CLACKAMAS
WATER ENVIRONMENT SERVICES

Gregory L. Geist
Director

August 20, 2020

Board of County Commissioners
Clackamas County

Members of the Board:

Approval and Adoption of Water Environment Services Five-Year Sanitary and Surface Water Programs Capital Improvement Plan (CIP) FY20/21 to FY24/25

Purpose/Outcomes	Approval and adoption of WES Capital Improvement Plan FY20 to FY25.
Fiscal Impact	Anticipated cost to fund CIP projects are built into the annual budget as adopted. Authorizes collection of system development charges.
Funding Source	WES Sanitary and Surface Water Construction and System Development Charge Funds
Duration	FY20/21 – FY24/25 (updated annually)
Previous Action	WES Advisory Committee review in May and July 2020, recommended for adoption by BCC.
Counsel Review	1. Date of Counsel review: 8/12/2020 2. Initials: Amanda Keller ____
Procurement Review	1. Was the item processed through Procurement? yes ☐ no ☒ 2. If no, provide brief explanation: The adoption of the CIP is not within the scope of items required to be processed through Procurement.
Strategic Plan Alliance	1. Supports the WES Strategic Plan to provide enterprise resiliency, infrastructure strategy and performance, and operational optimization. 2. Supports the County Strategic Plan of Building Strong Infrastructure
Contact Person	Lynne Chicoine, PE BCEE, WES Capital Program Manager lchicoine@clackamas.us x4559

BACKGROUND
On behalf of its ratepayers, Clackamas Water Environment Services ("WES") operates and maintains more than three hundred fifty 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.

To most efficiently construct capital assets to support WES' mission of protecting human health and the environment, and ensure new connections to the system pay their fair share, WES has

developed a 5 year Capital Improvement Plan ("CIP"). This is consistent with WES' Performance Clackamas strategic result in the Capital Planning Program, which guides our daily activities and long term planning with respect to capital projects. The Performance Clackamas result includes ensuring that there is adequate and appropriate wastewater and stormwater infrastructure necessary to support healthy living, natural resources, and economic development over the next 20 years.

The CIP puts forward a prioritized plan that will maintain existing facilities, allow efficient, cost-effective operations, and provide new infrastructure to continue to protect human health and WES' watershed for ratepayers today and into the future.

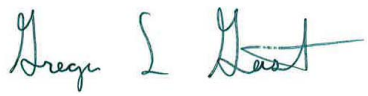
Once adopted, this new CIP will serve as the guide for capital investment and the establishment of system development charges for WES. Pursuant to Performance Clackamas, the CIP is updated annually and a rolling 5 year CIP will be adopted to ensure the best information is available to the BCC and WES' ratepayers.

A draft of this plan was presented to the WES Advisory Committee ("Committee") in May 2020 as informational, and a revised version responsive to feedback from the Committee was presented on July 30th, 2020. The Committee voted to unanimously recommend adoption of the Plan.

RECOMMENDATION

Staff recommends the Board of County Commissioners of Clackamas County, acting as the governing body of Water Environment Services, approve and adopt the Five-Year Capital Improvement Plan for WES' sanitary and surface water programs for FY20/21 to FY24/25.

Respectfully submitted,



Greg Geist, Director
Water Environment Services Director

Attachments:
Resolution adopting CIP
CIP Document

BEFORE THE BOARD OF COUNTY COMMISSIONERS
OF CLACKAMAS COUNTY, STATE OF OREGON

In the Matter of an Order Adopting a Capital Improvement Plan for FY20-25 for Water Environment Services

Resolution No. _____
Page 1 of 1

WHEREAS, Oregon Revised Statutes ("ORS") Chapter 223 requires a public body to create a capital improvement plan ("CIP") to impose system development charges; and

WHEREAS, best practices for such a plan call for a prioritized effort that will maintain existing facilities, allow efficient, cost- effective operations, and provide new infrastructure; and

WHEREAS, Water Environment Services has developed a five year CIP to ensure that it can accomplish its' mission to protect human health and WES' watershed and provide for opportunities for economic growth for ratepayers today and into the future.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS, ACTING AS THE GOVERNING BODY OF WATER ENVIRONMENT SERVICES, THAT:

The capital improvement plan attached as Exhibit A, which by this reference is made a part of this resolution, is hereby adopted.

ADOPTED this 20th day of August, 2020.

BOARD OF COUNTY COMMISSIONERS

_____
Chair

_____
Recording Secretary

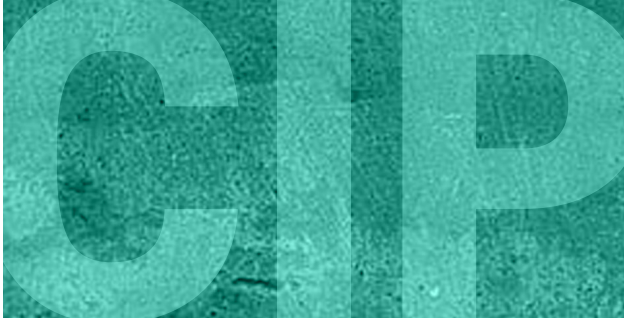
2020 - 2025

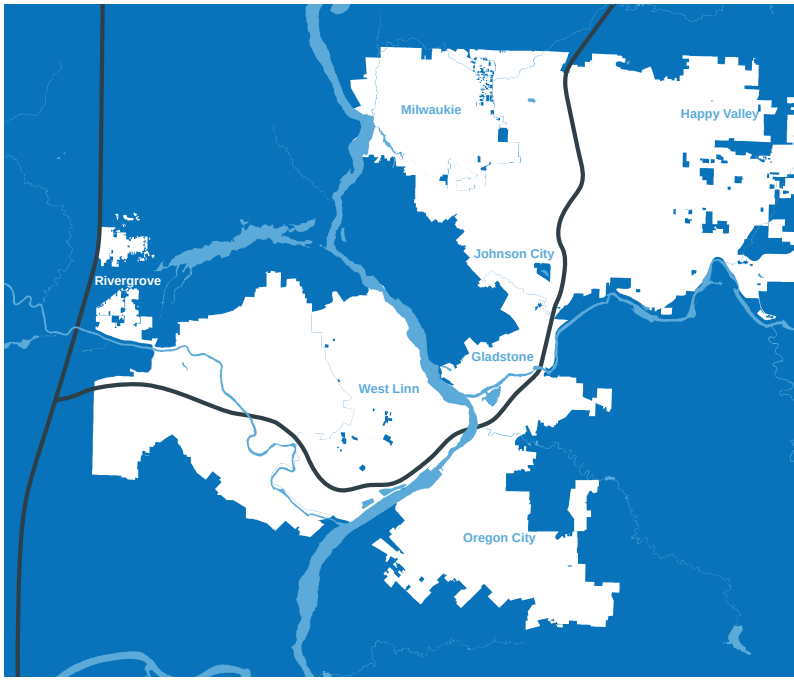
CAPITAL IMPROVEMENT PLAN

Water Environment Services

CLACKAMAS COUNTY

CLACKAMAS WATER ENVIRONMENT SERVICES





Clackamas

Water Environment Services

Fiscal Years 2020/2021 - 2024/2025

Capital Improvement Plan

Board of Directors

Jim Bernard, Chair

Sonya Fischer, Commissioner

Ken Humberston, Commissioner

Paul Savas, Commissioner

Martha Schrader, Commissioner

WES Leadership Team

Greg Geist, Director

Chris Storey, Assistant Director

Lynne Chicoine, Capital Program

Greg Eyerly, Operations

Amanda Keller, Legal Counsel

Doug Waugh, Financial Services

Ron Wierenga, Environmental Services

CLACKAMAS WATER ENVIRONMENT SERVICES

Clackamas Water Environment Services

Mission

The mission of Clackamas Water Environment Services (WES) is to provide resource recovery and watershed protection services to our community so they can live, work and play in a healthy environment.

Our Lines of Business and their 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

Our Strategic Results support Performance Clackamas which guide our daily activities and long term planning:

Comprehensive Plan – WES will provide the wastewater and stormwater infrastructure necessary to support partner communities and economic development over the next 20 years.

Decisions – Customers will benefit from well-informed and efficiency-minded decision making regarding wastewater infrastructure.

Continuing Operations/Utility Management – WES customers will continue to benefit from a well-managed utility.

Customer Experience – WES customers will understand, feel connected and support WES and the services they receive.

The 2020-2025 Capital Improvement Plan was developed to support WES in meeting our strategic results. The CIP puts forward a prioritized plan that will maintain existing facilities, allow efficient, cost-effective operations and provide new infrastructure to continue to protect human health and Clackamas County's water environment for ratepayers today and into the future.

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CAPITAL IMPROVEMENT PROGRAM OVERVIEW

INTRODUCTION

The Board of Directors (Board) approves the annual budgets for the Clackamas Water Environment Services (WES, District). The goal of this document is to provide context and continuity for the budgets and capital needs year over year.

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 5 years 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. Costs must be directly related to and primarily benefit a single capital project to be considered project costs.

BACKGROUND

On behalf of the ratepayers of Clackamas County, Water Environment Services operates and maintains more than 340 miles of sanitary sewers, 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 discharge to surface waters in the state of Oregon. Altogether, WES treats 6 billion gallons per year of wastewater and is in compliance with all of the terms of its permits.

Water Environment Services is also responsible for surface water management facilities. The District owns a limited amount of surface water infrastructure, but they are the operator of 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, both in public rights of way 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 58 square miles.

