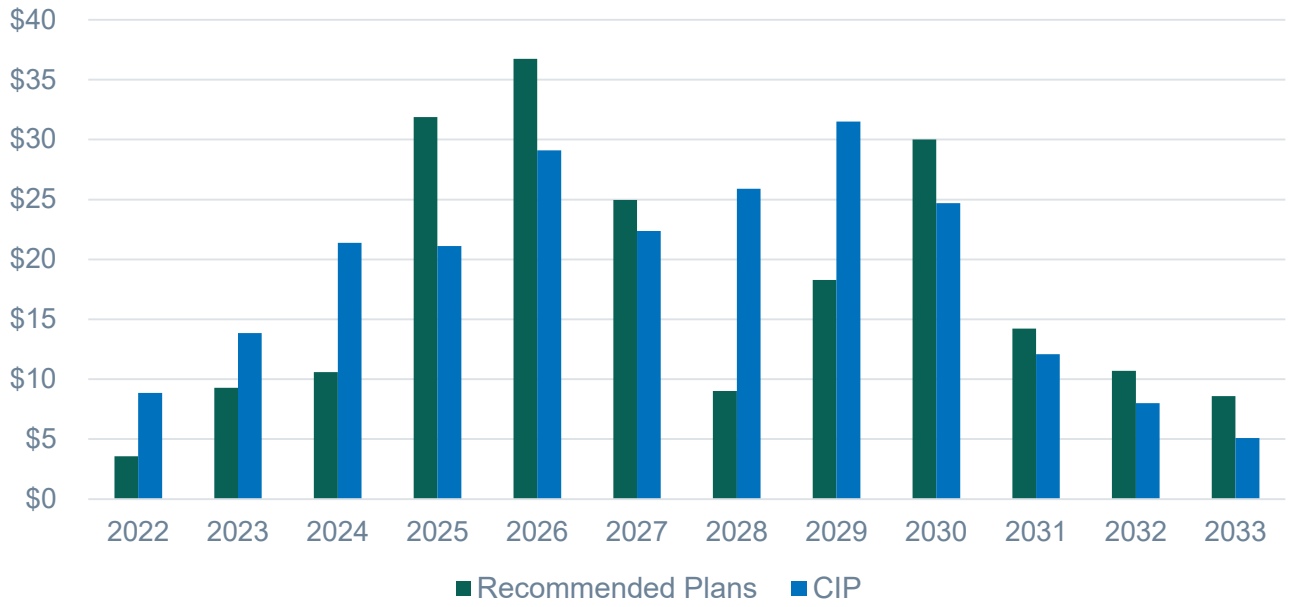


CIP is a Roadmap for WES' Future



CLACKAMAS WATER ENVIRONMENT SERVICES

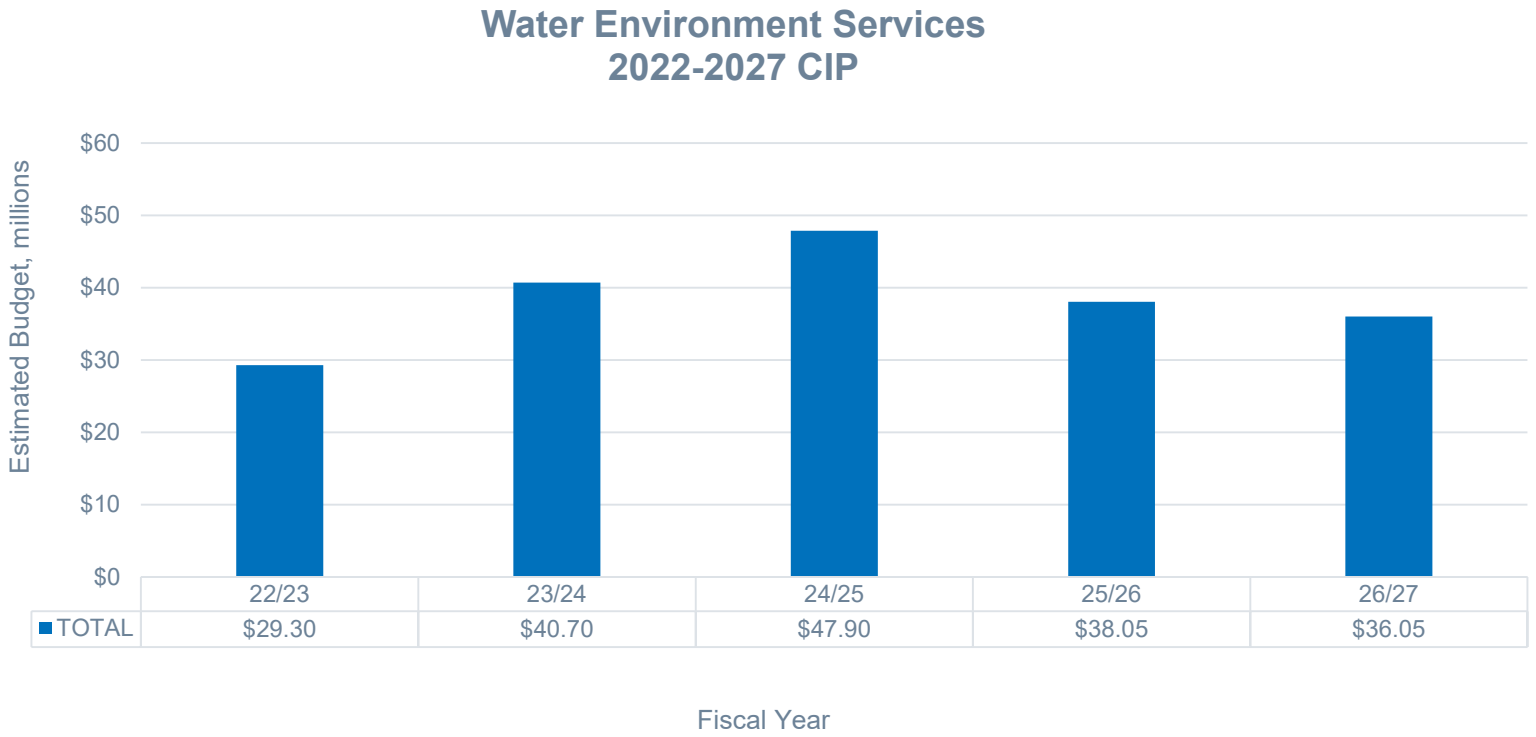
Recommended Plans vs. CIP Spending



*Willamette Facilities Plan and Collection System Master Plans

CLACKAMAS WATER ENVIRONMENT SERVICES

Wastewater CIP Projected Annual Spending



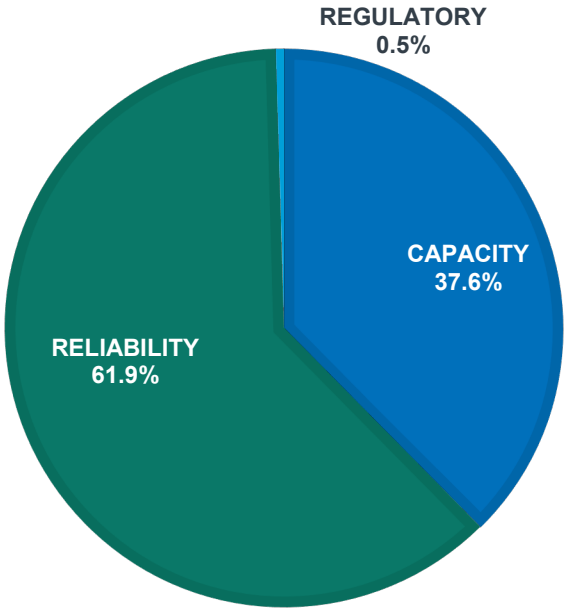
Wastewater CIP Priorities

Capacity

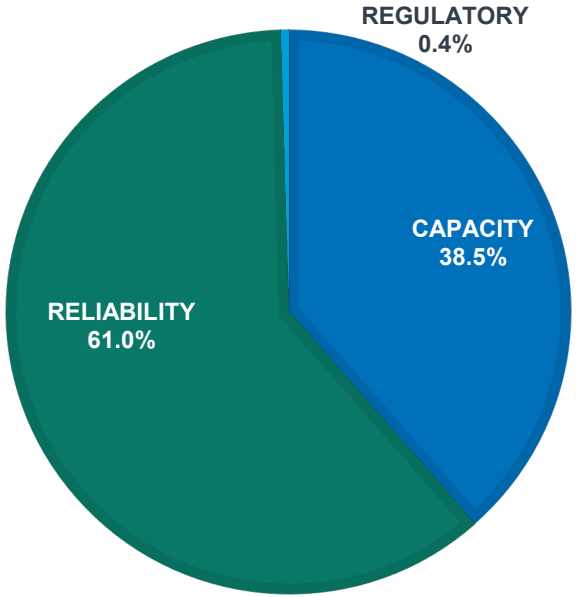
Reliability

