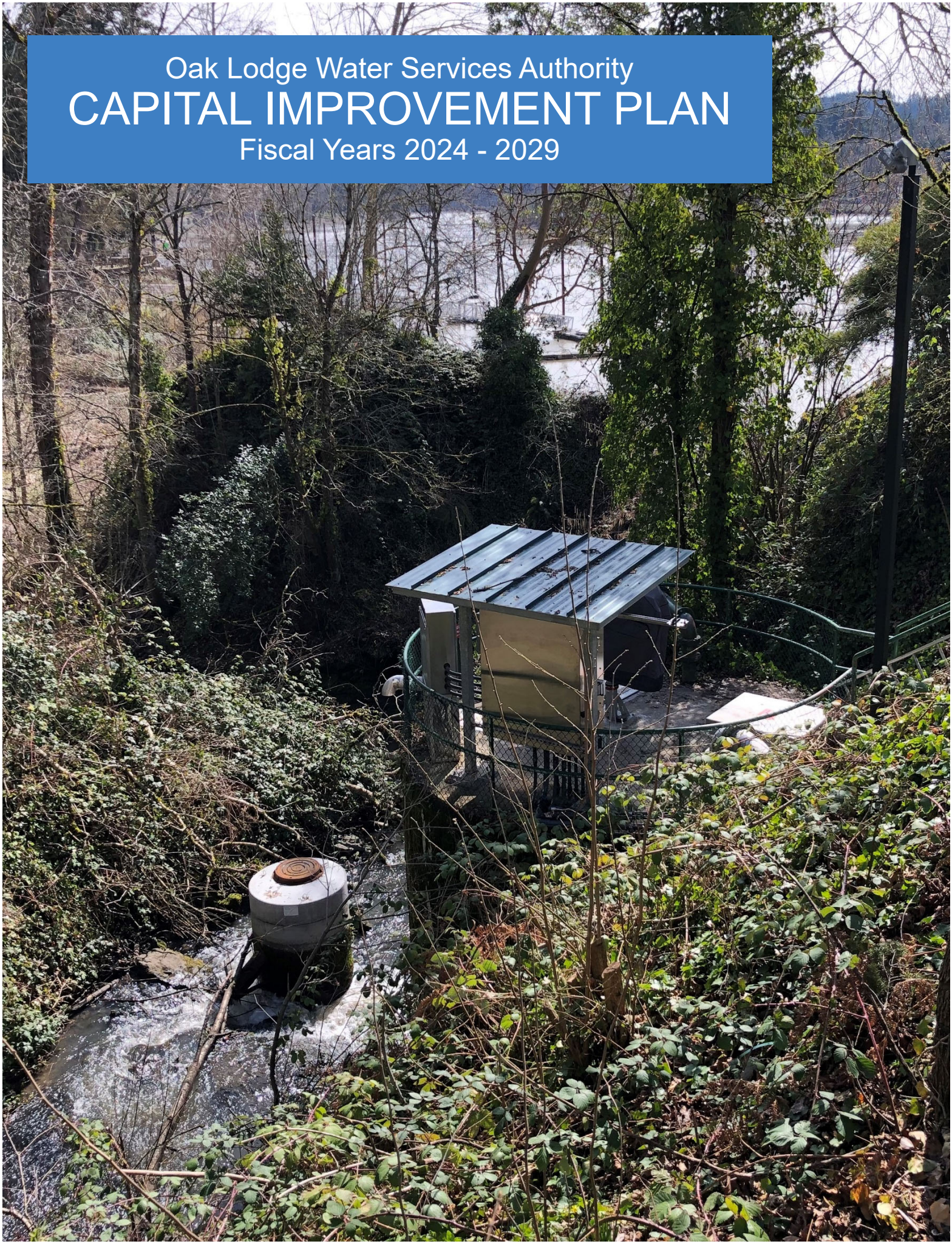
Oak Lodge Water Services Authority

CAPITAL IMPROVEMENT PLAN

Fiscal Years 2024 - 2029



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Message from the Public Works Director/District Engineer

Resource management is such an important function for any service provider and Oak Lodge Water Services Authority (OLWS) is no different in this regard. Finding a balance between exemplary customer service and the cost to provide that service is key to the success of public organizations. In order to achieve this balance, one tool OLWS uses is a Capital Improvement Plan (CIP) because our service is heavily dependent upon physical infrastructure such as pipes. This document monetarily prepares for the expansion and maintenance of your Wastewater and Water systems as well as the provision of Watershed Protection services.

As this document is being produced, staff has the benefit of a newly adopted Wastewater Master Plan to pull prioritized wastewater projects from. The Water Master Plan is fairly new as well, being adopted in 2020 with prioritized projects. Both of these documents help staff create an up to date and informed project list to shape the CIP for the FY24 budget cycle.

In parallel to the creation of the Wastewater Master Plan, staff simultaneously negotiated an updated permit with DEQ for the operation of your Wastewater Treatment Plant. This new permit layered more stringent standards on the plant; standards in which it currently can not meet. To resolve this issue, OLWS is looking to fund a Tertiary Filter Project (found on page 23). This is an example of how important it is for this document to look at the current fiscal year and beyond to meet the growing permitting demands placed on OLWS.

This proactive approach will not only save our rate payers money, but will enhance services due to time savings. Like a house waiting for a roof failure, that failure creates more damage to the house and costs more to repair than it would proactively; the same holds true for OLWS's investment in your infrastructure.

We at OLWS, hope this document provides clear, concise and transparent information to you as our rate payer. As a result of reading this document, we hope you gain a better understanding of how the investment of revenue from your rates ensure your Water, Wastewater and surface water systems remain functioning well into the future. If you have any questions about this document, I encourage you to contact me at (503) 353-4202.

Sincerely,

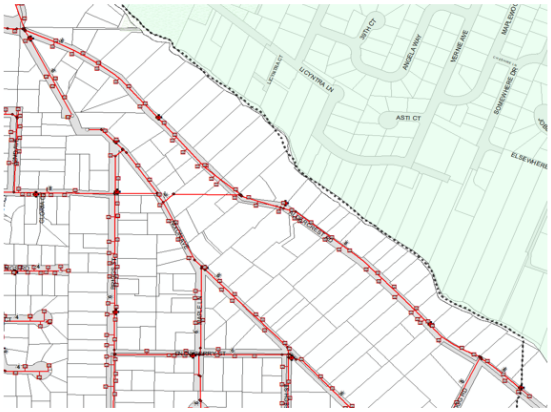
Brad Albert, PE
Oak Lodge Water Services Authority
Public Works Director/District Engineer

How to Use This Document

This six-year Capital Improvement Plan document provides detailed descriptions about projects organized by fund. Each fund section begins with a summary overview of the function of the fund followed by funding and project information. Summary tables and graphs highlight the capital projects within each fund. Following the summary section are detailed breakdowns of each project, along with project schedules, cost estimates, and operating budget impacts.

Summary information of all capital projects sorted by fund, and funding source are included as appendices to this document.

Aldercrest Road



Project Description

Replacement of 3,025 feet of 6-inch and 8-inch ductile iron pipe with 8-inch ductile iron pipe.

Project Justification

During the creation Water System Master Plan, Operations Staff identified and prioritized six pipeline projects based on age and condition. This project was prioritized by staff to be the single most important project to the District when trying to avoid main breaks.

Future Operating Cost Impact

Completion of this project would lessen overall main breaks and thus lower operating costs.

Budget Information and Projected Costs

Pre-CIP (<FY22)	*FY23*	*FY24*	*FY25*	*FY26*	*FY27*	*FY28*	*Total (in CIP)*	*Post-CIP (>FY28)*
$ 355,000	$ 1,195,000	$ -	$ -	$ -	$ -	$ -	$ 1,195,000	$ -

SDC Improvement Fee Eligibility: 9.7%

Overview

Capital Improvement Plan Overview

The six-year Capital Improvement Plan (CIP) establishes guidance and planning for OLWS's investments in capital infrastructure. At the foundation of the CIP are OLWS's Surface Water, Wastewater and Water Master Plan documents. These master plans illustrate the long-term needs and goals of each department as defined by community input, advisory groups, expert consultants, and OLWS Staff, and OLWS Board goals, operational (i.e. service delivery) needs, and regulatory requirements further refine and shape the CIP.