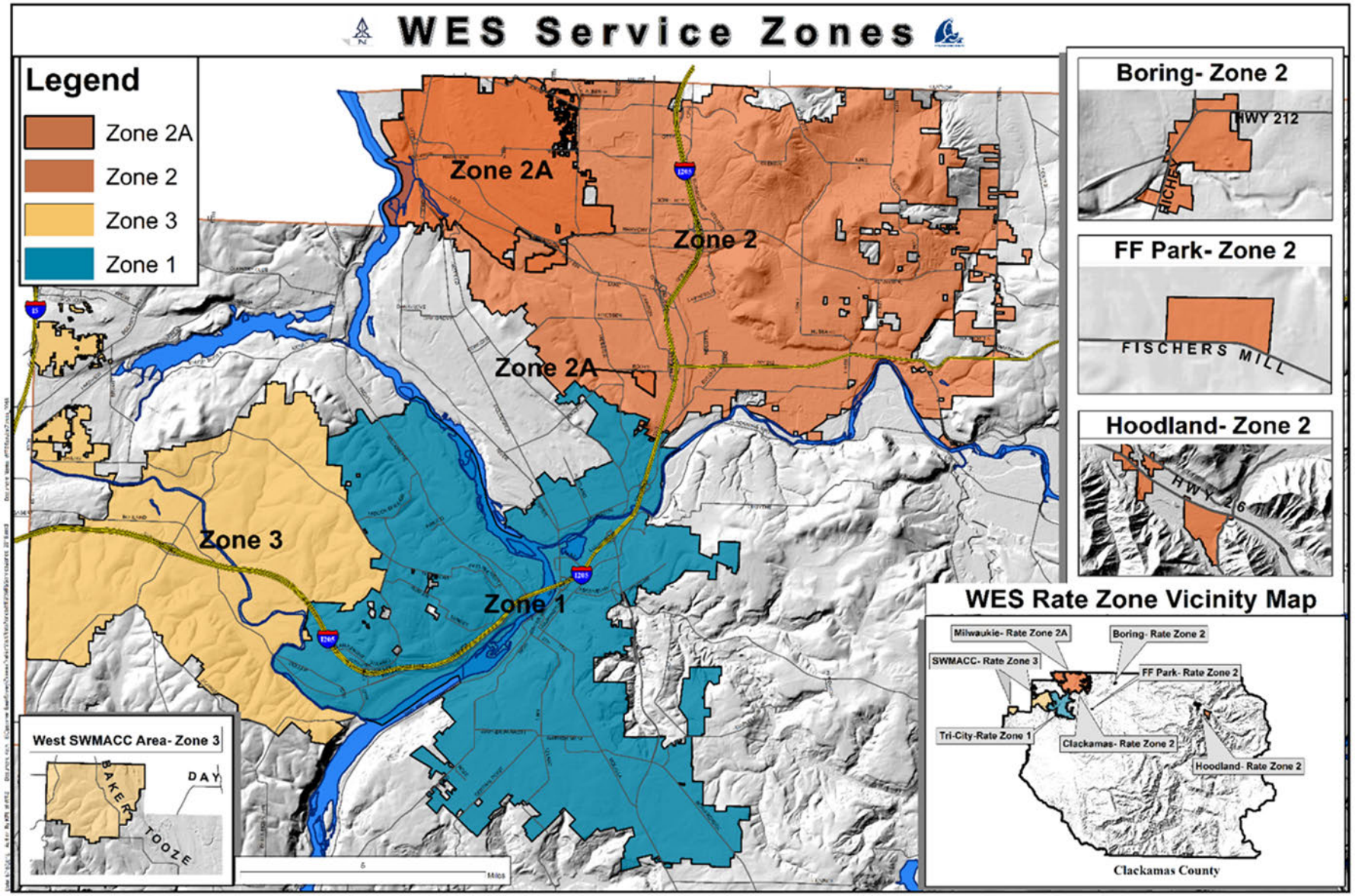


Figure 1. WES Service Area

Sanitary Sewer and Wastewater Treatment

WES provides retail sanitary sewer services to the cities of Happy Valley and Boring and to unincorporated portions of North Clackamas County, a portion of the former city of Damascus, the communities of the Hoodland corridor, and Fischer's Forest Park near Redland. WES provides wholesale wastewater treatment services to the cities of Milwaukie, Johnson City, Oregon City, West Linn, Gladstone and a small retail population outside of the cities. WES services are funded by revenues derived from rates and development fees. The District operates five wastewater treatment facilities: Tri-City WRRF, Kellogg WRRF, Hoodland WRRF, Boring WRRF and Fischer's Forest Park WRRF.

Tri-City Water Resource Recovery Facility (TC WRRF), located in Oregon City, provides treatment for wastewater from the service area and discharges to the Willamette River. The treatment plant was expanded with a state-of-the art membrane bioreactor system in 2012 to treat flow from the former CCSD1 and produces effluent that meets Oregon's highest reclaimed water standards. Digested sludge from Kellogg Creek WRRF is also dewatered at the TC WRRF under a temporary agreement until dewatering facilities are constructed at Kellogg Creek WRRF.

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

Hoodland WRRF began operation in 1982 and serves the Hoodland/Welches area and the Wemme Recreational Corridor. The service area includes 6 pump stations and 22 miles of pipelines and serves a population of approximately 4000. The treatment facility provides secondary treatment with a capacity of 0.9 mgd. The facility is located in Welches and discharges to the Sandy River.

The **Boring WRRF** serves 60 households and businesses in the city of Boring. The treatment plant 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 the Fischer's Forest Park subdivision in the Redland area. Unlike the other WES treatment facilities, this facility does not discharge to surface water, 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 necessary 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, 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 stormwater runoff impacts to streams and groundwater, and 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 fixing 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 Districts' Watershed Action Plans, in various environmental studies commissioned by the District 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 all 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 situation 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 all are part of the Districts' 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 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

The District develops a five year Capital Improvements Program (CIP) to project capital needs for the near term. Over the next few years, WES will complete 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 2020-25 CIP was developed as a result of leadership of the capital planning team with input from operations and maintenance staff. The wastewater engineering, asset management and operations groups met several times mid-year to itemize ongoing and anticipated projects, then prioritized the projects according to the following criteria:

- Health and Safety
- Ease of Implementation
- Innovation
- Regulatory Compliance
- Reliability
- Risk Reduction

Projects which 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

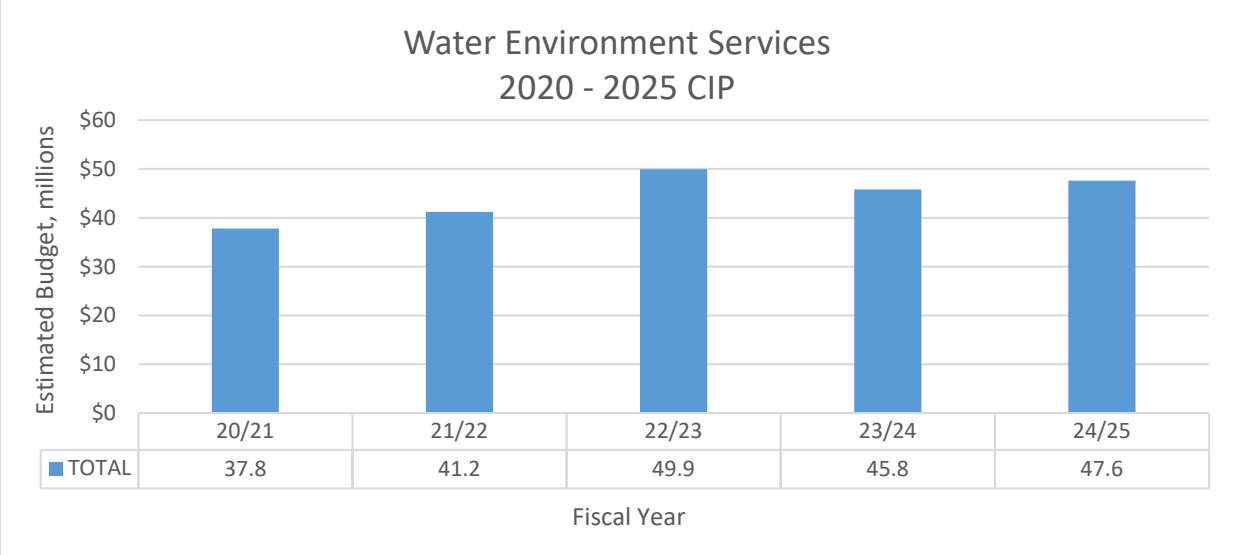
For sanitary sewer projects, projects are organized according to their location and/or function. Project types are Treatment (Tri-City, Kellogg Creek, Hoodland, Boring, Fischer's Forest Park), Blue Heron, Collection System, Fleet, Asset Management and Pump Stations. Collection System projects include those for facilities designed, managed and maintained by WES. Asset Management projects reflect WES's ongoing asset management program which includes 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. All projects shown are funded in the WES rate model.