*PROVIDE wastewater planning, engineering, and construction services to provide ratepayers with **reliable** wastewater treatment and conveyance infrastructure and support planned **growth.***

Projected Wastewater CIP $ Allocation



5 YEAR CIP



12 YEAR CIP

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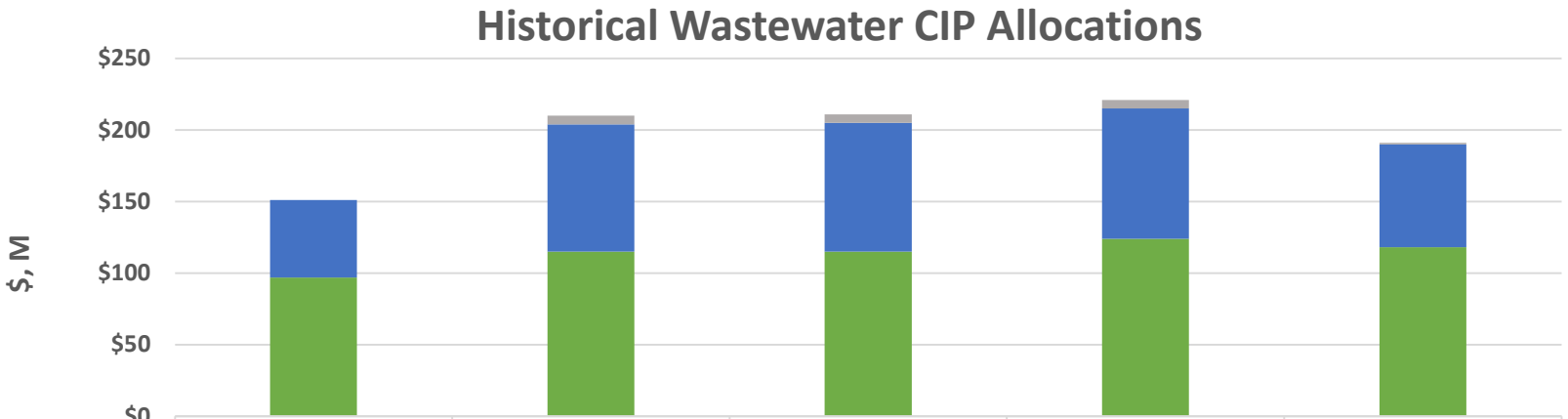
FY 22/27 Allocation is Consistent w/ Historical Allocations



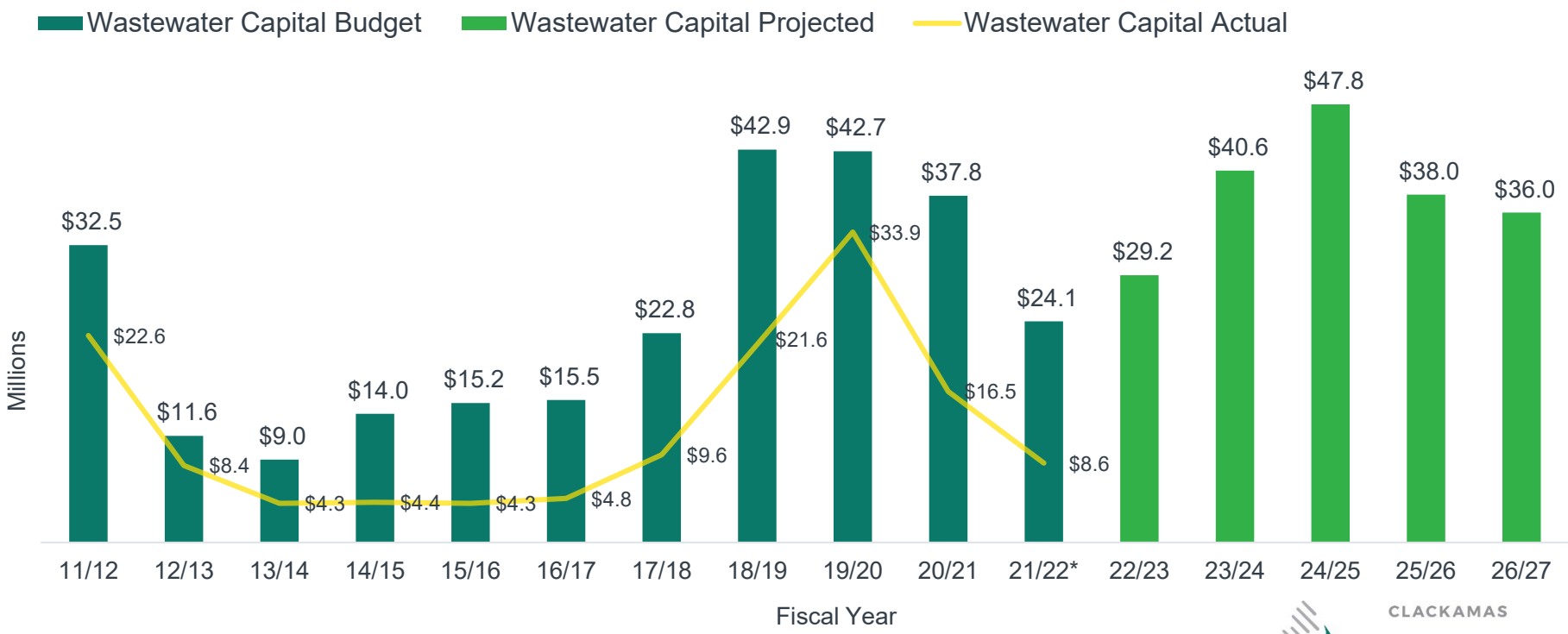
	FY18/23	FY19/24	FY20/25	FY21/26	FY22/27
REGULATORY	$-	$6	$6	$6	$1
CAPACITY	$54	$89	$90	$91	$72
RELIABILITY	$97	$115	$115	$124	$118