Projects within the CIP are prioritized and matched with projections of future revenues. Inclusion of a project within this document does not necessarily reflect a budgeted spending commitment, but is the anticipated priority at this snapshot in time based on estimated future revenues. Current revenues are not enough to keep up with all the capital needs of OLWS. Additionally, there are restrictions on many revenue sources in relation to where the funds may be spent.

As compared to Capital Outlay line in the Budget, which may include purchases as low as $5,000 and have a useful life of at least one year, a capital "project" contained within this document is defined by the complexity of the work.

The CIP is intended as a method of communication with citizens, businesses, advisory groups, and the Board of Directors. It gives the public the opportunity to see OLWS's proposed plans for the future and provide feedback to the Board and Staff.

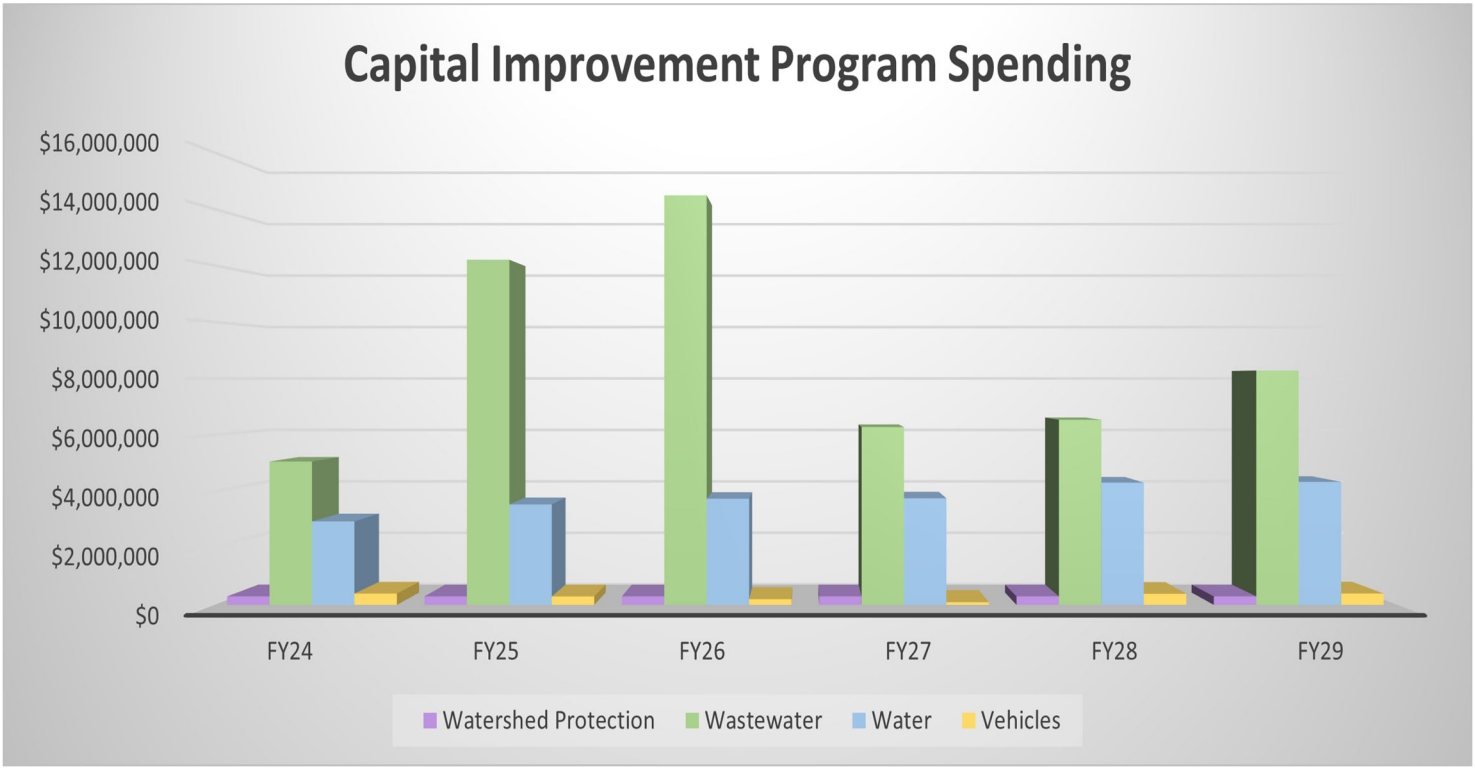
The goal of this Capital Improvement Plan is to provide the maximum sustainable level of priority capital investments to deliver outcomes that are of the highest importance to our citizens and provide for a healthy, safe, active, efficient, and optimized community with excellent livability and quality of life.

Factors in Evaluating CIP Projects	
• Master planning documents	• Health, safety, and environmental effects
• Board goals	• Community economic effects
• Operational needs	• Feasibility, including public support and disruption
• Regulatory requirements	• Implications of deferring the project
• Fiscal Impacts	• Coordination and advantages of joint projects

Summary Information

Funding Summary

	FY24	FY25	FY26	FY27	FY28	FY29	Total
Watershed Protection	$300,000	$300,000	$300,000	$300,000	$300,000	$300,000	**$1,800,000**
Wastewater	$5,065,000	$12,197,093	$14,471,185	$6,282,912	$6,540,395	$8,281,180	**$52,837,765**
Water	$2,950,000	$3,551,125	$3,750,500	$3,767,045	$4,317,636	$4,346,275	**$22,682,581**
Vehicles	$400,000	$297,800	$203,135	$93,572	$390,333	$403,284	**$1,788,124**
Total Capital Improvement Program	**$8,715,000**	**$16,346,018**	**$18,724,820**	**$10,443,529**	**$11,548,364**	**$13,330,739**	**$79,108,470**



Funding for Capital Projects comes from four OLWS sources

(1) Utility User Fees
(2) Bonds
(3) Grants come from outside agencies such as ODOT, Metro, DEQ, Oregon Parks, and the Oregon Marine Board
(4) Systems Development Charges (SDCs): from new development

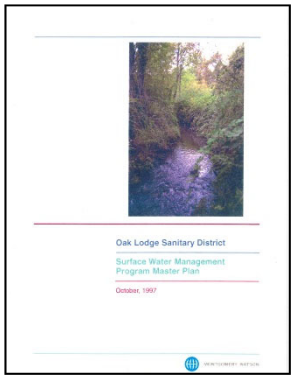
Multi-Document Transparency

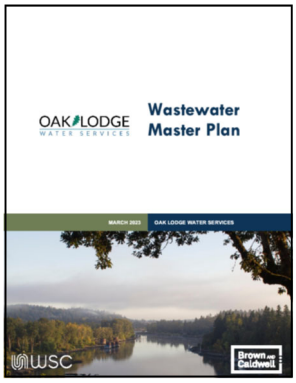
OLWS recognizes that the projects included in the Six-Year Capital Improvement Plan represent a significant amount of public funding and it is OLWS's intention is to present this information across several documents to ensure that projects are clearly understood and accounted for in financial forecasts, budgets, capital improvement plans and master plans.

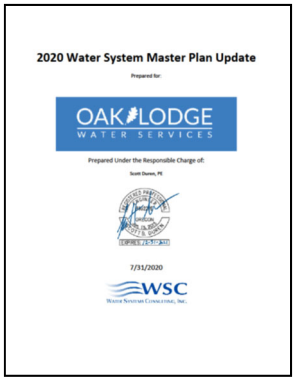
Multi-document transparency means that a capital project necessitated by a master plan will be included in the CIP document and then planned for in the forecast document. Funding for the project will then be included in the budget document and the expense will be recorded in quarterly and annual financial reports.