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

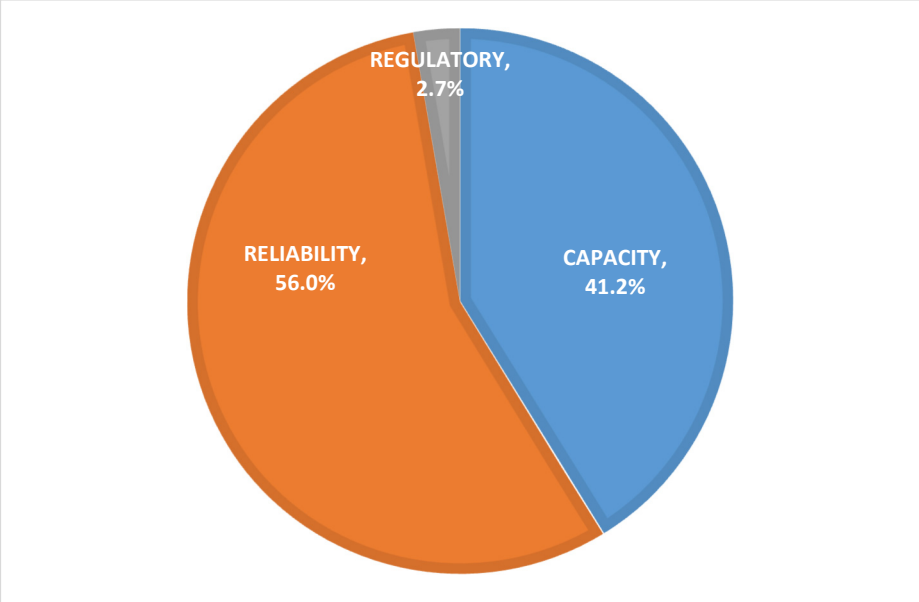
Project Type	Capital Budget, $ Million				
	20/21	**21/22**	**22/23**	**23/24**	**24/25**
Tri-City WRRF	$ 13.1	$ 5.5	$ 13.7	$ 14.8	$ 34.9
Kellogg Creek WRRF	$ 4.8	$ 5.1	$ 5.1	$ 6.0	$ -
Hoodland WRRF	$ -	$ 0.5	$ 2.7	$ -	$ -
Boring WRRF	$ 1.0	$ 4.0	$ -	$ -	$ -
Fischer Forest Park WRRF	$ 0.2	$ 0.8	$ -	$ -	$ -
Collection System	$ 16.8	$ 23.1	$ 26.0	$ 16.7	$ 10.3
Blue Heron	$ -	$ -	$ -	$ 6.0	$ -
Fleet	$ 0.8	$ 1.1	$ 1.2	$ 1.2	$ 1.3
OM Asset Management	$ 0.8	$ 0.8	$ 0.8	$ 0.8	$ 0.8
Pump Stations	$ 0.2	$ 0.2	$ 0.2	$ 0.2	$ 0.2
Water Quality Lab	$ 0.02	$ -	$ 0.1	$ -	$ -
Development Review	$ 0.1	$ 0.1	$ 0.1	$ 0.1	$ 0.1
Total	**$ 37.8**	**$ 41.2**	**$ 49.9**	**$ 45.8**	**$ 47.6**

Figure 2. Sanitary Sewer Capital Budget ($ Million)



Some of the CIP projects will provide capacity for growth and are eligible to be funded, or partially funded by 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 CIP dollars.

Figure 3. Sanitary Sewer Capital Budget Breakdown by Project Driver



FISCAL YEAR 2020-21 MAJOR PROJECTS

Of the $37.8 million in the FY 2020-21 capital budget, over $23.5 million is expected to be spent on the following five major projects:

Tri-City WRRF Solids Handling Project - $9.1 million
WES has identified the need to expand and refurbish the solids handling processes at the Tri-City Water Resource Recovery Facility (TCWRRF). Project costs for FY 2020-21 include construction and engineering services during construction. The expansion and refurbishments to be constructed include new sludge stabilization and dewatering facilities, electrical distribution upgrades, digester feed tank, digested sludge storage, cake storage and loadout facility, centrate storage, biogas utilization and upgrades to existing facilities. New digestion and dewatering facilities will begin operation during Summer 2020 so that existing digesters can be refurbished and cogeneration facilities constructed. Construction is expected to be completed in early 2021.

Tri-City Outfall Project - $1.0 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 TC WRRF outfall is approximately 75 MGD and is expected to be exceeded as flows increase as projected in the CSMP. This project began with a study to select a preferred outfall location and route from the TC WRRF to the Willamette River and geotechnical exploration. FY 20/21 work will include design and permitting. Project completion is pending Oregon City approval of an easement below Jon Storm Park in November 2020.

Multiple Pump Station Upgrade Project - $3.0 million

This project includes necessary improvements to eight WES pump stations. The work includes a variety of upgrades to pump stations to improve reliability and condition including safety, structural, mechanical and electrical and control system improvements. The pump stations include Willamette, Sieben Lane, South Welches, Golf Course Terrace, Gladstone, Clackamas, 82nd Drive and Timberline Rim. The project provides the opportunity for efficiencies by developing standards for pump station design and construction. The work will be designed but construction will occur over several years and under separate construction contracts. High priority work will be constructed in FY 20/21.

Clackamas Interceptor Capacity Improvements Project - $9.4 million

The Clackamas Interceptor is lacking in capacity to serve current and future ratepayers and needs rehabilitation in some areas. Conceptual design of the improvements was completed in FY 19/20. Design and permitting for the estimated $47 million construction of improvements will begin in FY 20/21 and be constructed in phases over the next ten years

Rock Creek Interceptor Project - $1.0 million

A preliminary routing study was performed for the extension of the Rock Creek Interceptor in 2007. Located upstream of the Clackamas Interceptor, this project extends service to developments to the north and east. Design of the interceptor extension will occur in FY 20/21.

FISCAL YEAR 2019-20 PROJECT PROGRESS

While we are continually looking forward to future needs, the WES capital team is, at the same time, busy managing the design and construction of numerous projects. We made significant progress in FY 19/20. Dollar amounts reflect estimated amounts spent in FY 19/20. Below are highlights of our work:

Tri-City WRRF Solids Handling Improvements Project - $14.0 million

Construction began early in FY 18/19 on the expansion of our solids handling facilities at the TC WRRF. WES scheduled the project so that excavation would be performed during the dry season to avoid dewatering costs. New facilities are scheduled to be on line in Summer 2020 so that refurbishment of existing facilities and construction of the cogeneration system can begin.

Kellogg WRRF Improvements Project - $9.0 million

Significant progress was made in FY 19/20. A new emergency generator was installed and the power distribution system was upgraded for reliability. The peak flow facilities were completed. The Influent Pump Station improvements were completed; however, work continues on the pumps. Site piping and pavement work continued through the year. With the exception of the influent pumps and W3 pump station, the project will be complete in FY 19-20. The project is expected to be complete in December 2020.

Tri-City WRRF Sodium Hypochlorite Disinfection and W3 System Upgrade - $2.2 million

The gaseous chlorine disinfection at the TC WRRF was original to the facility and for years was industry standard. Current best practice is to use sodium hypochlorite or ultraviolet light for disinfection. The existing Chlorine Building was retrofitted with a hypochlorite storage and feed system, and the aging sodium bisulfite storage tanks were replaced. At the same time the W3 (plant water) system was upgraded with a new intake, strainer, pumps and controls to improve water quality and system reliability.

82nd Drive Bridge – North Approach - $2.8 million

This project was part of a larger effort to complete the infrastructure which diverts wet weather flows from the capacity-limited Kellogg WRRF to the Tri-City WRRF. The project replaced the north apron of the bridge which had become structurally unsound and provided an additional structural upgrade to the bridge to allow it to provide passage for emergency vehicles after a major storm event. WES worked collaboratively with Clackamas DTD to manage construction. Work on the project was substantially complete in FY 19/20 and will be finalized in Summer 2020.

Tri-City Outfall Project - $1.3 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 buildout conditions if I/I reduction recommended in the CSMP are achieved. The capacity of the existing TC WRRF outfall is approximately 75 MGD and is at capacity. A route study, conceptual design elements and geotechnical exploration for the project were completed in FY19/20.

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.

TABLE 2. TRI-CITY WRRF PROJECT SUMMARY

FUNDING SOURCE	FY 19/20 BUDGET[1] $	FY 19/20 ESTIMATE[1] $	FY 20/21 PROJECTED $	FY 21/22 PROJECTED $	FY 22/23 PROJECTED $	FY 23/24 PROJECTED $	FY 24/25 PROJECTED $	TOTAL FY 20-25 PROJECTED, $
CONST	5,582,500	4,641,500	5,037,500	3,340,000	9,725,000	10,355,000	15,400,000	43,857,500
SDC	11,447,500	10,818,500	8,012,500	2,160,000	3,925,000	4,425,000	19,500,000	38,022,500
TOTAL	17,030,000	15,460,000	13,050,000	5,500,000	13,650,000	14,780,000	34,900,000	81,880,000

TABLE 3. KELLOGG CREEK WRRF PROJECT SUMMARY

FUNDING SOURCE	FY 19/20 BUDGET[1] $	FY 19/20 ESTIMATE[1] $	FY 20/21 PROJECTED $	FY 21/22 PROJECTED $	FY 22/23 PROJECTED $	FY 23/24 PROJECTED $	FY 24/25 PROJECTED $	TOTAL FY 20-25 PROJECTED, $
CONST	11,250,000	9,002,000	4,800,000	5,100,000	5,100,000	6,000,000	-	21,000,000
SDC	-	-	-	-	-	-	-	-
TOTAL	11,250,000	9,002,000	4,800,000	5,100,000	5,100,000	6,000,000	-	21,000,000

TABLE 4. HOODLAND WRRF PROJECT SUMMARY

FUNDING SOURCE	FY 19/20 BUDGET[1] $	FY 19/20 ESTIMATE[1] $	FY 20/21 PROJECTED $	FY 21/22 PROJECTED $	FY 22/23 PROJECTED $	FY 23/24 PROJECTED $	FY 24/25 PROJECTED $	TOTAL FY 20-25 PROJECTED, $
CONST	-	-	-	250,000	1,375,000	-	-	1,625,000
SDC	-	-	-	250,000	1,375,000	-	-	1,625,000
TOTAL	-	-	-	500,000	2,750,000	-	-	3,250,000

TABLE 5. BORING WRRF PROJECT SUMMARY

FUNDING SOURCE	FY 19/20 BUDGET[1] $	FY 19/20 ESTIMATE[1] $	FY 20/21 PROJECTED $	FY 21/22 PROJECTED $	FY 22/23 PROJECTED $	FY 23/24 PROJECTED $	FY 24/25 PROJECTED $	TOTAL FY 20-25 PROJECTED, $
CONST	500,000	6,440	1,000,000	4,000,000	-	-	-	5,000,000
SDC	-	-	-	-	-	-	-	-
TOTAL	500,000	6,440	1,000,000	4,000,000	-	-	-	5,000,000