CLACKAMAS WATER ENVIRONMENT SERVICES

Wastewater CIP $ Projection By Location/Category

LOCATION/CATEGORY	5 YEAR CIP		12 YEAR CIP	
	CAPACITY	RELIABILITY	CAPACITY	RELIABILITY
TC WRRF	26%	74%	37%	63%
KC WRRF	0%	100%	0%	100%
HOODLAND WRRF			50%	50%
BORING WRRF			0%	100%
COLLECTION SYSTEM	55%	45%	56%	44%
FLEET	0%	100%	0%	100%
PUMP STATION UPGRADES	0%	100%	0%	100%
LAB	0%	0%		
AM BUCKET	0%	100%	0%	100%
FISCHER FOREST PARK (FFP)	0%	100%	0%	100%
TOTAL	**$ 72,073,722**	**$ 118,598,750**	**$ 142,153,972**	**$ 225,129,000**

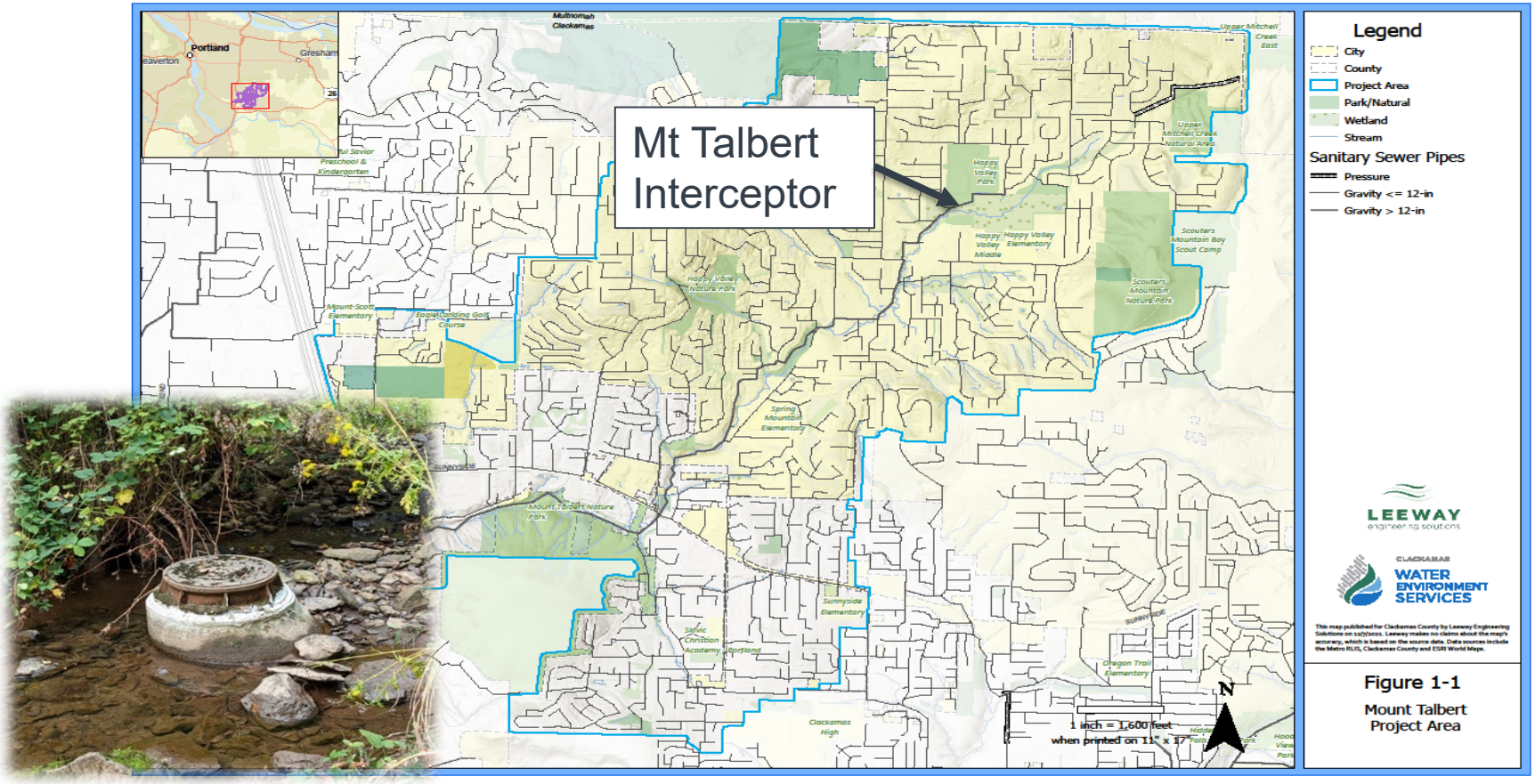
Historical Wastewater Actual vs Budget



*21/22 Actual Capital Expenses are estimated

CLACKAMAS WATER ENVIRONMENT SERVICES

I&I Reduction Work is Underway



Tri-City WRRF Solids Handling Improvements Project

CONSTRUCTION

ESTIMATE:	$35.5M
BID:	$33.5M
ACTUAL:	$35.9M

CHANGES DURING CONSTRUCTION

CHANGE ORDERS:	3.4%
OWNER REQUESTED:	3.7%

CLACKAMAS WATER ENVIRONMENT SERVICES

Kellogg Creek WRRF Improvements Project

CONSTRUCTION

GMP: $18.6M

FINAL: $17.4M

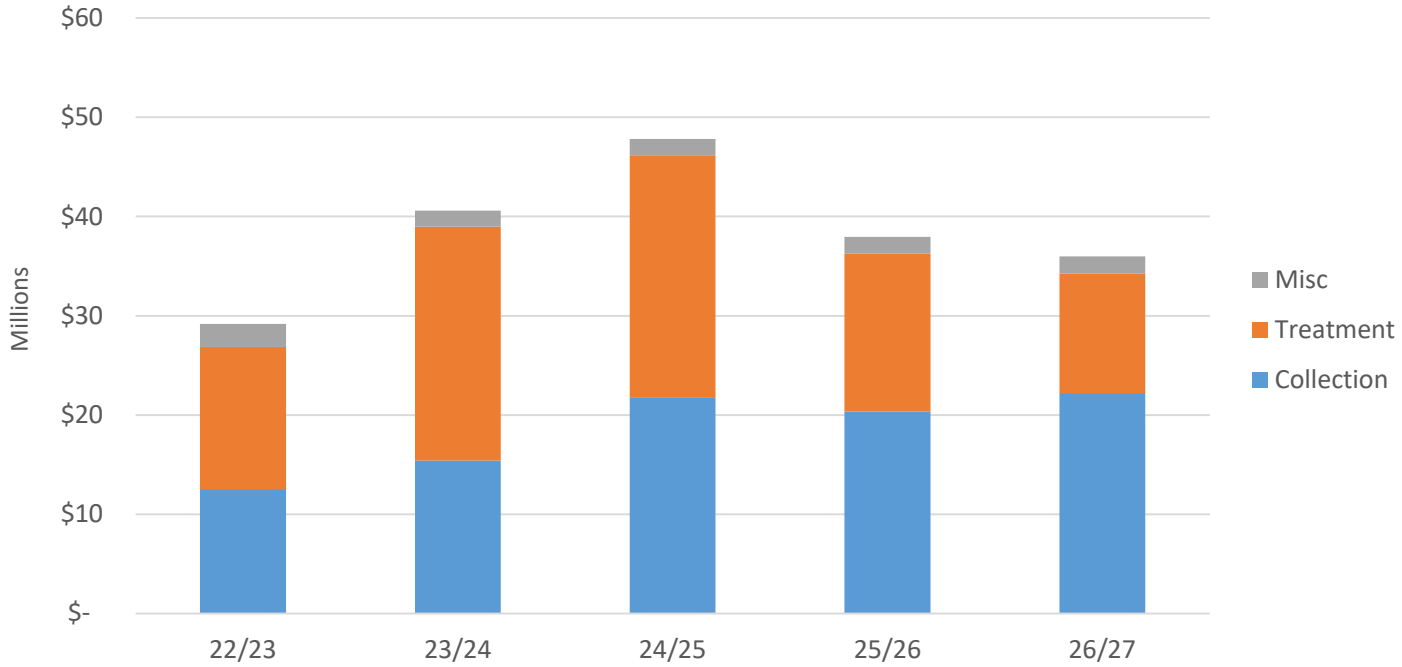
CHANGES DURING CONSTRUCTION

CHANGE ORDERS: 3.7%

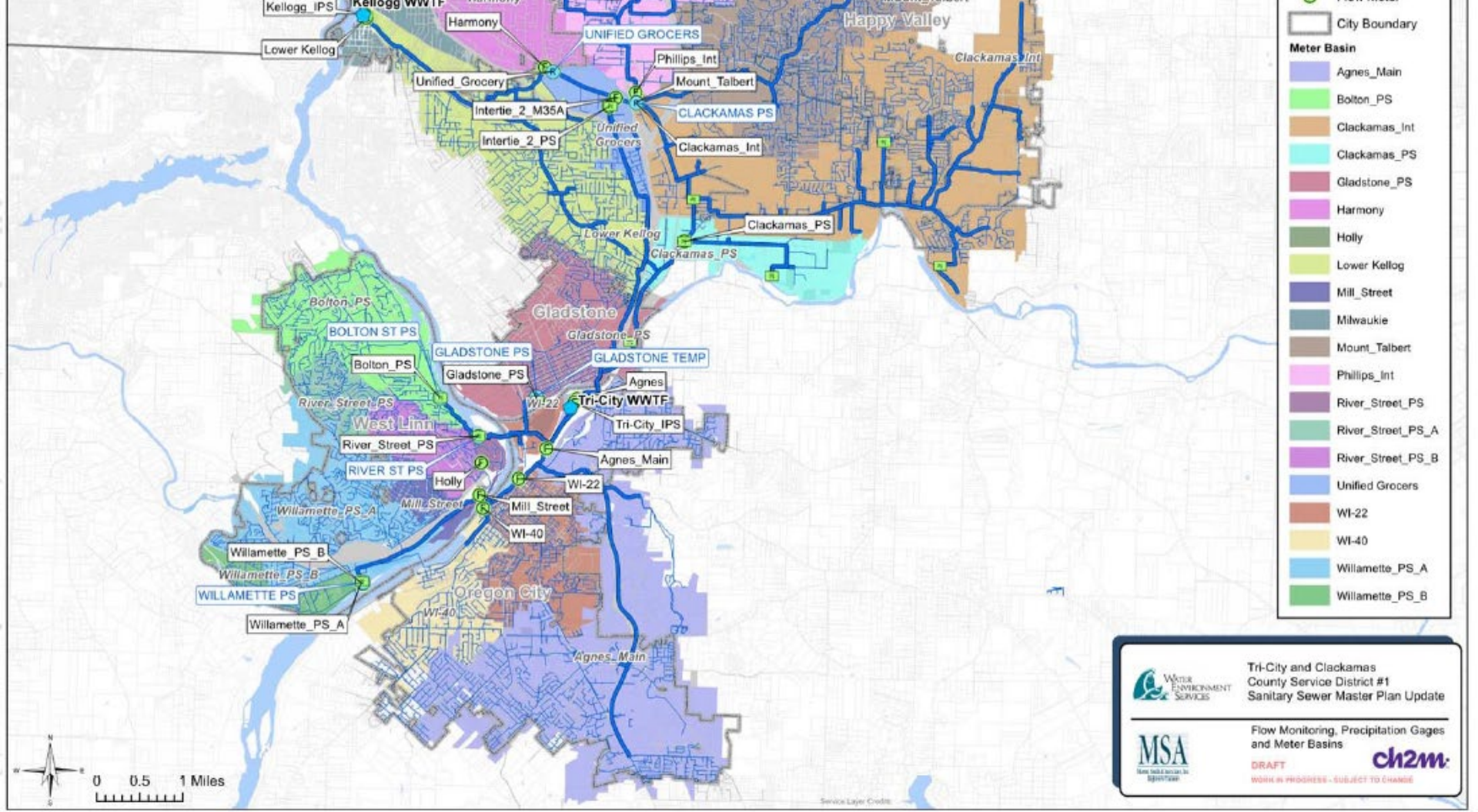
OWNER REQUESTED: 6.2%