Master Plans

- Surface Water
- Wastewater
- Water







Fund 71 - Drinking Water Capital Fund

ACTUAL 17-18	ACTUAL 18-19	BUDGET 19-20	Object Code	Item	PROPOSED 20-21	APPROVED 20-21	ADOPTED 20-21
			71-00-	**Resources**			
$ -	$ -	$ 2,703,013	3500	Beginning Fund Balance	$ 3,942,000	$ 3,942,000	$ 3,942,000
-	74,267	50,000	4610	Investment revenue	50,000	50,000	50,000
-	1,320,000	-	4650	Proceeds from borrowing	-	-	-
			71-29-	**Transfers In**			
-	2,700,000	1,675,000	4910	Transfer In from Fund 10	500,000	500,000	500,000
$ -	$ 4,094,267	$ 4,428,013	**Total Resources**		$ 4,492,000	$ 4,492,000	$ 4,492,000.00
			71-20-	**Capital Outlay**			
$ -	$ 683,972	$ -	7200	Infrastructure	$ -	$ -	$ -
-	-	330,000	7300	Buildings and improvements	-	-	-
-	6,419	-	7530	Capital Software Purchase	-	-	-
-	34,113	-	7540	Vehicles	35,000	35,000	35,000
-	133,715	4,098,013	7600	Capital improvement projects	1,480,000	1,480,000	1,480,000
$ -	$ 858,220	$ 4,428,013	**Total Capital Outlay**		$ 1,515,000	$ 1,515,000	$ 1,515,000
			71-29-	**Transfers and Contingency**			
$ -	$ -	$ -	9000	Contingency	$ 2,977,000	$ 2,977,000	$ 2,977,000
$ -	$ -	$ -	**Total Transfers and Contingency**		$ 2,977,000	$ 2,977,000	$ 2,977,000
$ -	$ 858,220	$ 4,428,013	**Total Appropriations**		$ 4,492,000	$ 4,492,000	$ 4,492,000
$ -	$ 3,236,048	$ -	**Reserve for future expenditures**		$ -	$ -	$ -
$ -	$ 4,094,267	$ 4,428,013	**Total Requirements**		$ 4,492,000	$ 4,492,000	$ 4,492,000

Financial Reporting

"Capital Outlay" is reported in financial forecasts, budgets, quarterly reports, and annual reports. This line item corresponds with the annual funded totals shown in this Six-Year Capital Improvement Plan (CIP).

The adoption of this CIP document provides the baseline for the capital outlay that will be included in future budget documents for the Budget Committee to review, consider and approve, and for the Board to formally adopt.

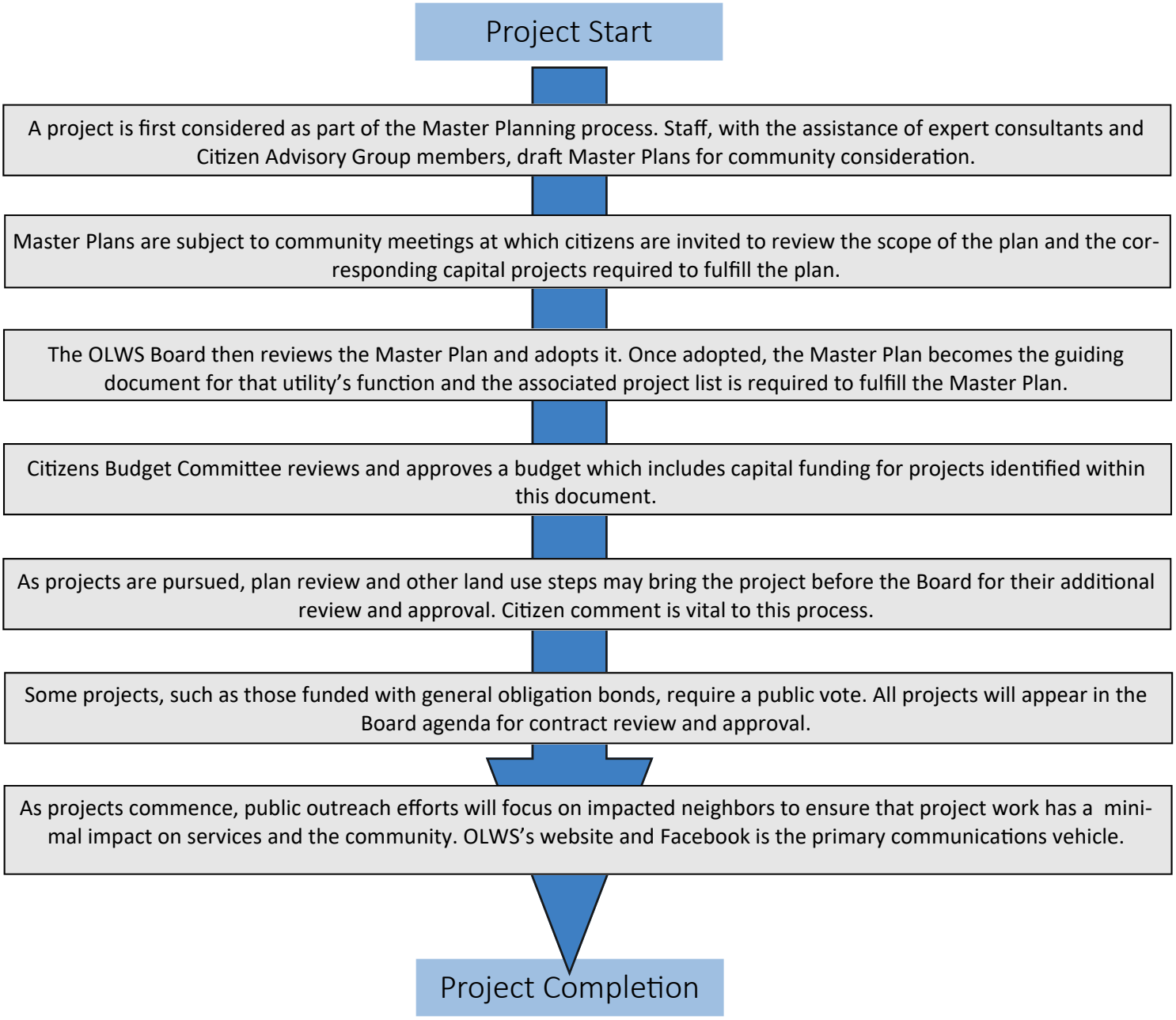
The Process of a CIP Project

Question:

How does a project get placed on the Capital Improvement Plan?

Answer:

Rate Payer involvement is the cornerstone of the Six-Year Capital Improvement Plan. Projects are vetted through a multi-step process (see below) that includes public comment at several stages to ensure that projects meet the community's needs, in addition to expert analyses during plan development. Funding is not available for projects to begin until it is approved and adopted into OLWS's budget.



Vehicles and Equipment

Overview

Oak Lodge Water Services Authority (OLWS) has 36 pieces of rolling stock. 16 primarily used for the water, 18 for sewer and 1 for storm and 1 for Technical Services inspections. This program aims to systematically set aside funds at a predictable rate, that not only gives the Board a snapshot of the current fleet, but it also allows staff to show the Board in a single document the intended replacement schedule of each piece of equipment.

With regular and scheduled replacement of vehicles, the cost for major repairs should be kept to a minimum. In addition, the timing for replacements can occur in a planned, efficient and effective fashion thus evening out costs. For the first couple of years OLWS would need to catch up to meet the scheduled replacements because the newly created Capital Fund has no pre-existing reserves built up.

Vehicle Capital Purchases

ID#	Program	Vehicle Description	FY24	FY25	FY26	FY27	FY28	FY29	Totals
NEW	Wastewater	Biosolids Loader	250,000						$ 250,000
12	Collections	Field Operations Vehicle		66,150					$ 66,150
8	Technical Services	Inspection Truck		66,150					$ 66,150
30	Water	Operations Dump Truck	150,000						$ 150,000
55	Water	Field Operations Truck			68,135				$ 68,135
42	Water	Backhoe		165,500					$ 165,500
15	Wastewater	Plant Operations Truck			45,000				$ 45,000
16	Wastewater	Plant Operations Truck			90,000				$ 90,000
23	Wastewater	Portable Generator				23,393			$ 23,393
68	Water	Field Operations Truck				70,179			$ 70,179
69	Water	Field Operations Truck					89,150		$ 89,150
17	Wastewater	Hydrocleaner					301,183		$ 301,183
19	Wastewater	TV Van						403,284	$ 403,284
		Total Vehicle Capital Expenses	$ 400,000	$ 297,800	$ 203,135	$ 93,572	$ 390,333	$ 403,284	$ 1,788,124

Watershed Protection

Overview

The Oak Lodge Water Services Authority (OLWS) is responsible for water quality improvement projects within the communities of Oak Grove and Jennings Lodge, Oregon. Although not formal cities, this portion of unincorporated Clackamas County is heavily urbanized with residential, commercial, and industrial development.