TABLE 6. FISCHER FOREST PARK WRRF PROJECT SUMMARY

FUNDING SOURCE	FY 19/20 BUDGET[1] $	FY 19/20 ESTIMATE[1] $	FY 20/21 PROJECTED $	FY 21/22 PROJECTED $	FY 22/23 PROJECTED $	FY 23/24 PROJECTED $	FY 24/25 PROJECTED $	TOTAL FY 20-25 PROJECTED, $
CONST	-	10,000	200,000	800,000	-	-	-	1,000,000
SDC	-	-	-	-	-	-	-	-
TOTAL	-	10,000	200,000	800,000	-	-	-	1,000,000

[1] FY 19/20 Budget and Estimate column totals reflect only the projects in the FY 20-25 CIP and do not include amounts for projects completed during FY 2019/20

TABLE 7. COLLECTION SYSTEM PROJECT SUMMARY

FUNDING SOURCE	FY 19/20 BUDGET[1] $	FY 19/20 ESTIMATE[1] $	FY 20/21 PROJECTED $	FY 21/22 PROJECTED $	FY 22/23 PROJECTED $	FY 23/24 PROJECTED $	FY 24/25 PROJECTED $	TOTAL FY 20-25 PROJECTED, $
CONST	1,386,000	732,811	9,294,000	11,112,000	11,360,000	6,250,000	3,050,000	41,066,000
SDC	1,614,000	110,811	7,536,000	11,938,000	14,650,000	10,400,000	7,200,000	51,724,000
TOTAL	3,000,000	843,622	16,830,000	23,050,000	26,010,000	16,650,000	10,250,000	92,790,000

TABLE 8. BLUE HERON SITE PROJECT SUMMARY

FUNDING SOURCE	FY 19/20 BUDGET[1] $	FY 19/20 ESTIMATE[1] $	FY 20/21 PROJECTED $	FY 21/22 PROJECTED $	FY 22/23 PROJECTED $	FY 23/24 PROJECTED $	FY 24/25 PROJECTED $	TOTAL FY 20-25 PROJECTED, $
CONST	-	-	-	-	-	-	-	-
SDC	-	-	-	-	-	6,000,000	-	6,000,000
TOTAL	-	-	-	-	-	6,000,000	-	6,000,000

TABLE 9. FLEET SUMMARY

FUNDING SOURCE	FY 19/20 BUDGET[1] $	FY 19/20 ESTIMATE[1] $	FY 20/21 PROJECTED $	FY 21/22 PROJECTED $	FY 22/23 PROJECTED $	FY 23/24 PROJECTED $	FY 24/25 PROJECTED $	TOTAL FY 20-25 PROJECTED, $
CONST	1,010,000	472,771	845,000	1,145,000	1,180,000	1,225,000	1,325,000	5,720,000
SDC	-	-	-	-	-	-	-	-
TOTAL	1,010,000	472,771	845,000	1,145,000	1,180,000	1,225,000	1,325,000	5,720,000

TABLE 10. OM ASSET MANAGEMENT PROJECT SUMMARY

FUNDING SOURCE	FY 19/20 BUDGET[1] $	FY 19/20 ESTIMATE[1] $	FY 20/21 PROJECTED $	FY 21/22 PROJECTED $	FY 22/23 PROJECTED $	FY 23/24 PROJECTED $	FY 24/25 PROJECTED $	TOTAL FY 20-25 PROJECTED, $
CONST	800,000	114,215	800,000	800,000	800,000	800,000	800,000	4,000,000
SDC	-	-	-	-	-	-	-	-
TOTAL	800,000	114,215	800,000	800,000	800,000	800,000	800,000	4,000,000

TABLE 11. PUMP STATION PROJECT SUMMARY

FUNDING SOURCE	FY 19/20 BUDGET[1] $	FY 19/20 ESTIMATE[1] $	FY 20/21 PROJECTED $	FY 21/22 PROJECTED $	FY 22/23 PROJECTED $	FY 23/24 PROJECTED $	FY 24/25 PROJECTED $	TOTAL FY 20-25 PROJECTED, $
CONST	450,000	92,529	200,000	200,000	200,000	200,000	200,000	1,000,000
SDC	-	-	-	-	-	-	-	-
TOTAL	450,000	92,529	200,000	200,000	200,000	200,000	200,000	1,000,000

TABLE 12. WATER QUALITY LAB PROJECT SUMMARY

FUNDING SOURCE	FY 19/20 BUDGET[1] $	FY 19/20 ESTIMATE[1] $	FY 20/21 PROJECTED $	FY 21/22 PROJECTED $	FY 22/23 PROJECTED $	FY 23/24 PROJECTED $	FY 24/25 PROJECTED $	TOTAL FY 20-25 PROJECTED, $
CONST	178,000	65,350	23,000	-	60,000	-	-	83,000
SDC	-	-		-	-			-
TOTAL	178,000	65,350	23,000	-	60,000	-	-	83,000

[1] FY 19/20 Budget and Estimate column totals reflect only the projects in the FY 20-25 CIP and do not include amounts for projects completed during FY 2019/20

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.

District goals for stormwater capital projects include:

- Protect and enhance District 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 public 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's 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 cost-beneficial 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 projects 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 repair projects 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 completing these projects. 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 District owned or operated stormwater facilities identifies repair needs. Given regulatory requirements and funding constraints, the District 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 retrofit 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 of runoff, 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 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, the District 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

The District enhances public and private properties with native vegetation, including 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 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, the Districts purchase 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, the Districts seek 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 Districts' 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 13. Surface Water Project Budgets by Project Area.

Project Type	**Capital Budget, $ Million**				
	20/21	**21/22**	**22/23**	**23/24**	**24/25**
3-Creeks Water Quality Project	$ 0.5	$ 0.5	$ 1.2	$ 1.5	$ -
90th Ave Water Quality Retrofit	$ 0.15	$ -	$ -	$ -	$ -
Carli Creek Water Quality Retrofit	$ 0.091	$ 0.042	$ 0.042	$ 0.042	$ -
Detention Pond Repair/Rehab	$ 0.1	$ 0.1	$ 0.1	$ 0.1	$ 0.1
Red Rose Valley Detention Pipe Repair	$ 1.2	$ -	$ -	$ -	$ -
Small Projects – ongoing	$ 0.1	$ 0.25	$ 0.25	$ 0.25	$ 0.25
Total	$ 2.141	$ 0.892	$ 1.592	$ 1.892	$ 0.35

SURFACE WATER PROJECT LIST BY FUNDING SOURCE

TABLE 14. SURFACE WATER PROJECT SUMMARY								
FUNDING SOURCE	**FY 19/20 BUDGET $**	**FY 19/20 ESTIMATE $**	**FY 20/21 PROJECTED $**	**FY 21/22 PROJECTED $**	**FY 22/23 PROJECTED $**	**FY 23/24 PROJECTED $**	**FY 24/25 PROJECTED $**	**TOTAL FY 20-25 PROJECTED, $**
CONST	920,300	797,500	2,141,500	892,000	1,592,000	1,892,000	350,000	6,867,500
SDC	50,000	-	-	-	-	-	-	-
TOTAL	970,300	797,500	2,141,500	892,000	1,592,000	1,892,000	350,000	6,867,500

APPENDIX A

PROJECT DETAIL

Project Name: Tri-City WRRF Solids Handling Improvements Project

Project Number: P632162

Project Subprogram: Capital Delivery/Tri-City WRRF

Fund: 632/639

Project Status: Active

Project Description:

WES has identified the need to expand and refurbish the solids handling processes at the Tri-City Water Resource Recovery Facility. Project costs include construction and engineering services during construction. The expansion and refurbishments to be considered include new sludge stabilization and dewatering facilities, electrical distribution upgrades, digester feed tank, digested sludge storage, cake storage and loadout facility, centrate storage, biogas utilization and upgrades to existing facilities. The new cogeneration system will provide approximately half of the power required at the facility and provide heat for the process and space heat for several buildings. Construction is expected to be completed in early 2021.

Project Costs:

FUNDING SOURCE	FY 19/20 BUDGET	FY 19/20 ESTIMATE	FY 20/21 BUDGET	FY 21/22 PROJECTED	FY 22/23 PROJECTED	FY 23/24 PROJECTED	FY 24/25 PROJECTED	TOTAL FY 20-25 PROJECTED
CONST	$ 3,475,000	$ 3,500,000	$ 2,275,000					$ 2,275,000
SDC	$ 10,425,000	$ 10,500,000	$ 6,825,000					$ 6,825,000
TOTAL	$ 13,900,000	$ 14,000,000	$ 9,100,000					$ 9,100,000

PROJECT DETAIL

Project Name: Mitigation Landscape for TCSHI and 82nd Drive Bridge Proj

Project Number: P632293

Project Subprogram: Capital Delivery/Tri-City WRRF

Fund: 632/639

Project Status: Active

Project Description:
Mitigation is required for both the TCSHI and 82nd Drive Bridge projects for work in the environmental set back area on those projects. The mitigation will consist of prescribed area of habitat restoration on the shore of the Clackamas River near the TC WRRF. A significant portion of the mitigation is due to the TCSHI project.