CLACKAMAS WATER ENVIRONMENT SERVICES

Wastewater CIP by Area of Work



CLACKAMAS WATER ENVIRONMENT SERVICES


Kellogg_IPS
Kellogg WWTF
Harmony
Lower Kellog
UNIFIED GROCERS
Unified_Grocery
Intertie_2_M35A
Intertie_2_PS
Phillips_Int
Mount_Talbert
CLACKAMAS PS
Clackamas_Int
Clackamas_PS
Happy Valley
Unified Grocers
Lower Kellog
Clackamas_PS
Bolton_PS
BOLTON ST PS
Bolton_PS
Gladstone_PS
GLADSTONE PS
Gladstone
Gladstone_PS
GLADSTONE TEMP
Agnes
Tri-City WWTF
WI-22
Tri-City_IPS
River_Street_PS
West Linn
River_Street_PS
RIVER ST PS
Agnes_Main
Holly
WI-22
Willamette_PS_A
Mill_Street
Mill_Street
WI-40
Willamette_PS_B
Willamette_PS_B
WILLAMETTE PS
Willamette_PS_A
Oregon City
WI-40
Agnes_Main
City Boundary
Meter Basin
Agnes_Main
Bolton_PS
Clackamas_Int
Clackamas_PS
Gladstone_PS
Harmony
Holly
Lower Kellog
Mill_Street
Milwaukie
Mount_Talbert
Phillips_Int
River_Street_PS
River_Street_PS_A
River_Street_PS_B
Unified Grocers
WI-22
WI-40
Willamette_PS_A
Willamette_PS_B
0 0.5 1 Miles
Tri-City and Clackamas County Service District #1
Sanitary Sewer Master Plan Update
Flow Monitoring, Precipitation Gages and Meter Basins
DRAFT
WORK IN PROGRESS - SUBJECT TO CHANGE
June 2016
16-1801