Less than 10 years ago, an analysis of OLWS revealed that the Total Impervious Area is 80% -- that is about 2,800 acres of surface that does not infiltrate water, all of which contributes to increased water velocity and scour in local streams, and the majority of which contributes pollutants into the surface water system, including streams and rivers.

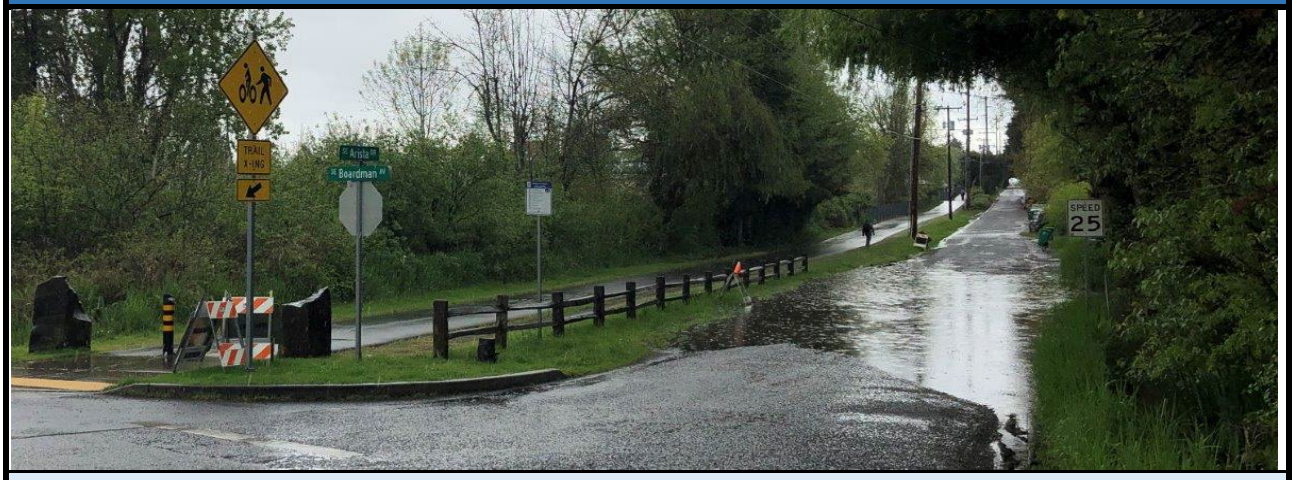
OLWS charges customers a monthly surface water fee, which covers all surface water program operations. Annual revenue changes slightly (based on the number of customers), but is approximately $1.6M annually.

Projects within the Watershed Protection Capital Improvement Program include new regional stormwater treatment facilities, retrofits of existing facilities, installation of roadside facilities, such as “rain gardens”, upgrades of existing storm lines and catch basins, and natural resource restoration projects.

Watershed Protection Capital Improvement Projects

Page	Project Name	FY24	FY25	FY26	FY27	FY28	FY29
12	Boardman and Arista Flooding	300,000					
13	Localized Enhancement Program		300,000	300,000	300,000	300,000	300,000
	Total Watershed Protection Capital Expenses	$ 300,000	$ 300,000	$ 300,000	$ 300,000	$ 300,000	$ 300,000

Boardman and Arista Flooding



Project Description

Recognized as one of the OLWS's worst flooding spots, this site repeatedly floods the Trolley Trail, Boardman Avenue, Arista Drive and private property. Currently, it is suspected that beaver dams and flat grades cause a majority of the flooding. This project seeks first to identify alternatives that could ease the flooding or completely eliminate it. Once these alternatives are identified, they will be presented to the stakeholders and a project will be decided upon based on funding contributions.

Project Justification

By fixing flooding issues within the service area it improves environmental health, livability, and property values. These types of projects also help OLWS's MS4 Annual commitments to treating stormwater.

Future Operating Cost Impact

This project will both decrease Staff's time reporting to localized flooding; however, depending on the solution it may increase maintenance of OLWS owned facilities.

Budget Information and Projected Costs

FY24	*FY25*	*FY26*	*FY27*	*FY28*	*FY29*	*Total (in CIP)*	*Post-CIP (>FY28)*
$ 300,000	$ -	$ -	$ -	$ -	$ -	$ 300,000	

SDC Improvement Fee Eligibility: 0%

Localized Enhancement Program

Project Description

This program aims to fix small to medium scale localized issues throughout the service area. Projects will include replacement of damaged stormwater pipes owned by OLWS, create new roadside surface water treatment and address issues brought forth by OLWS customers.

Project Justification

The Board as well as staff often hear about issues throughout the service area related to flooding. By programming money to either solve these issues or participate in multi-jurisdictional projects, OLWS can start to alleviate these issues for our rate-payers.

Future Operating Cost Impact

These projects will both decrease Staff's time reporting to localized flooding and increase maintenance of OLWS owned facilities.

Budget Information and Projected Costs

FY24	*FY25*	*FY26*	*FY27*	*FY28*	*FY29*	*Total (in CIP)*	*Post-CIP (>FY28)*
$ -	$ 300,000	$ 300,000	$ 300,000	$ 300,000	$ 300,000	$ 1,500,000	TBD

SDC Improvement Fee Eligibility: 0%

Overview

Oak Lodge Water Services Authority (OLWS) charges customers a monthly fee for wastewater service. Annual revenue changes slightly based on the number and types of customers, and comes in at approximately $8.6M annually. Of this revenue, approximately 12% is budgeted to be used on capital improvements. The majority of wastewater revenue is used for payment of the debt service to address the various loans associated with the Wastewater Treatment Plant Expansion project.

Wastewater Capital Improvement Projects

Page	Project Name	FY24	FY25	FY26	FY27	FY28	FY29	Totals
15	Lift Station 5 Basin RDII	1,500,000	1,000,000					$ 2,500,000
16	Lift Station 2 Basin RDII	200,000	600,000	4,705,823				$ 5,505,823
17	Lift Station 6 Basin RDII		82,688	476,942				$ 559,630
18	Influent Lift Station Basin RDII		1,214,955	250,000	3,297,525	3,653,951		$ 8,416,431
19	Lift Station 4 Basin RDII			46,559	191,821			$ 238,380
20	Trunk Main A Upsizing					1,427,607	6,618,819	$ 8,046,426
21	Trunk Main B Upsizing						1,285,545	$ 1,285,545
22	LS2 Construction	1,100,000						$ 1,100,000
23	LS3 Construction	50,000	275,000	908,460	935,714			$ 2,169,174
24	Hillside Sewer Line Replacement	700,000						$ 700,000
25	Boardman Sewer Line Replacement		630,000					$ 630,000
26	Manhole Repair Program	75,000	100,000	100,000	100,000	100,000	100,000	$ 575,000
27	Mainline Repair Program	75,000	100,000	100,000	100,000	100,000	100,000	$ 575,000
28	Lateral Repair Program	75,000	100,000	100,000	100,000	100,000	100,000	$ 575,000
29	Replace Aeration Blowers	275,000		325,000				$ 600,000
30	Tertiary Treatment at WWTP	750,000	6,615,000	5,677,875				$ 13,042,875
31	Influent Lift Station Reconstruction			124,913	526,339	542,129		$ 1,193,381
32	Secondary Clarifier 1 and 2 Refurbishment	150,000	1,323,000	1,249,133				$ 2,722,133
33	UV Disinfection Rehabilitation			124,913	526,339	542,129		$ 1,193,381
34	UV Disinfection Equipment Replacement	30,000	31,500	32,445	33,418	34,421	35,454	$ 197,238
35	TWAS Pump Replacement			75,000				$ 75,000
36	Motor Control (VFD) Replacement	35,000	36,750	37,853	38,988	40,158	41,362	$ 230,111
37	Plant Drain Pump Replacement			136,269				$ 136,269
38	Plant Air-line Inspection		88,200					$ 88,200
39	Wastewater Master Plan update	50,000			432,768			$ 482,768
	Total Wastewater Capital Expenses	$ 5,065,000	$ 12,197,093	$14,471,185	$ 6,282,912	$ 6,540,395	$ 8,281,180	$ 52,837,765