Project Costs:

FUNDING SOURCE	FY 19/20 BUDGET	FY 19/20 ESTIMATE	FY 20/21 BUDGET	FY 21/22 PROJECTED	FY 22/23 PROJECTED	FY 23/24 PROJECTED	FY 24/25 PROJECTED	TOTAL FY 20-25 PROJECTED
CONST	$ 7,500	$ 7,500	$ 62,500					$ 62,500
SDC	$ 22,500	$ 22,500	$ 187,500					$ 187,500
TOTAL	$ 30,000	$ 30,000	$ 250,000					$ 250,000

PROJECT DETAIL

Project Name: TC WRRF Liquids 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 exceeds its hydraulic capacity. The Willamette Facilities Plan (WFP) is underway. The WFP is a planning effort for the TC and KC WRRFs and will define facilities that will be required to provide peak wet and dry weather capacity for the near and long term. This project, yet to be defined, will address the wet weather expansion required to be completed within the next five years. The costs are placeholders and will be better defined upon completion of the Willamette Facilities Plan in 2021. Note that projected flows and project sizing assumes I/I reduction per the CSMP. **Construction of this estimated total $85M expansion will continue beyond 2025.**

Project Costs:

FUNDING SOURCE	FY 19/20 BUDGET	FY 19/20 ESTIMATE	FY 20/21 BUDGET	FY 21/22 PROJECTED	FY 22/23 PROJECTED	FY 23/24 PROJECTED	FY 24/25 PROJECTED	TOTAL FY 20-25 PROJECTED
CONST				$ 500,000	$ 2,000,000	$ 2,500,000	$15,000,000	$20,000,000
SDC				$ 500,000	$ 2,000,000	$ 2,500,000	$15,000,000	$20,000,000
TOTAL				$ 1,000,000	$ 4,000,000	$ 5,000,000	$30,000,000	$40,000,000

PROJECT DETAIL

Project Name: TC WRRF Wet Weather Outfall

Project Number: 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. The capacity of the existing TC WRRF outfall is approximately 75 MGD and is expected to be exceeded as flows increase. The capacity of the new outfall will be higher and sufficient except for peak wet weather in future years. Note that projected flows and sizing of the outfall assume I/I reduction per the CSMP.

Project Costs:

FUNDING SOURCE	FY 19/20 BUDGET	FY 19/20 ESTIMATE	FY 20/21 BUDGET	FY 21/22 PROJECTED	FY 22/23 PROJECTED	FY 23/24 PROJECTED	FY 24/25 PROJECTED	TOTAL FY 20-25 PROJECTED
CONST	$ 1,000,000	$ 1,014,000	$ 500,000	$ 2,340,000	$ 6,825,000	$ 6,825,000		$16,490,000
SDC	$ 1,000,000	$ 286,000	$ 500,000	$ 660,000	$ 1,925,000	$ 1,925,000		$ 5,010,000
TOTAL	$ 2,000,000	$ 1,300,000	$ 1,000,000	$ 3,000,000	$ 8,750,000	$ 8,750,000		$21,500,000

PROJECT DETAIL

Project Name: IPS VFDs

Project Number: P632286

Project Subprogram: Capital Delivery/Tri-City WRRF

Fund: 639

Project Status: Active

Project Description:
The TC WRRF IPS VFDs are at the end of their useful life and will be replaced. Design and construction of the project will span two years.

Project Costs:

FUNDING SOURCE	FY 19/20 BUDGET	FY 19/20 ESTIMATE	FY 20/21 BUDGET	FY 21/22 PROJECTED	FY 22/23 PROJECTED	FY 23/24 PROJECTED	FY 24/25 PROJECTED	TOTAL FY 20-25 PROJECTED
CONST	$ 500,000	$ 90,000	$ 1,000,000					$ 1,000,000
SDC								
TOTAL	$ 500,000	$ 90,000	$ 1,000,000					$ 1,000,000

PROJECT DETAIL

Project Name: Process Software (Data Management)

Project Number: TBD

Project Subprogram: Capital Delivery/Tri-City WRRF

Fund: 639

Project Status: Not Active

Project Description:

Water resource recovery facilities include complex hydraulic, chemical and biological systems. Current wastewater treatment practice includes use of process control software to collect data to inform operators about the collection system and treatment process performance and allows operators to monitor and control the collection system and treatment processes in the most efficient and reliable manner. This fund will provide software, configuration and implementation services for WES treatment facilities and the laboratory as defined in the IT business plan.

Project Costs:

FUNDING SOURCE	FY 19/20 BUDGET	FY 19/20 ESTIMATE	FY 20/21 BUDGET	FY 21/22 PROJECTED	FY 22/23 PROJECTED	FY 23/24 PROJECTED	FY 24/25 PROJECTED	TOTAL FY 20-25 PROJECTED
CONST	$ 100,000		$ 100,000					$ 100,000
SDC								
TOTAL	$ 100,000		$ 100,000					$ 100,000

PROJECT DETAIL

Project Name: Recoat PCs/Primary Clarifier Refurbishment

Project Number: P632221

Project Subprogram: Capital Delivery/Tri-City WRRF

Fund: 639

Project Status: Active

Project Description:

This project provides a rehabilitation of the mechanical equipment associated with the Primary Clarifiers and the application of a protective coating to the concrete tanks. The concrete surface of the primary clarifiers are exposed to continuous wear from grit and hydrogen sulfide. The coating will help maintain the integrity of the structure and the mechanical rehab will provide an upgrade to equipment that is original to the plant. There are six primary clarifiers, two of which can be off-line at a time. The plan is to work on two tanks/year.

Project Costs:

FUNDING SOURCE	FY 19/20 BUDGET	FY 19/20 ESTIMATE	FY 20/21 BUDGET	FY 21/22 PROJECTED	FY 22/23 PROJECTED	FY 23/24 PROJECTED	FY 24/25 PROJECTED	TOTAL FY 20-25 PROJECTED
CONST					$ 400,000	$ 400,000	$ 400,000	$ 1,200,000
SDC								
TOTAL					$ 400,000	$ 400,000	$ 400,000	$ 1,200,000

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) is 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 with cassettes that utilize a new aeration system developed by GE Water Process Technology which reduces air requirements by 25-30%. This reduction will result in energy savings and reduced maintenance requirements.

Project Costs:

FUNDING SOURCE	FY 19/20 BUDGET	FY 19/20 ESTIMATE	FY 20/21 BUDGET	FY 21/22 PROJECTED	FY 22/23 PROJECTED	FY 23/24 PROJECTED	FY 24/25 PROJECTED	TOTAL FY 20-25 PROJECTED
CONST						$ 630,000		$ 630,000
SDC								
TOTAL						$ 630,000		$ 630,000

PROJECT DETAIL

Project Name: WES Administration Building and Lab Remodel

Project Number: TBD

Project Subprogram: Capital Delivery/Tri-City WRRF

Fund: 639

Project Status: Not Active

Project Description:
This project is for the rehabilitation of the TC Administration Building and lab for TC and lab staff. The lab, maintenance, and line crew areas are in need of refurbishment or repair.

Project Costs:

FUNDING SOURCE	FY 19/20 BUDGET	FY 19/20 ESTIMATE	FY 20/21 BUDGET	FY 21/22 PROJECTED	FY 22/23 PROJECTED	FY 23/24 PROJECTED	FY 24/25 PROJECTED	TOTAL FY 20-25 PROJECTED
CONST	$ 500,000	$ 30,000	$ 500,000	$ 500,000	$ 500,000			$ 1,500,000
SDC								
TOTAL	$ 500,000	$ 30,000	$ 500,000	$ 500,000	$ 500,000			$ 1,500,000

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 was not constructed. The cost for this project is a placeholder and includes studies to assess methods and schedule for mitigation.

Project Costs:

FUNDING SOURCE	FY 19/20 BUDGET	FY 19/20 ESTIMATE	FY 20/21 BUDGET	FY 21/22 PROJECTED	FY 22/23 PROJECTED	FY 23/24 PROJECTED	FY 24/25 PROJECTED	TOTAL FY 20-25 PROJECTED
CONST								
SDC		$ 10,000	$ 500,000	$ 1,000,000			$ 4,500,000	$ 6,000,000
TOTAL		$ 10,000	$ 500,000	$ 1,000,000			$ 4,500,000	$ 6,000,000

PROJECT DETAIL

Project Name: IPS Discharge Piping Repair

Project Number: TBD

Project Subprogram: Capital Delivery/Tri-City WRRF

Fund: 639

Project Status: Not Active

Project Description:
Discharge piping is original to the pump station and is showing signs of corrosion. This project will assess pipe condition and construct repairs.

Project Costs:

FUNDING SOURCE	FY 19/20 BUDGET	FY 19/20 ESTIMATE	FY 20/21 BUDGET	FY 21/22 PROJECTED	FY 22/23 PROJECTED	FY 23/24 PROJECTED	FY 24/25 PROJECTED	TOTAL FY 20-25 PROJECTED
CONST			$ 600,000					$ 600,000
SDC								
TOTAL			$ 600,000					$ 600,000

PROJECT DETAIL

Project Name: Kellogg Creek WRRF Improvements Project

Project Number: P632139

Project Subprogram: Capital Delivery/Kellogg Creek WRRF

Fund: 639

Project Status: Active

Project Description:
Asset renewal and replacement at the Kellogg WRRF has been deferred over the years while a determination was made regarding the future of the facility. Now that the facility will continue its service with a capped capacity, several areas of the facility require upgrades to provide a fully reliable, functional facility. This project combines several subprojects including blower replacement, polymer system for the thickening process, aeration basin covers for odor control, flow management and improvements to the biofilter, a power distribution system, a retrofit of the return sludge pump station, influent pump station, and associated yard piping. Construction of the improvements began in 2017 and is anticipated to be completed in Summer 2020.

Project Costs:

FUNDING SOURCE	FY 19/20 BUDGET	FY 19/20 ESTIMATE	FY 20/21 BUDGET	FY 21/22 PROJECTED	FY 22/23 PROJECTED	FY 23/24 PROJECTED	FY 24/25 PROJECTED	TOTAL FY 20-25 PROJECTED
CONST	$10,000,000	$ 9,000,000	$ 2,000,000					$ 2,000,000
SDC								
TOTAL	$10,000,000	$ 9,000,000	$ 2,000,000					$ 2,000,000

PROJECT DETAIL

Project Name: KC Secondary Mechanisms and Weirs

Project Number: TBD

Project Subprogram: Capital Delivery/Kellogg Creek WRRF

Fund: 639

Project Status: Not Active

Project Description:
This project will rehab the secondary clarifier mechanisms and level the weirs. There are two clarifiers. One can be off line during dry weather. The tanks will be rehabbed one per year over two years.