Tri-City WRRF 12 Year CIP

PROJECT DESCRIPTION	CAPACITY	RELIABILITY	TOTAL
Outfall	22%	78%	$ 52,700,000
Wet Weather Expansion	50%	50%	$ 48,745,000
Landfill Mitigation	100%	0%	$ 7,500,000
Recoat PCs and mechanical	0%	100%	$ 6,000,000
PS Thickening	75%	25%	$ 5,680,000
IPS Expansion (Incl pipe and VFD)	50%	50%	$ 4,500,000
TC Admin Remodel	0%	100%	$ 4,300,000
HW Rehab	0%	100%	$ 2,223,000
Aeration Basin Improvements	0%	100%	$ 2,200,000
Relocate Maintenance Bldg	0%	100%	$ 1,200,000
Chlorine Contact Basins - Recoat and Gates	0%	100%	$ 640,000
MBR Cassette Replacement	0%	100%	$ 630,000
Mt Rosane	100%	0%	$ 400,000
TOTALS	**$ 50,376,500**	**$ 86,341,500**	**$ 136,718,000**

Tri-City WRRF Outfall Project - $53M

- Progressive Design Build Delivery
- Preliminary Design Phase
- Build out capacity
- Construction in 2024/2025

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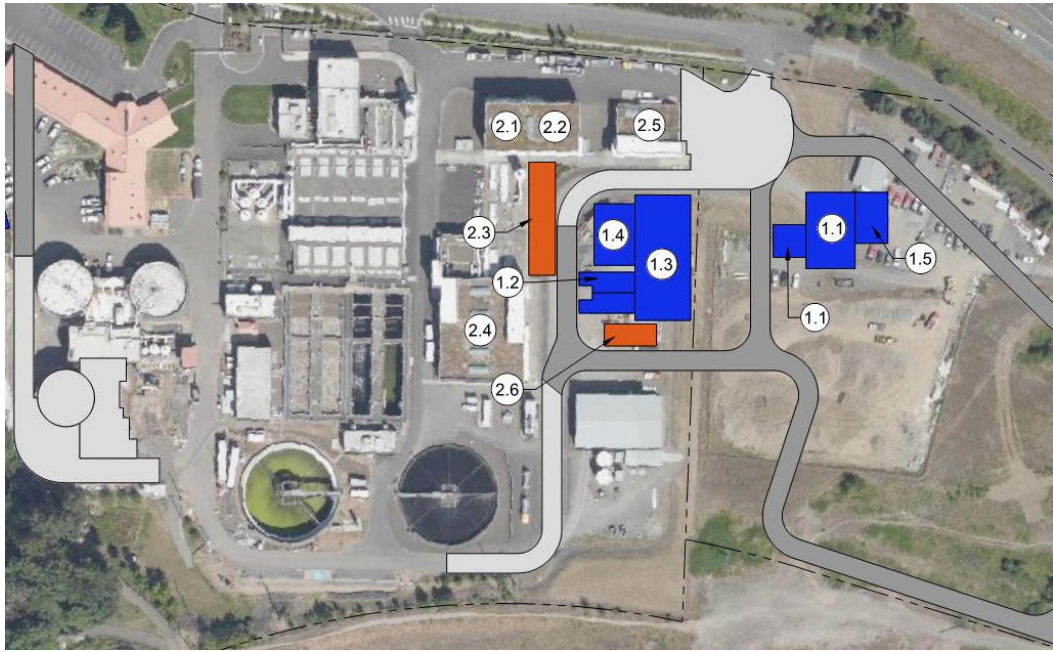
Tri-City WRRF Wet Weather Expansion - $49M

- Increase peak capacity from 70 MGD to 105 MGD for 2040 projected flow
- Plan complete
- DEQ negotiations
- Design/construction 2026-2031