Lift Station 5 Basin RDII

OAK LODGE WATER SERVICES

Project Description

This project will enact the following measures to reduce RDII in the Lift Station 5 Basin:
Smoke testing 35,000 LF of pipe; flow metering at 5 locations (pre- and post-rehabilitation [rehab]); rehab of 173 LF of 6” pipe, 5,839 LF of 8” pipe, 2,556 LF of 10” pipe, and 215 LF of 12” pipe; rehab of 6 manholes (63 vertical feet [VF]); and rehab of 138 laterals from the main to the property connection.

Project Justification

Rainfall-derived Infiltration and Inflow (RDII) occurs after heavy rains when rainwater makes its way into the collections system and mixes with the wastewater. The full combined flow then needs to be transported and treated. By shoring up the collections system against RDII, all downstream conveyance and treatment infrastructure can be right-sized to treat customer's wastewater only without also conveying and treating rainwater.

Future Operating Cost Impact

OLWS has commissioned past studies showing how the cost of RDII reductions is far less expensive than upgrading downstream infrastructure to handle combined flows.

Budget Information and Projected Costs

FY24	*FY25*	*FY26*	*FY27*	*FY28*	*FY29*	*Total (in CIP)*	*Post-CIP (>FY29)*
$ 1,500,000	$ 1,000,000	$ -	$ -	$ -	$ -	$ 2,500,000	$ -

SDC Improvement Fee Eligibility: 0%

Lift Station 2 Basin RDII

Project Description

This project will enact the following measures to reduce RDII in the Lift Station 2 Basin:
Smoke testing 165,414 LF of pipe; flow metering at 17 locations (pre- and post-rehab); rehab of 11,145 LF of 8” pipe, 304 LF of 12” pipe, 4 LF of 14” pipe, 251 LF of 18” pipe, 752 LF of 20” pipe, and 338 LF of 21” pipe; rehab of 9 manholes (95 VF); and rehab of 198 laterals from the main to the property connection.

Project Justification

Rainfall-derived Infiltration and Inflow (RDII) occurs after heavy rains when rainwater makes its way into the collections system and mixes with the wastewater. The full combined flow then needs to be transported and treated. By shoring up the collections system against RDII, all downstream conveyance and treatment infrastructure can be right-sized to treat customer's wastewater only without also conveying and treating rainwater.

Future Operating Cost Impact

OLWS has commissioned past studies showing how the cost of RDII reductions is far less expensive than upgrading downstream infrastructure to handle combined flows.

Budget Information and Projected Costs

FY24	*FY25*	*FY26*	*FY27*	*FY28*	*FY29*	*Total (in CIP)*	*Post-CIP (>FY29)*
$ 200,000	$ 600,000	$ 4,705,823	$ -	$ -	$ -	$ 5,505,823	$ -

SDC Improvement Fee Eligibility: 0%

Lift Station 6 Basin RDII

Project Description

This project will enact the following measures to reduce RDII in the Lift Station 6 Basin:
Smoke testing 6,846 LF of pipe; flow metering at 2 locations (pre- and post-rehab); rehab of 171 LF of 8" pipe; rehabilitation of 1 manhole (11 VF); and rehab of 33 laterals from the main to the property connection. Scope is limited to OLWS-owned assets.

Project Justification

Rainfall-derived Infiltration and Inflow (RDII) occurs after heavy rains when rainwater makes its way into the collections system and mixes with the wastewater. The full combined flow then needs to be transported and treated. By shoring up the collections system against RDII, all downstream conveyance and treatment infrastructure can be right-sized to treat customer's wastewater only without also conveying and treating rainwater.

Future Operating Cost Impact

OLWS has commissioned past studies showing how the cost of RDII reductions is far less expensive than upgrading downstream infrastructure to handle combined flows.

Budget Information and Projected Costs

FY24	*FY25*	*FY26*	*FY27*	*FY28*	*FY29*	*Total (in CIP)*	*Post-CIP (>FY29)*
$ -	$ 82,688	$ 476,942	$ -	$ -	$ -	$ 559,630	$ -

SDC Improvement Fee Eligibility: 0%

Influent Lift Station Basin RDII

OAK LODGE WATER SERVICES

Project Description

This project will enact the following measures to reduce RDII in the Influent Lift Station Basin:
Smoke testing 207,931 LF of pipe; flow metering at 21 locations (pre- and post-rehab); rehab of 270 LF of 6” pipe, 12,724 LF of 8” pipe, 503 LF of 10” pipe, 250 LF of 12” pipe, 247 LF of 15” pipe, and 1,428 LF of 21” pipe; rehab of 17 manholes (179 VF); and rehab of 326 laterals from the main to the property connection.

Project Justification

Rainfall-derived Infiltration and Inflow (RDII) occurs after heavy rains when rainwater makes its way into the collections system and mixes with the wastewater. The full combined flow then needs to be transported and treated. By shoring up the collections system against RDII, all downstream conveyance and treatment infrastructure can be right-sized to treat customer's wastewater only without also conveying and treating rainwater.

Future Operating Cost Impact

OLWS has commissioned past studies showing how the cost of RDII reductions is far less expensive than upgrading downstream infrastructure to handle combined flows.

Budget Information and Projected Costs

FY24	*FY25*	*FY26*	*FY27*	*FY28*	*FY29*	*Total (in CIP)*	*Post-CIP (>FY29)*
$ -	$ 1,214,955	$ 250,000	$ 3,297,525	$ 3,653,951	$ -	$ 8,416,431	$ -

SDC Improvement Fee Eligibility: 0%

Lift Station 4 Basin RDII

Project Description

This project will enact the following measures to reduce RDII in the Lift Station 4 Basin:
Smoke testing 2,335 LF of pipe; flow metering at 1 location (pre- and post-rehab); rehab of 491 LF of 8" pipe; rehab of 1 manhole (11 VF); and rehab of 4 laterals from the main to the property connection.

Project Justification

Rainfall-derived Infiltration and Inflow (RDII) occurs after heavy rains when rainwater makes its way into the collections system and mixes with the wastewater. The full combined flow then needs to be transported and treated. By shoring up the collections system against RDII, all downstream conveyance and treatment infrastructure can be right-sized to treat customer's wastewater only without also conveying and treating rainwater.

Future Operating Cost Impact

OLWS has commissioned past studies showing how the cost of RDII reductions is far less expensive than upgrading downstream infrastructure to handle combined flows.

Budget Information and Projected Costs

FY24	*FY25*	*FY26*	*FY27*	*FY28*	*FY29*	*Total (in CIP)*	*Post-CIP (>FY29)*
$ -	$ -	$ 46,559	$ 191,821	$ -	$ -	$ 238,380	$ -

SDC Improvement Fee Eligibility: 0%

Trunk Main A Upsizing

Project Description

Trunk Main A conveys over half of all wastewater collected in OLWS from Lift Station 2 to the Wastewater Treatment Plant. This project includes the installation of 3,516 LF of 24”, 240 LF of 27”, and 3,202 LF of 30” gravity wastewater main. Depending on the effectiveness of RDII reductions, this scope may be reduced.

Project Justification

Trunk Main A is currently undersized to convey both normal wastewater flows and the surges of rainfall-derived inflow and infiltration (RDII) experienced after heavy rainfall.

Future Operating Cost Impact

This project would reduce the likelihood of sanitary sewer overflow events at Lift Station 2.