Project Costs:

FUNDING SOURCE	FY 19/20 BUDGET	FY 19/20 ESTIMATE	FY 20/21 BUDGET	FY 21/22 PROJECTED	FY 22/23 PROJECTED	FY 23/24 PROJECTED	FY 24/25 PROJECTED	TOTAL FY 20-25 PROJECTED
CONST	$ 800,000	$ 2,000	$ 800,000	$ 800,000				$ 1,600,000
SDC								
TOTAL	$ 800,000	$ 2,000	$ 800,000	$ 800,000				$ 1,600,000

PROJECT DETAIL

Project Name: Primary Clarifier Floor

Project Number: TBD

Project Subprogram: Capital Delivery/Kellogg Creek WRRF

Fund: 639

Project Status: Not Active

Project Description:
Degradation of the surface of primary clarifier floors was noticed during routine maintenance. This project will repair the concrete floor surface of both tanks, over the next two dry seasons

Project Costs:

FUNDING SOURCE	FY 19/20 BUDGET	FY 19/20 ESTIMATE	FY 20/21 BUDGET	FY 21/22 PROJECTED	FY 22/23 PROJECTED	FY 23/24 PROJECTED	FY 24/25 PROJECTED	TOTAL FY 20-25 PROJECTED
CONST			$ 800,000	$ 800,000				$ 1,600,000
SDC								
TOTAL			$ 800,000	$ 800,000				$ 1,600,000

PROJECT DETAIL

Project Name: Admin Lab

Project Number: TBD

Project Subprogram: Capital Delivery/Kellogg Creek WRRF

Fund: 639

Project Status: Not Active

Project Description:
This project would refurbish the administration building and lunch room at the Kellogg Facility to update restrooms, conference rooms and offices to better accommodate visitors and staff.

Project Costs:

FUNDING SOURCE	FY 19/20 BUDGET	FY 19/20 ESTIMATE	FY 20/21 BUDGET	FY 21/22 PROJECTED	FY 22/23 PROJECTED	FY 23/24 PROJECTED	FY 24/25 PROJECTED	TOTAL FY 20-25 PROJECTED
CONST	$ 250,000		$ 500,000					$ 500,000
SDC								
TOTAL	$ 250,000		$ 500,000					$ 500,000

PROJECT DETAIL

Project Name: IPS Pumps 2 and 4

Project Number: TBD

Project Subprogram: Capital Delivery/Kellogg Creek WRRF

Fund: 639

Project Status: Not Active

Project Description:
The Kellogg WRRF Improvements Project replaced Pumps 1 and 3. Engineering for replacement of Pumps 2 and 4 is scheduled for FY 2020-21. This project will complete the refurbishment of the IPS.

Project Costs:

FUNDING SOURCE	FY 19/20 BUDGET	FY 19/20 ESTIMATE	FY 20/21 BUDGET	FY 21/22 PROJECTED	FY 22/23 PROJECTED	FY 23/24 PROJECTED	FY 24/25 PROJECTED	TOTAL FY 20-25 PROJECTED
CONST			$ 500,000	$ 1,500,000				$ 2,000,000
SDC								
TOTAL			$ 500,000	$ 1,500,000				$ 2,000,000

PROJECT DETAIL

Project Name: Kellogg WRRF Solids Improvement Project

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 at the Kellogg Facility with 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.

Project Costs:

FUNDING SOURCE	FY 19/20 BUDGET	FY 19/20 ESTIMATE	FY 20/21 BUDGET	FY 21/22 PROJECTED	FY 22/23 PROJECTED	FY 23/24 PROJECTED	FY 24/25 PROJECTED	TOTAL FY 20-25 PROJECTED
CONST				$ 1,500,000	$ 3,500,000	$ 3,000,000		$ 8,000,000
SDC								
TOTAL				$ 1,500,000	$ 3,500,000	$ 3,000,000		$ 8,000,000

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 (US) light. A chlorination/dechlorination system provides back up and supplemental disinfection. 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 for design and construction of the recommended system.

Project Costs:

FUNDING SOURCE	FY 19/20 BUDGET	FY 19/20 ESTIMATE	FY 20/21 BUDGET	FY 21/22 PROJECTED	FY 22/23 PROJECTED	FY 23/24 PROJECTED	FY 24/25 PROJECTED	TOTAL FY 20-25 PROJECTED
CONST					$ 600,000	$ 3,000,000		$ 3,600,000
SDC								
TOTAL					$ 600,000	$ 3,000,000		$ 3,600,000

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.

Project Costs:

FUNDING SOURCE	FY 19/20 BUDGET	FY 19/20 ESTIMATE	FY 20/21 BUDGET	FY 21/22 PROJECTED	FY 22/23 PROJECTED	FY 23/24 PROJECTED	FY 24/25 PROJECTED	TOTAL FY 20-25 PROJECTED
CONST	$ 200,000			$ 500,000	$ 1,000,000			$ 1,500,000
SDC								
TOTAL	$ 200,000			$ 500,000	$ 1,000,000			$ 1,500,000

PROJECT DETAIL

Project Name: W3 Project

Project Number: TBD

Project Subprogram: Capital Delivery/Kellogg Creek WRRF

Fund: 639

Project Status: Not Active

Project Description:
This project is the replacement of the W3 system at Kellogg for reliability and improved water quality. The replacement was originally included in the Kellogg Improvements project but was deferred due to budget constraints.

Project Costs:

FUNDING SOURCE	FY 19/20 BUDGET	FY 19/20 ESTIMATE	FY 20/21 BUDGET	FY 21/22 PROJECTED	FY 22/23 PROJECTED	FY 23/24 PROJECTED	FY 24/25 PROJECTED	TOTAL FY 20-25 PROJECTED
CONST			$ 200,000					$ 200,000
SDC								
TOTAL			$ 200,000					$ 200,000

PROJECT DETAIL

Project Name: Hoodland Secondary Treatment Upgrade

Project Number: TBD

Project Subprogram: Capital Delivery/Hoodland WRRF

Fund: 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. 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.

Project Costs:

FUNDING SOURCE	FY 19/20 BUDGET	FY 19/20 ESTIMATE	FY 20/21 BUDGET	FY 21/22 PROJECTED	FY 22/23 PROJECTED	FY 23/24 PROJECTED	FY 24/25 PROJECTED	TOTAL FY 20-25 PROJECTED
CONST				$ 250,000	$ 1,375,000			$ 1,625,000
SDC				$ 250,000	$ 1,375,000			$ 1,625,000
TOTAL				$ 500,000	$ 2,750,000			$ 3,250,000

PROJECT DETAIL

Project Name: Boring Upgrades

Project Number: P632235

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. A Facilities Plan has been prepared for the facility, and recommends the facility be converted to a pump station to convey flow to another facility for treatment. The cost in FY 2020-21 is for design of the pump station and force main and decommissioning of the treatment facility.

Project Costs:

FUNDING SOURCE	FY 19/20 BUDGET	FY 19/20 ESTIMATE	FY 20/21 BUDGET	FY 21/22 PROJECTED	FY 22/23 PROJECTED	FY 23/24 PROJECTED	FY 24/25 PROJECTED	TOTAL FY 20-25 PROJECTED
CONST	$ 500,000	$ 6,440	$ 1,000,000	$ 4,000,000				$ 5,000,000
SDC								
TOTAL	$ 500,000	$ 6,440	$ 1,000,000	$ 4,000,000				$ 5,000,000

PROJECT DETAIL

Project Name: Renovation Project

Project Number: 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. The cost in FY 20/21 is for project design with construction happening in FY 21/22.

Project Costs:

FUNDING SOURCE	FY 19/20 BUDGET	FY 19/20 ESTIMATE	FY 20/21 BUDGET	FY 21/22 PROJECTED	FY 22/23 PROJECTED	FY 23/24 PROJECTED	FY 24/25 PROJECTED	TOTAL FY 20-25 PROJECTED
CONST		$ 10,000	$ 200,000	$ 800,000				
SDC								
TOTAL		$ 10,000	$ 200,000	$ 800,000				$ 1,000,000

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. 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	FY 19/20 BUDGET	FY 19/20 ESTIMATE	FY 20/21 BUDGET	FY 21/22 PROJECTED	FY 22/23 PROJECTED	FY 23/24 PROJECTED	FY 24/25 PROJECTED	TOTAL FY 20-25 PROJECTED
CONST	$ 500,000	$ 70,811	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 2,500,000
SDC	$ 500,000	$ 70,811	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 2,500,000
TOTAL	$ 1,000,000	$ 141,622	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 5,000,000

PROJECT DETAIL

Project Name: I/I Reduction Program

Project Number: TBD

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. This project will involve activities to identify areas of high I/I and their sources and include design and construction of sewer rehabilitation projects, to abate the I/I. The Mount Talbert and Gladstone Area Sanitary Sewer Evaluation Survey (SSES) and I/I Reduction Project are funded by this Program.

Project Costs:

FUNDING SOURCE	FY 19/20 BUDGET	FY 19/20 ESTIMATE	FY 20/21 BUDGET	FY 21/22 PROJECTED	FY 22/23 PROJECTED	FY 23/24 PROJECTED	FY 24/25 PROJECTED	TOTAL FY 20-25 PROJECTED
CONST								
SDC	$ 1,000,000		$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 5,000,000
TOTAL	$ 1,000,000		$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 5,000,000

PROJECT DETAIL

Project Name: Last Road Pipe Rehabilitation

Project Number: P632215

Project Subprogram: Capital Delivery/Collection System

Fund: 639

Project Status: Active

Project Description:
This project will relay approximately 700 lf of 8" sewer to remove sags or bellies in the pipe which cause maintenance issues.