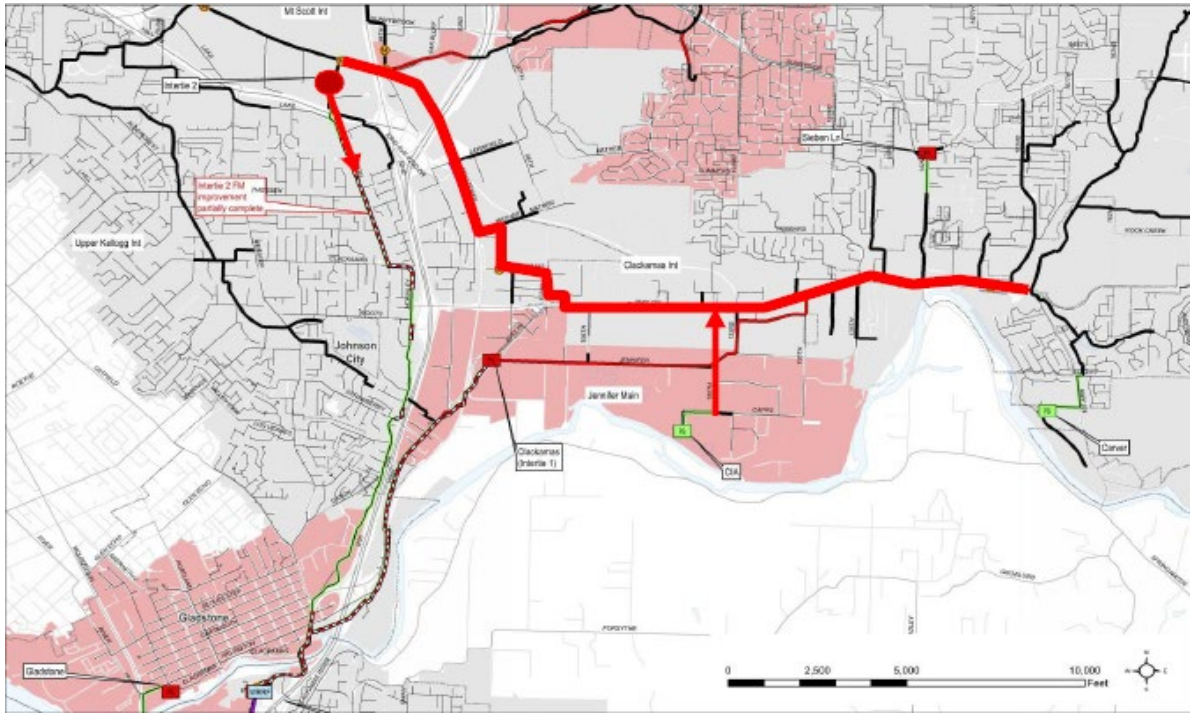
CLACKAMAS WATER ENVIRONMENT SERVICES

Collection System 12 Year CIP

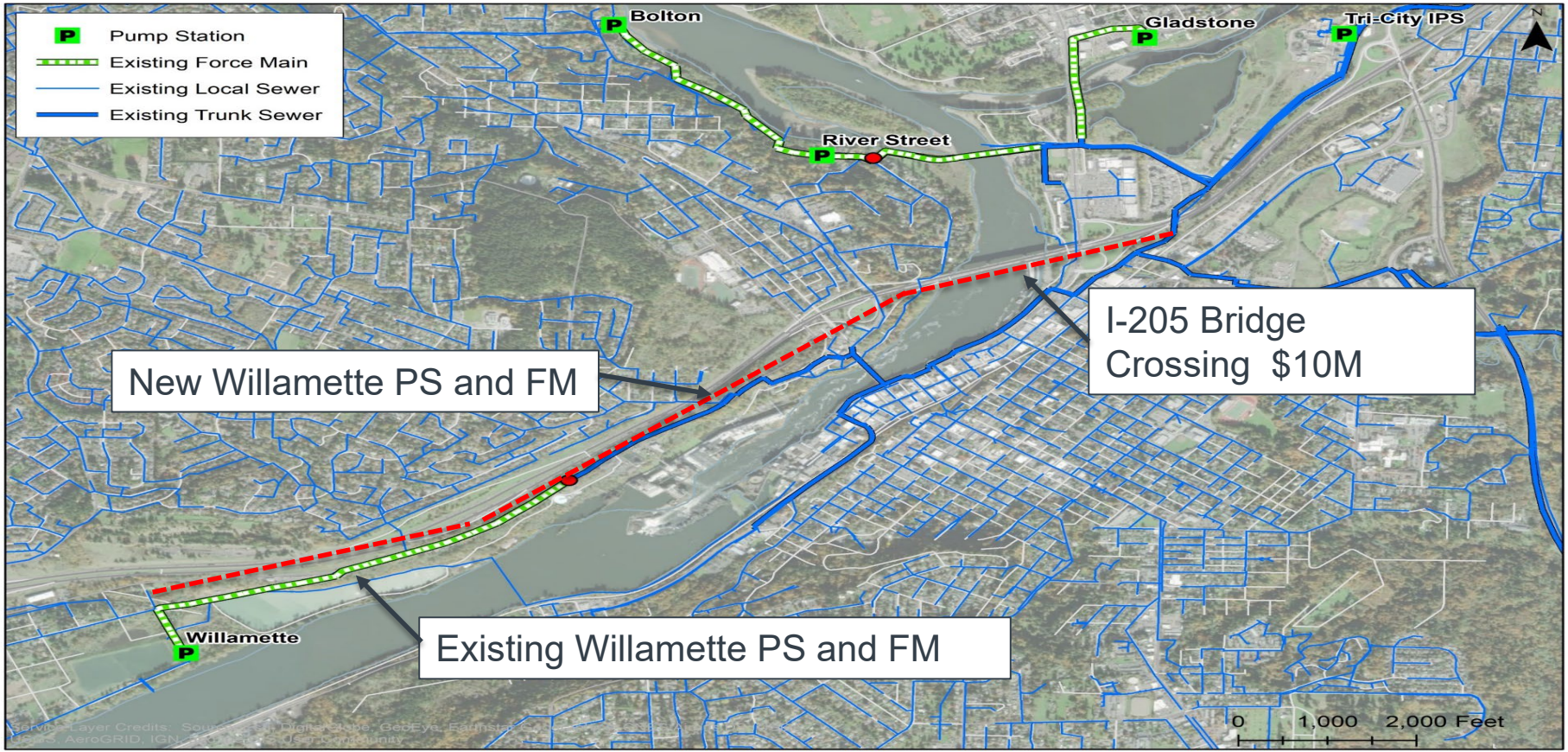
PROJECT DESCRIPTION	CAPACITY	RELIABILITY	TOTAL
Willamette PS and FM	50%	50%	$ 26,457,000
I/I Reduction Program	100%	0%	$ 23,482,972
Lower Clackamas Interceptor	50%	50%	$ 14,000,000
IT2 Pump Station and 30 IN FM	24%	76%	$ 13,400,000
Middle Clackamas Interceptor	50%	50%	$ 12,700,000
Lower Willamette Interceptor	50%	50%	$ 11,800,000
Multi PS Upgrades	0%	100%	$ 9,000,000
Extend Rock Creek Interceptor	100%	0%	$ 9,000,000
Upper Clackamas Interceptor	50%	50%	$ 8,700,000
Pipe and MH Rehabilitation and	50%	50%	$ 8,000,000
Linwood Pump Station (Lents)/Phillips	100%	0%	$ 7,500,000
Timberline Rim and Sandy River Lane	0%	100%	$ 3,760,000
Mt Scott Interceptor	50%	50%	$ 3,500,000
Oregon City Interceptor Rehabilitation	50%	50%	$ 1,500,000
Flow Monitoring (Scada Master Plan	0%	100%	$ 300,000
Bolton FM Evaluation and Replacement	0%	100%	$ 300,000
Sieben Lane/Rose Creek	0%	100%	$ 200,000
Hoodland Pump Stations Property	0%	100%	$ 100,000
TOTAL	**$ 86,527,472**	**$ 67,172,500**	**$ 153,699,972**

Clackamas Interceptor Program - $32M/$52M

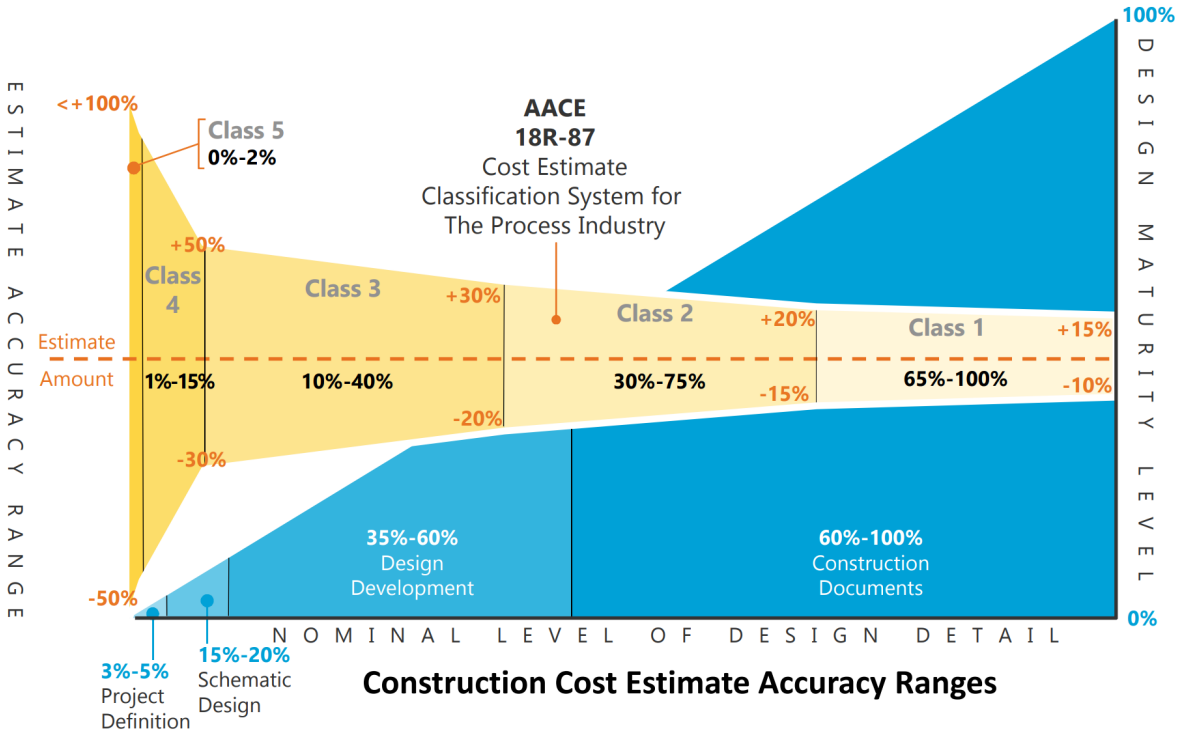
- Three Clackamas Interceptor segments
- Mt. Scott Interceptor
- IT2 PS and forcemain
- Under design
- Phased construction