Budget Information and Projected Costs

FY24	*FY25*	*FY26*	*FY27*	*FY28*	*FY29*	*Total (in CIP)*	*Post-CIP (>FY29)*
$ -	$ -	$ -	$ -	$ 1,427,607	$ 6,618,819	$ 8,046,426	$ -

SDC Improvement Fee Eligibility: 0%

Trunk Main B Upsizing

OAK LODGE WATER SERVICES

Project Description

Trunk Main B conveys a majority of wastewater collected in the Influent Pump Station Basin. This project includes the installation of 362 LF of 15”, 4,600 LF of 18”, and 3,729 LF of 24” gravity wastewater main. Depending on the effectiveness of RDII reductions, this scope may be reduced.

Project Justification

Trunk Main B is currently undersized to convey both normal wastewater flows and the surges of rainfall-derived inflow and infiltration (RDII) experienced after heavy rainfall.

Future Operating Cost Impact

This project will reduce the likelihood of sanitary sewer overflow events in the Influent Pump Station Basin.

Budget Information and Projected Costs

FY24	*FY25*	*FY26*	*FY27*	*FY28*	*FY29*	*Total (in CIP)*	*Post-CIP (>FY29)*
$ -	$ -	$ -	$ -	$ -	$ 1,285,545	$ 1,285,545	$ -

SDC Improvement Fee Eligibility: 0%

LS2 Construction

Project Description

This project will completely reconstruct OLWS's largest wastewater lift station - Lift Station 2. The station conveys nearly half of all wastewater collected by OLWS. The old structure and all its electrical and mechanical equipment will be removed and replaced as the facility gets reconfigured to host submersible non-clog pumps in a larger wetwell.

Project Justification

Existing equipment in Lift Station 2 is old, noisy, cumbersome to operate, and demanding of constant resources to remain in reliable operation. The pumps can only be worked on in a confined space, which creates a safety risk. Furthermore, with virtually no wetwell volume, the station performs poorly at handling surges of flow following rain storms. This project is designed to address all these issues with one rebuild.

Future Operating Cost Impact

The rebuilt station will demand fewer resources to keep running smoothly, both in terms of OLWS staff time and vendor-provided services. It will furthermore be better able to dampen storm surges, which could prevent sanitary sewer overflows following lighter storms.

Budget Information and Projected Costs

FY24	*FY25*	*FY26*	*FY27*	*FY28*	*FY29*	*Total (in CIP)*	*Post-CIP (>FY29)*
$ 1,100,000	$ -	$ -	$ -	$ -	$ -	$ 1,100,000	$ -

SDC Improvement Fee Eligibility: Likely >0% (Post Master Plan Approval)

LS3 Construction

Project Description

This project will largely reconstruct Wastewater Lift Station 3. The mechanical and electrical components of the station will be completely overhauled. Several configurations for the wetwell are being considered, including refurbishing the existing wetwell or building a new one. Either way, the station will feature a submersible pump configuration that is safer and easier to maintain.

Project Justification

The pumps and other mechanics of this station are aged, difficult to maintain, and awkwardly located in multiple chambers below ground. Recent Tri-Met transportation improvements around Lift Station 3 have created an urban-style construction challenge as a light rail terminal, the Trolley Trail, and Park Avenue all intersect next to Lift Station 3.

Future Operating Cost Impact

The rebuilt station will demand fewer resources to keep running smoothly, both in terms of OLWS staff time and vendor-provided services.

Budget Information and Projected Costs

FY24	*FY25*	*FY26*	*FY27*	*FY28*	*FY29*	*Total (in CIP)*	*Post-CIP (>FY29)*
$ 50,000	$ 275,000	$ 908,460	$ 935,714			$ 2,169,174	$ -

SDC Improvement Fee Eligibility: 0%

Hillside Sewer Line Replacement

Project Description

This project replaces approximately 800 feet of wastewater main and two manholes buried beneath the banks of the Willamette River. The section of pipeline being replaced has deformed since it was initially constructed in the 1960's. It now has a low-lying belly where wastewater collects and decays.

Project Justification

Extra maintenance is needed to regularly clean this pipeline, up to once a month. Although OLWS collections crews' cleaning effort does indeed flush out the rotting sewage, the constant pressure washing is demanding of OLWS resources and slowly eroding the inside of the pipe wall.

Future Operating Cost Impact

The construction of the Hillside Project would reduce operating costs by eliminating the extraordinary and repeat burden on OLWS staff and equipment.

Budget Information and Projected Costs

FY24	*FY25*	*FY26*	*FY27*	*FY28*	*FY29*	*Total (in CIP)*	*Post-CIP (>FY29)*
$ 700,000	$ -	$ -	$ -	$ -	$ -	$ 700,000	$ -

SDC Improvement Fee Eligibility: 0%

Boardman Sewer Line Replacement

Project Description

This project will replace a section of wastewater main near Boardman Ave and HWY 99.

Project Justification

This project is prioritized in the Wastewater Master Plan. Currently this section of wastewater main has a long sag and collects debris. It is also under a large wetland area and re-routing this section will remove a majority of it from the wetland area.

Future Operating Cost Impact

Operational cost savings may be realized through reduced pipe maintenance.

Budget Information and Projected Costs

FY24	*FY25*	*FY26*	*FY27*	*FY28*	*FY29*	*Total (in CIP)*	*Post-CIP (>FY29)*
$ -	$ 630,000	$ -	$ -	$ -	$ -	$ 630,000	$ -

SDC Improvement Fee Eligibility: 0%

Manhole Repair Program

Project Description

This program was created to ensure the replacement of all manholes within the wastewater network over a 150-year period. In the case of a manhole having satisfactory structural integrity, manhole rehabilitation (i.e., manhole lining or grouting) will be done in lieu of full manhole replacement. Manholes to be replaced or rehabilitated will be identified by staff on an annual basis.

Project Justification

While manholes are relatively low-maintenance and last quite some time, they are vital to conveying sewage and providing access for inspections of mainlines. Keeping good records in the District's asset management database, staff will stay ahead of failures by rehabilitating when needed rather than complete replacement.

Future Operating Cost Impact

This project will not increase operating expenditures. These projects will replace or repair manholes one-for-one and will not increase the number of wastewater assets system-wide.

Budget Information and Projected Costs

FY24	*FY25*	*FY26*	*FY27*	*FY28*	*FY29*	*Total (in CIP)*	*Post-CIP (>FY29)*
$ 75,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 575,000	>100K/year

SDC Improvement Fee Eligibility: 0%

Mainline Repair Program

Project Description

The focus of this program is to repair and replace wastewater main lines, 8-inch diameter or smaller. Priority will be given to broken mainlines at risk of collapse and allowing stormwater inflow and infiltration into the collection system.

Project Justification

Stormwater seeps into the ground and makes its way into collection system through cracks in buried sewer pipe. This unwelcomed stormwater overwhelms the system's capacity to transport domestic wastewater from homes and businesses.

Future Operating Cost Impact

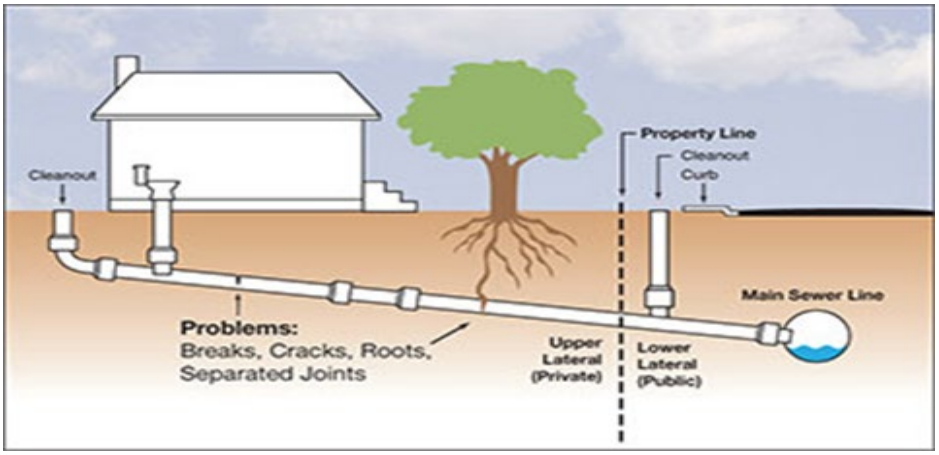
Avoids fines and penalties from DEQ resulting from non-compliance with permit.