Project Costs:

FUNDING SOURCE	FY 19/20 BUDGET	FY 19/20 ESTIMATE	FY 20/21 BUDGET	FY 21/22 PROJECTED	FY 22/23 PROJECTED	FY 23/24 PROJECTED	FY 24/25 PROJECTED	TOTAL FY 20-25 PROJECTED
CONST		$ 150,000	$ 30,000					$ 30,000
SDC								
TOTAL		$ 150,000	$ 30,000					$ 30,000

PROJECT DETAIL

Project Name: Flow Monitoring
SCADA Master Plan Recommendations and Meter Upgrades

Project Number: P632209

Project Subprogram: Capital Delivery/Collection System

Fund: 639

Project Status: Active

Project Description:
The recent installation of a fiber optics grid in Clackamas County has provided an opportunity for the Districts to enhance and standardize their Systems Control and Data Acquisition (SCADA) system. This project will upgrade SCADA software and hardware to current technology and create operating efficiencies by providing real-time operating data and enabling continuous equipment monitoring in both districts.

Project Costs:

FUNDING SOURCE	FY 19/20 BUDGET	FY 19/20 ESTIMATE	FY 20/21 BUDGET	FY 21/22 PROJECTED	FY 22/23 PROJECTED	FY 23/24 PROJECTED	FY 24/25 PROJECTED	TOTAL FY 20-25 PROJECTED
CONST	$ 150,000	$ 150,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 250,000
SDC								
TOTAL	$ 150,000	$ 150,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 250,000

PROJECT DETAIL

Project Name: Hoodland Pump Stations Property Acquisition

Project Number: 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 acquire property for construction of relocated pump stations.

Project Costs:

FUNDING SOURCE	FY 19/20 BUDGET	FY 19/20 ESTIMATE	FY 20/21 BUDGET	FY 21/22 PROJECTED	FY 22/23 PROJECTED	FY 23/24 PROJECTED	FY 24/25 PROJECTED	TOTAL FY 20-25 PROJECTED
CONST	$ 200,000	$ 100,000	$ 100,000					$ 100,000
SDC								
TOTAL	$ 200,000	$ 100,000	$ 100,000					$ 100,000

PROJECT DETAIL

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

Project Number: 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	FY 19/20 BUDGET	FY 19/20 ESTIMATE	FY 20/21 BUDGET	FY 21/22 PROJECTED	FY 22/23 PROJECTED	FY 23/24 PROJECTED	FY 24/25 PROJECTED	TOTAL FY 20-25 PROJECTED
CONST		$ 7,000			$ 760,000			$ 760,000
SDC								
TOTAL		$ 7,000			$ 760,000			$ 760,000

PROJECT DETAIL

Project Name: Multiple Pump Station Upgrades

Project Number: TBD

Project Subprogram: Capital Delivery/Collection System

Fund: 639

Project Status: Active

Project Description:
Eight pump stations are in need of rehabilitation. The type of upgrades include, but are not limited to pumps and electrical, HVAC and structural components. The pump stations include Willamette, Sieben Lane, South Welches, Golf Course Terrace, Gladstone, Clackamas, 82nd Drive, and Timberline Rim.

Project Costs:

FUNDING SOURCE	FY 19/20 BUDGET	FY 19/20 ESTIMATE	FY 20/21 BUDGET	FY 21/22 PROJECTED	FY 22/23 PROJECTED	FY 23/24 PROJECTED	FY 24/25 PROJECTED	TOTAL FY 20-25 PROJECTED
CONST		$ 180,000	$ 3,000,000	$ 3,000,000	$ 2,000,000			$ 8,000,000
SDC								
TOTAL		$ 180,000	$ 3,000,000	$ 3,000,000	$ 2,000,000			$ 8,000,000

PROJECT DETAIL

Project Name: Willamette Interceptor Capacity Upgrade

Project Number: TBD

Project Subprogram: Capital Delivery/Collection System

Fund: 632/639

Project Status: Active

Project Description:
The Willamette Interceptor receives flows from the Willamette Pump Station and the Willamette force main. This project includes evaluation and rehabilitation of manholes and the interceptor between the West Linn side of the old Oregon City bridge and the downstream end of the Willamette Interceptor near the TC WRRF. The project will be better defined after completion of the Willamette Facilities Plan. **This cost is a placeholder for the beginning of design. Construction of $6M in improvements is scheduled between 2025 and 2030.**

Project Costs:

FUNDING SOURCE	FY 19/20 BUDGET	FY 19/20 ESTIMATE	FY 20/21 BUDGET	FY 21/22 PROJECTED	FY 22/23 PROJECTED	FY 23/24 PROJECTED	FY 24/25 PROJECTED	TOTAL FY 20-25 PROJECTED
CONST			$ 250,000	$ 750,000	$ 2,150,000	$ 2,500,000	$ 2,500,000	$ 8,150,000
SDC			$ 250,000	$ 750,000	$ 2,150,000	$ 2,500,000	$ 2,500,000	$ 8,150,000
TOTAL			$ 500,000	$ 1,500,000	$ 4,300,000	$ 5,000,000	$ 5,000,000	$16,300,000

PROJECT DETAIL

Project Name: IT3 Pump Station and 30 IN Forcemain

Project Number: TBD

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 add 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 between 2025 and 2030.**

Project Costs:

FUNDING SOURCE	FY 19/20 BUDGET	FY 19/20 ESTIMATE	FY 20/21 BUDGET	FY 21/22 PROJECTED	FY 22/23 PROJECTED	FY 23/24 PROJECTED	FY 24/25 PROJECTED	TOTAL FY 20-25 PROJECTED
CONST			$ 228,000	$ 912,000				$ 1,140,000
SDC			$ 72,000	$ 288,000				$ 360,000
TOTAL			$ 300,000	$ 1,200,000				$ 1,500,000

PROJECT DETAIL

Project Name: Rock Creek Interceptor Extension

Project Number: TBD

Project Subprogram: Capital Delivery/Collection System

Fund: 632

Project Status: Not 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. Work is currently underway to determine the required schedule for implementation, but preliminary indications are that the north extension may be required within the 5 year CIP window The project is included in the CIP as a place holder until the current study is complete. The estimated cost is for the north extension.

Project Costs:

FUNDING SOURCE	FY 19/20 BUDGET	FY 19/20 ESTIMATE	FY 20/21 BUDGET	FY 21/22 PROJECTED	FY 22/23 PROJECTED	FY 23/24 PROJECTED	FY 24/25 PROJECTED	TOTAL FY 20-25 PROJECTED
CONST								
SDC			$ 1,000,000	$ 3,500,000	$ 3,500,000			$ 8,000,000
TOTAL			$ 1,000,000	$ 3,500,000	$ 3,500,000			$ 8,000,000

PROJECT DETAIL

Project Name: Emergency Generator for River St PS

Project Number: P632264

Project Subprogram: Capital Delivery/Collection System

Fund: 639

Project Status: Active

Project Description:
This project will provide an emergency generator at the River Street Pump Station in West Linn for reliable operation.

Project Costs:

FUNDING SOURCE	FY 19/20 BUDGET	FY 19/20 ESTIMATE	FY 20/21 BUDGET	FY 21/22 PROJECTED	FY 22/23 PROJECTED	FY 23/24 PROJECTED	FY 24/25 PROJECTED	TOTAL FY 20-25 PROJECTED
CONST	$ 250,000	$ 35,000	$ 250,000					$ 250,000
SDC								
TOTAL	$ 250,000	$ 35,000	$ 250,000					$ 250,000

PROJECT DETAIL

Project Name: Clackamas Interceptor Capacity Improvements

Project Number: P632274

Project Subprogram: Capital Delivery/Collection System

Fund: 632/639

Project Status: Active

Project Description:

The Clackamas Interceptor has been shown in past studies 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. Work is underway to assess the condition and current and future capacity needs for the Clackamas Interceptor. Improvements along the length of the interceptor will be designed together, then construction will be phased over several years and multiple projects to best meet capacity needs and funding resources. **An additional $8M of improvements will be required prior to 2030.**

Project Costs:

FUNDING SOURCE	FY 19/20 BUDGET	FY 19/20 ESTIMATE	FY 20/21 BUDGET	FY 21/22 PROJECTED	FY 22/23 PROJECTED	FY 23/24 PROJECTED	FY 24/25 PROJECTED	TOTAL FY 20-25 PROJECTED
CONST	$ 100,000	$ 40,000	$ 4,700,000	$ 5,900,000	$ 5,900,000	$ 3,200,000		$19,700,000
SDC	$ 100,000	$ 40,000	$ 4,700,000	$ 5,900,000	$ 5,900,000	$ 3,200,000		$19,700,000
TOTAL	$ 200,000	$ 80,000	$ 9,400,000	$11,800,000	$11,800,000	$ 6,400,000		$39,400,000

PROJECT DETAIL

Project Name: Sieben Lane Pump Station Alternatives

Project Number: TBD

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 recently completed collection system master plan 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	FY 19/20 BUDGET	FY 19/20 ESTIMATE	FY 20/21 BUDGET	FY 21/22 PROJECTED	FY 22/23 PROJECTED	FY 23/24 PROJECTED	FY 24/25 PROJECTED	TOTAL FY 20-25 PROJECTED
CONST	$ 186,000		$ 186,000					$ 186,000
SDC	$ 14,000		$ 14,000					$ 14,000
TOTAL	$ 200,000		$ 200,000					$ 200,000

PROJECT DETAIL

Project Name: Linwood Pump Station

Project Number: TBD

Project Subprogram: Capital Delivery/Collection System

Fund: 632

Project Status: Not 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.