Willamette Interceptor Program - $27M



Planning Costs are Refined as Design Matures



Construction Cost Estimate Accuracy Ranges

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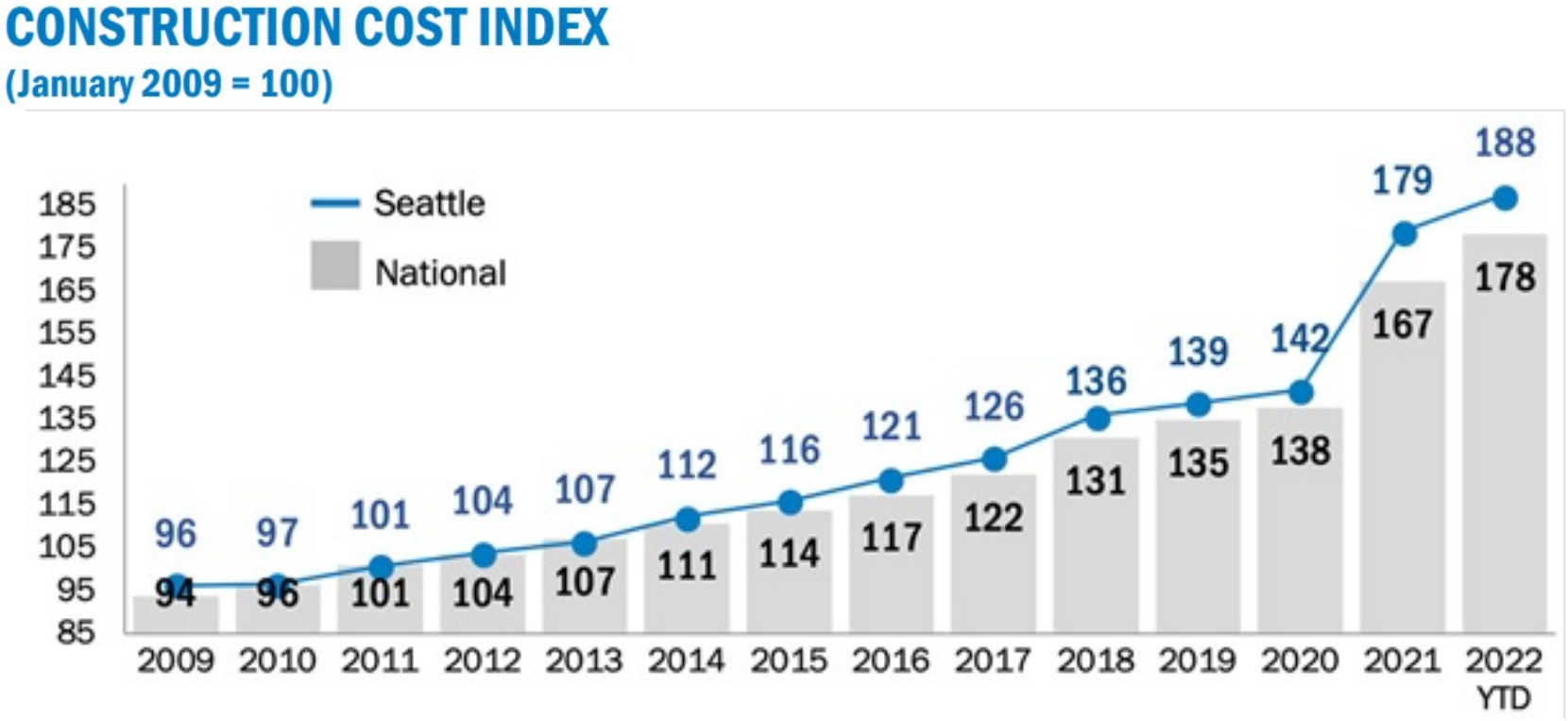
Estimated Costs are Indexed and Updated



Financial Planning and Rate Impact

- Sewer Program Revenue Requirements Analysis / 10-Year Forecast
- 5-year Sewer CIP: $192M / 10-year Sewer CIP: $344.3M
  - Use of existing construction/SDC reserves of ~$151M
  - Debt issuance starting in FY 2026/27 aligned with projections developed during budget
  - 5% annual rate increases and rate harmonization achieved by FY 2030/31 aligned w/ Advisory Committee guidance

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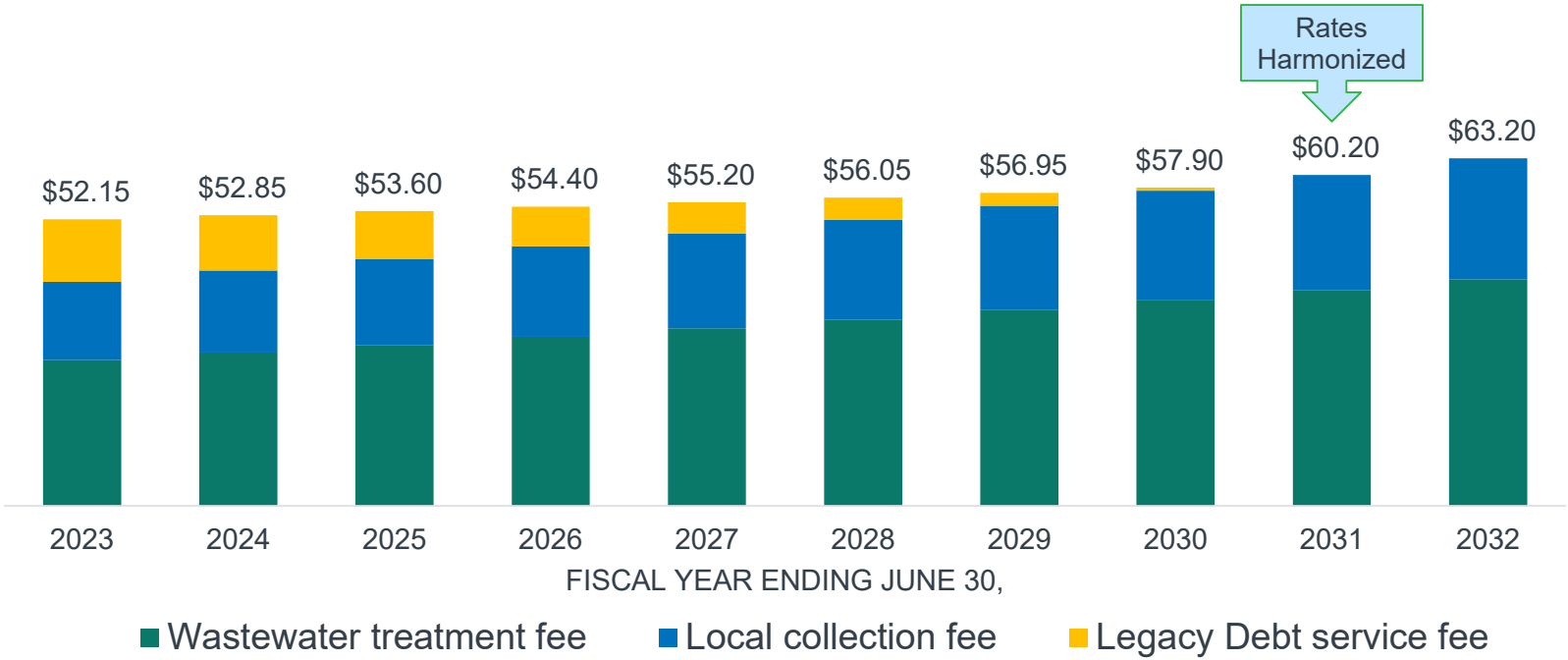
Forecasted Sewer Rates under 10-Year Plan