Budget Information and Projected Costs

FY24	*FY25*	*FY26*	*FY27*	*FY28*	*FY29*	*Total (in CIP)*	*Post-CIP (>FY29)*
$ 75,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 575,000	$ -

SDC Improvement Fee Eligibility: 0%

Lateral Repair Program



Project Description

The focus of this program is to repair and replace the public portion (the portion in the right-of-way) of wastewater laterals. Priority will be given to laterals allowing stormwater inflow and infiltration through breaks and which cause the greatest impacts to the operating budget.

Project Justification

OLWS is responsible for wastewater laterals from the mainline to the property line or easement boundary. Currently there are 7550 laterals in the service area and the replacement of each is averaging around $10,000 per lateral. If each lateral were to be replaced once every 100 years, the cost would be$755,000 per year on this program.

Future Operating Cost Impact

This project will decrease operating expenditures by reducing the total amount of inflow and infiltration into the wastewater system. Replacement of these laterals also help minimize risk to OLWS before failures cause damage to private property.

Budget Information and Projected Costs

FY24	*FY25*	*FY26*	*FY27*	*FY28*	*FY29*	*Total (in CIP)*	*Post-CIP (>FY29)*
$ 75,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 575,000	>150k/year

SDC Improvement Fee Eligibility: 0%

Replace Aeration Blowers

Project Description

Four existing blowers in the Aeration Blowers Facility supply air to the treatment plant's Aeration Basins and Aerobic Digesters. Two of four have been replaced in Fiscal Year 2022-23, and this project will replace the other two.

Project Justification

The old turbo-style Aeration Blowers have experienced complicated mechanical flaws since they were installed. Troubleshooting and maintenance of these machines has been further hindered by the models being highly limited and no longer in production, making spare parts difficult to procure. The new positive-displacement-type blowers are simpler to maintain and crucially perform with greater flexibility to meet varying air demands at all times.

Future Operating Cost Impact

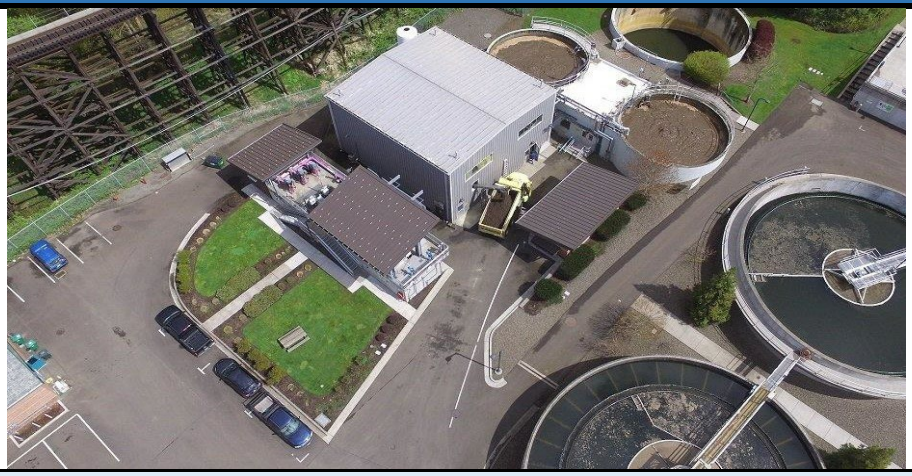
The positive-displacement blowers are expected to run with greater energy efficiently than the turbo-style blowers they replace. Savings would be realized through reduced electricity usage and reduced staff time maintaining the machines and troubleshooting technical issues.

Budget Information and Projected Costs

FY24	*FY25*	*FY26*	*FY27*	*FY28*	*FY29*	*Total (in CIP)*	*Post-CIP (>FY29)*
$ 275,000	$ -	$ 325,000	$ -	$ -	$ -	$ 600,000	$ -

SDC Improvement Fee Eligibility: 0%

Tertiary Treatment at WWTP



Project Description

OLWS Wastewater Treatment Plant (WWTP) has primary and secondary treatment. This project will add a tertiary level of treatment to the first two. This third phase of water purification polishes clarified wastewater with filters, removing microscopic particles that would otherwise get released to the Willamette River. When the WWTP was redesigned around 2009, space was left open for a tertiary treatment facility.

Project Justification

Through the new NPDES Permit, the Environmental Protection Agency has set stricter limits for the purity of water leaving the plant. The addition of tertiary treatment helps meet the more stringent requirements all year round.

Future Operating Cost Impact

This additional stage of wastewater treatment demands additional powered and maintenance. Although the power demand of tertiary filters is relatively low, maintenance time will be increased for OLWS staff, and new parts and materials will be needed to maintain the new filters.

Budget Information and Projected Costs

FY24	*FY25*	*FY26*	*FY27*	*FY28*	*FY29*	*Total (in CIP)*	*Post-CIP (>FY29)*
$ 750,000	$ 6,615,000	$ 5,677,875	$ -	$ -	$ -	$ 13,042,875	$ -

SDC Improvement Fee Eligibility: 0%

Influent Lift Station Reconstruction

Project Description

This project will reconfigure the Wastewater Treatment Plant's (WWTP's) Influent Pump Station Wetwell. The existing wetwell has a sharp boxy shape that collects grit and debris. This project will reshape the well to direct influent wastewater directly to the pumps, add security enhancements, and provide tools for managing the surface of the wastewater.

Project Justification

During the construction of the WWTP, certain items at the Influent Pump Station were value engineered out. These items have caused for more maintenance on behalf of the treatment plant staff. Fixing these items will allow for staff to focus on other operational tasks.

Future Operating Cost Impact

This project will reduce maintenance for the plant staff.

Budget Information and Projected Costs

FY24	*FY25*	*FY26*	*FY27*	*FY28*	*FY29*	*Total (in CIP)*	*Post-CIP (>FY29)*
$ -	$ -	$ 124,913	$ 526,339	$ 542,129	$ -	$ 1,193,381	$ -

SDC Improvement Fee Eligibility: 0%

Secondary Clarifier 1 and 2 Refurbishment

Project Description

This Project primarily replaces the internal mechanisms of Secondary Clarifiers 1 and 2, which are reaching the end of their lifespan. These two older clarifiers will be rebuild to perform as well as Secondary Clarifiers 3 and 4, which came online in 2012. Additional improvements will be made to walkways, safety railings, power supply, plant drain system, and return activated sludge control equipment.

Project Justification

The steel and fiberglass components are loosing their structural strength, drive mechanisms are breaking down, and the two old clarifiers perform poorly at their main task of clarifying water. These clarifiers pre-date the plant's rebuild around 2011.

Future Operating Cost Impact

Reduces the risk of critical down time by replacing steel components deteriorating from rust. Provides long-term value by reinstalling mechanisms with corrosion-resistant materials. Enhances clarifier performance. Reduces need for mechanical repairs.

Budget Information and Projected Costs

FY24	*FY25*	*FY26*	*FY27*	*FY28*	*FY29*	*Total (in CIP)*	*Post-CIP (>FY29)*
$ 150,000	$ 1,323,000	$ 1,249,133	$ -	$ -	$ -	$ 2,722,133	$ -

SDC Improvement Fee Eligibility: 0%

UV Disinfection Rehabilitation

Project Description

This project makes permanent improvements to the UV channels that disinfect treated wastewater before releaseing it to the river. The project will replace effluent flow meters, complex gate maneuvering and level control with a new level control system, and influent gates with simple actuated slide gates. The project also inspects and modernizes the UV bulb control system itself.

Project Justification

The intent of the rebuild is to simplify maintenance, make level control more reliable, and heighen the redundancy of the UV disinfection system, which is vital to permit compliance.