Project Costs:

FUNDING SOURCE	FY 19/20 BUDGET	FY 19/20 ESTIMATE	FY 20/21 BUDGET	FY 21/22 PROJECTED	FY 22/23 PROJECTED	FY 23/24 PROJECTED	FY 24/25 PROJECTED	TOTAL FY 20-25 PROJECTED
CONST								
SDC					$ 1,600,000	$ 3,200,000	$ 3,200,000	$ 8,000,000
TOTAL					$ 1,600,000	$ 3,200,000	$ 3,200,000	$ 8,000,000

PROJECT DETAIL

Project Name: Blue Heron Treatment Facilities

Project Number: TBD

Project Subprogram: Capital Delivery/Blue Heron

Fund: 632

Project Status: Active

Project Description:

This project includes the purchase, remediation, and restoration of the former Blue Heron Paper Company West Linn facility. The industrial wastewater treatment lagoon and outfall to the Willamette River provides the Districts with additional capacity for growth and economic development while maintaining the ability to meet regulatory requirements. The cost of the project is jointly shared between the Districts and includes the prior year purchase of the 39 acre site as well as future efforts directed at remediation and restoration of the 14 acre industrial wastewater treatment lagoon.

Project Costs:

FUNDING SOURCE	FY 19/20 BUDGET	FY 19/20 ESTIMATE	FY 20/21 BUDGET	FY 21/22 PROJECTED	FY 22/23 PROJECTED	FY 23/24 PROJECTED	FY 24/25 PROJECTED	TOTAL FY 20-25 PROJECTED
CONST								
SDC						$ 6,000,000		$ 6,000,000
TOTAL						$ 6,000,000		$ 6,000,000

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 equipment used in plant operations, pipeline and infrastructure maintenance, and biosolids distribution and application.

Project Costs:

FUNDING SOURCE	FY 19/20 BUDGET	FY 19/20 ESTIMATE	FY 20/21 BUDGET	FY 21/22 PROJECTED	FY 22/23 PROJECTED	FY 23/24 PROJECTED	FY 24/25 PROJECTED	TOTAL FY 20-25 PROJECTED
CONST	$ 700,000	$ 297,539	$ 500,000	$ 900,000	$ 930,000	$ 1,020,000	$ 965,000	$ 4,315,000
SDC								
TOTAL	$ 700,000	$ 297,539	$ 500,000	$ 900,000	$ 930,000	$ 1,020,000	$ 965,000	$ 4,315,000

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 line and facility maintenance, sampling, biosolids, surface water, and district support functions. Specific vehicle purchases will be determined during each fiscal year and are based on an assessment that weighs the costs of maintenance versus the costs of replacement and includes such 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	FY 19/20 BUDGET	FY 19/20 ESTIMATE	FY 20/21 BUDGET	FY 21/22 PROJECTED	FY 22/23 PROJECTED	FY 23/24 PROJECTED	FY 24/25 PROJECTED	TOTAL FY 20-25 PROJECTED
CONST	$ 310,000	$ 175,232	$ 345,000	$ 245,000	$ 250,000	$ 205,000	$ 360,000	$ 1,405,000
SDC								
TOTAL	$ 310,000	$ 175,232	$ 345,000	$ 245,000	$ 250,000	$ 205,000	$ 360,000	$ 1,405,000

PROJECT DETAIL

Project Name: Asset Management - Renewal and Replacement

Project Number: Various

Project Subprogram: Capital Delivery/Tri-City WRRF

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 will include electrical updates, instrumentation upgrades, and process HVAC system improvements.

Project Costs:

FUNDING SOURCE	FY 19/20 BUDGET	FY 19/20 ESTIMATE	FY 20/21 BUDGET	FY 21/22 PROJECTED	FY 22/23 PROJECTED	FY 23/24 PROJECTED	FY 24/25 PROJECTED	TOTAL FY 20-25 PROJECTED
CONST	$ 800,000	$ 114,215	$ 800,000	$ 800,000	$ 800,000	$ 800,000	$ 800,000	$ 4,000,000
SDC								
TOTAL	$ 800,000	$ 114,215	$ 800,000	$ 800,000	$ 800,000	$ 800,000	$ 800,000	$ 4,000,000

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 pump station assets to increase reliability. Specific efforts in this project class include electrical updates, pump replacements, and instrumentation upgrades.

Project Costs:

FUNDING SOURCE	FY 19/20 BUDGET	FY 19/20 ESTIMATE	FY 20/21 BUDGET	FY 21/22 PROJECTED	FY 22/23 PROJECTED	FY 23/24 PROJECTED	FY 24/25 PROJECTED	TOTAL FY 20-25 PROJECTED
CONST	$ 450,000	$ 92,529	$ 200,000	$ 200,000	$ 200,000	$ 200,000	$ 200,000	$ 1,000,000
SDC								
TOTAL	$ 450,000	$ 92,529	$ 200,000	$ 200,000	$ 200,000	$ 200,000	$ 200,000	$ 1,000,000

PROJECT DETAIL

Project Name: Lab

Project Number: Various

Project Subprogram: Capital Delivery/Lab

Fund: 639

Project Status: Active

Project Description:
Lab equipment has been identified as needing replacement due to normal use.

Project Costs:

FUNDING SOURCE	FY 19/20 BUDGET	FY 19/20 ESTIMATE	FY 20/21 BUDGET	FY 21/22 PROJECTED	FY 22/23 PROJECTED	FY 23/24 PROJECTED	FY 24/25 PROJECTED	TOTAL FY 20-25 PROJECTED
CONST	$ 178,000	$ 65,350	$ 23,000		$ 60,000			$ 83,000
SDC								
TOTAL	$ 178,000	$ 65,350	$ 23,000		$ 60,000			$ 83,000

APPENDIX B

PROJECT DETAIL

Project Name: 3-Creeks Water Quality Project

Project Number: TBD

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 planning a project 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 2020-21 work includes pre-design work, permitting, and community involvement.

Project Costs:

FUNDING SOURCE	FY 19/20 BUDGET	FY 19/20 ESTIMATED	FY 20/21 PROJECTED	FY 21/22 PROJECTED	FY 22/23 PROJECTED	FY 23/24 PROJECTED	FY 24/25 PROJECTED	TOTAL FY 20-25 PROJECTED
CONST	$ 50,000		$ 500,000	$ 500,000	$ 1,200,000	$ 1,500,000		$ 3,700,000
SDC								
TOTAL	$ 50,000		$ 500,000	$ 500,000	$ 1,200,000	$ 1,500,000		$ 3,700,000

PROJECT DETAIL

Project Name: 90th Ave Water Quality Retrofit

Project Number: TBD

Project Subprogram: Watershed Protection

Fund: 649

Project Status: Active

Project Description:
WES has partnered with Clackamas County Transportation for the completion of a water quality retrofit project as part of the SE 90th Ave road reconstruction project. The project will add water quality treatment to an area that currently has no treatment.

Project Costs:

FUNDING SOURCE	FY 19/20 BUDGET	FY 19/20 ESTIMATED	FY 20/21 PROJECTED	FY 21/22 PROJECTED	FY 22/23 PROJECTED	FY 23/24 PROJECTED	FY 24/25 PROJECTED	TOTAL FY 20-25 PROJECTED
CONST			$ 150,000					$ 150,000
SDC								
TOTAL			$ 150,000					$ 150,000

PROJECT DETAIL

Project Name: Carli Creek Enhancement and Water Quality Project

Project Number: 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 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	FY 19/20 BUDGET	FY 19/20 ESTIMATED	FY 20/21 PROJECTED	FY 21/22 PROJECTED	FY 22/23 PROJECTED	FY 23/24 PROJECTED	FY 24/25 PROJECTED	TOTAL FY 20-25 PROJECTED
CONST	$ 75,000	$ 200,000	$ 91,500	$ 42,000	$ 42,000	$ 42,000		$ 217,500
SDC								
TOTAL	$ 75,000	$ 200,000	$ 91,500	$ 42,000	$ 42,000	$ 42,000		$ 217,500

PROJECT DETAIL

Project Name: Detention Pond Repair/Rehab

Project Number: Various

Project Subprogram: Watershed Protection

Fund: 649

Project Status: Active

Project Description:
WES is planning to remove silt and vegetation from 4-6 detention ponds to return the ponds to their original design. Since the original installation, the 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	FY 19/20 BUDGET	FY 19/20 ESTIMATED	FY 20/21 PROJECTED	FY 21/22 PROJECTED	FY 22/23 PROJECTED	FY 23/24 PROJECTED	FY 24/25 PROJECTED	TOTAL FY 20-25 PROJECTED
CONST	$ 100,000		$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 500,000
SDC								
TOTAL	$ 100,000		$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 500,000

PROJECT DETAIL

Project Name: Red Rose Valley Detention Pipe Repair

Project Number: TBD

Project Subprogram: Watershed Protection

Fund: 649

Project Status: Active

Project Description:
This project includes design and construction work to repair a large detention pipe that collapsed in 2020. The work may entail a range of options, including a spot repair of the pipe to full pipe replacement.

Project Costs:

FUNDING SOURCE	FY 19/20 BUDGET	FY 19/20 ESTIMATED	FY 20/21 PROJECTED	FY 21/22 PROJECTED	FY 22/23 PROJECTED	FY 23/24 PROJECTED	FY 24/25 PROJECTED	TOTAL FY 20-25 PROJECTED
CONST		$ 25,000	$ 1,200,000					$ 1,200,000
SDC								
TOTAL		$ 25,000	$ 1,200,000					$ 1,200,000

PROJECT DETAIL

Project Name: Small Projects

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	FY 19/20 BUDGET	FY 19/20 ESTIMATED	FY 20/21 PROJECTED	FY 21/22 PROJECTED	FY 22/23 PROJECTED	FY 23/24 PROJECTED	FY 24/25 PROJECTED	TOTAL FY 20-25 PROJECTED
CONST	$ 100,000	$ 20,000	$ 100,000	$ 250,000	$ 250,000	$ 250,000	$ 250,000	$ 1,100,000
SDC								
TOTAL	$ 100,000	$ 20,000	$ 100,000	$ 250,000	$ 250,000	$ 250,000	$ 250,000	$ 1,100,000

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