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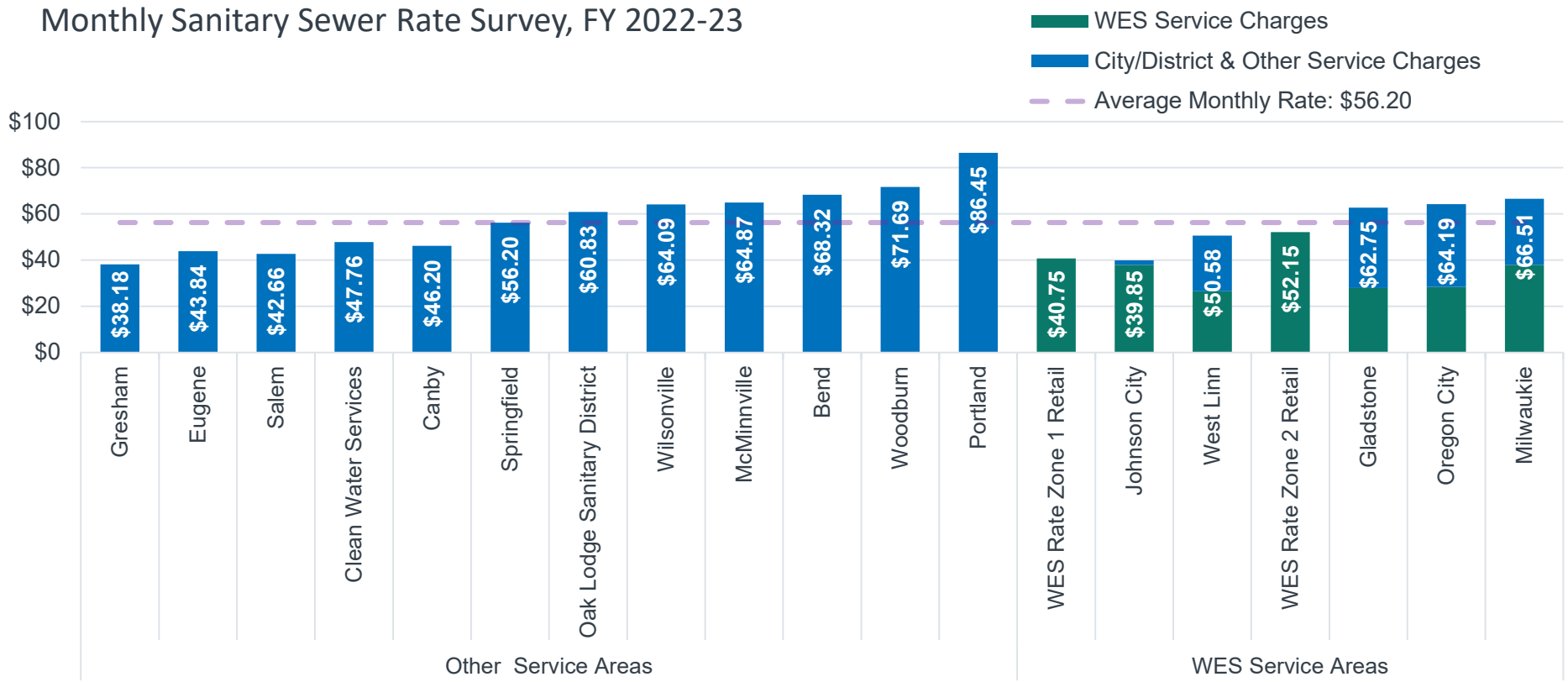
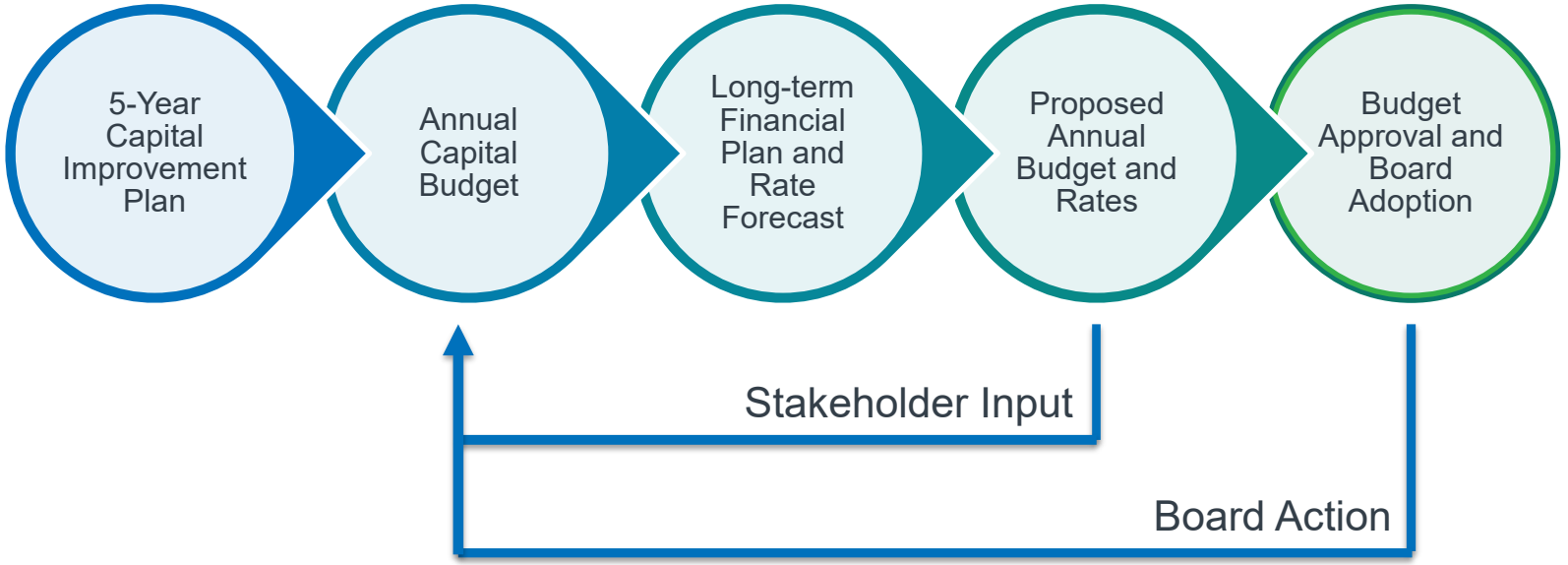
WES RATES ARE LOWER THAN AREA AVERAGE



Financial Planning and Rate Impact

Connection between CIP, Budget, and Rates



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QUESTIONS?
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