Future Operating Cost Impact

This project will reduce the time needed by OLWS staff in maintaining the water level control system of the UV channels.

Budget Information and Projected Costs

FY24	*FY25*	*FY26*	*FY27*	*FY28*	*FY29*	*Total (in CIP)*	*Post-CIP (>FY29)*
$ -	$ -	$ 124,913	$ 526,339	$ 542,129	$ -	$ 1,193,381	$ -

SDC Improvement Fee Eligibility: Likely >0% (Post Master Plan Approval)

UV Disinfection Equipment Replacement

Project Description

This project replaces ultraviolet (UV) disinfection equipment.

Project Justification

UV disinfection equipment is reaching the end of its service life. The UV disinfection bulbs are replaced every 4 years and OLWS replaces on quarter of them each year.

Future Operating Cost Impact

This project imparts no material change to daily operations.

Budget Information and Projected Costs

FY24	*FY25*	*FY26*	*FY27*	*FY28*	*FY29*	*Total (in CIP)*	*Post-CIP (>FY29)*
$ 30,000	$ 31,500	$ 32,445	$ 33,418	$ 34,421	$ 35,454	$ 197,238	$ -

SDC Improvement Fee Eligibility: Likely >0% (Post Master Plan Approval)

TWAS Pump Replacement

OAK LODGE WATER SERVICES

Project Description

This project replaces a pair of pumps used to move thickened waste activated sludge (TWAS, thickened sludge) between the WWTP Solids Handling Building and the Digesters.

Project Justification

The two existing TWAS pumps were initially installed around 2001 and are reaching the end of their service life.

Future Operating Cost Impact

This project imparts no material change to daily operations.

Budget Information and Projected Costs

FY24	*FY25*	*FY26*	*FY27*	*FY28*	*FY29*	*Total (in CIP)*	*Post-CIP (>FY29)*
$ -	$ -	$ 75,000	$ -	$ -	$ -	$ 75,000	>100K/year

SDC Improvement Fee Eligibility: 0%

Motor Control (VFD) Replacement

OAK LODGE WATER SERVICES

Project Description

This project replaces existing variable frequency drive (VFD) motor controllers. VFD's manipulate the shape of electrical power being supplied to large electric motors as a means to adjust the rotational speed of pumps, blower, and other powerful machines.

Project Justification

The existing VFD's are reaching the end of their service life.

Future Operating Cost Impact

This project imparts no material change to daily operations.

Budget Information and Projected Costs

FY24	*FY25*	*FY26*	*FY27*	*FY28*	*FY29*	*Total (in CIP)*	*Post-CIP (>FY29)*
$ 35,000	$ 36,750	$ 37,853	$ 38,988	$ 40,158	$ 41,362	$ 230,111	TBD

SDC Improvement Fee Eligibility: Likely >0% (Post Master Plan Approval)

Plant Drain Pump Replacement

Project Description

Adds a third bar screen in the headworks. In the 2012 upgrade, engineers added a slot for a third bar screen for future expansion.

Project Justification

When originally designed, the operating plan for most equipment at the WWTP was sized to have a lead piece of equipment, which could operate under normal conditions, with a spare or redundant piece of equipment as backup in case of failure or maintenance. As the flows have increased at the WWTP, operations has seen more and more use of both of the bar screens, leaving no redundancy in the case of failure or maintenance. During these times if one of the two automated bar screens were to fail, one bar screen would not be able to handle the flows and catastrophic flooding may occur.

Future Operating Cost Impact

Routine maintenance costs and electricity will go up slightly.

Budget Information and Projected Costs

FY24	*FY25*	*FY26*	*FY27*	*FY28*	*FY29*	*Total (in CIP)*	*Post-CIP (>FY29)*
$ -	$ -	$ 136,269	$ -	$ -	$ -	$ 136,269	

SDC Improvement Fee Eligibility: 0%

Plant Air-line Inspection

Project Description

This project will inspect and identify corrosion and loose fittings in three lightly-pressurized air pipelines (Air Low Pressure, ALP) at the WWTP. A specialist will inspect the lines that transport the low-pressure air from blowers to the Aeration Basins and Aerobic Digesters.

Project Justification

Alternating cycles of high and low pressure, temperature, and humidity within the ALP pipelines generates wear and corrosion. Since the ALP pipelines are both critical to plant operations and at risk of corrosion, a special inspection is prudent.

Future Operating Cost Impact

Inspection may reveal sections of ALP piping that need to be repaired and/or replaced.

Budget Information and Projected Costs

FY24	*FY25*	*FY26*	*FY27*	*FY28*	*FY29*	*Total (in CIP)*	*Post-CIP (>FY29)*
$ -	$ 88,200	$ -	$ -	$ -	$ -	$ 88,200	

SDC Improvement Fee Eligibility: 0%

Wastewater Master Plan update

OAK LODGE WATER SERVICES

Project Description

This project revisits the Wastewater Master Plan initially published in 2023 and provides an update to the big-picture direction of the entire wastewater collections and treatment system.

Project Justification

The Wastewater Master Plan is a continuously active plan that is most helpful when maintained and kept up to date.

Future Operating Cost Impact

Master planning reduces operational costs in the long run by aiding prudent decision making.

Budget Information and Projected Costs

FY24	*FY25*	*FY26*	*FY27*	*FY28*	*FY29*	*Total (in CIP)*	*Post-CIP (>FY29)*
$ 50,000	$ -	$ -	$ 432,768	$ -	$ -	$ 482,768	

SDC Improvement Fee Eligibility: 0%

Overview

Oak Lodge Water Services Authority (OLWS) water distribution system is primarily comprised of 6-inch and 8-inch cast and ductile iron pipe. Prior to the Water Master Plan Adoption, OLWS has concentrated on eliminating many sections of 2-inch pipe and looping dead-ends and spent on average $500,000 annually on water capital, however beginning last year this number has been increased to around $1,500,000 to keep up with other water capital needs such as inter-ties and resiliency against natural disasters.

The District has more than sufficient storage with two 5 million gallon reservoirs at the Valley View site and two 2.8 million gallon reservoirs at the View Acres site to supply the system. However, the Valley View Reservoirs are also used as a storage source to serve the Sunrise Water Authority, Clackamas River Water and the City of Gladstone.

Water Capital Improvement Projects

Page	Project Name	FY24	FY25	FY26	FY27	FY28	FY29	Totals
41	Water Pump Station at CRW Generator		225,000					$ 225,000
42	Seismic Study of 24-inch Supply Line		225,000					$ 225,000
43	Valley View Tank Upgrades (Fall Protection)	150,000						$ 150,000
44	Valley View Leak Repair	50,000						$ 50,000
45	28th Avenue and Lakewood Drive	2,000,000						$ 2,000,000
46	Milwaukie-OLWSD Intertie Pump Station	150,000	2,500,000	2,500,000				$ 5,150,000
47	Large Meter Testing and Replacement	75,000	57,000	59,000	61,000	63,000	65,000	$ 380,000
48	Valley View Pole Storage Building	25,000	75,000					$ 100,000
49	Ranstad and Cinderella Courts		165,375					$ 165,375
50	Marcia Court			200,000				$ 200,000
51	Oatfield Road			400,000	3,000,000	2,000,000	2,000,000	$ 7,400,000
52	Lisa Lane			340,000				$ 340,000
53	Pressure Reducing Valve Rebuild (Every 5 years)		20,000					$ 20,000
54	Hydrant Capital Repair and Replacement	175,000	183,750					$ 358,750
55	McLoughlin - Jennings to Arista	250,000						$ 250,000
56	AWIA Risk and Resilience Assessment - Update			50,000				$ 50,000
57	Water System Master Plan - Update		50,000	150,000				$ 200,000
58	SCADA System Upgrades	75,000	50,000	51,500	53,045	54,636	56,275	$ 340,456
59	Radio Telemetry Activation Study				24,000			$ 24,000
60	Vault Meter Bypass Installations				129,000			$ 129,000
61	River Road				500,000	2,000,000	2,000,000	$ 4,500,000
62	Seal Coat on Valley View Reservoir Domes					200,000		$ 200,000
63	View Acres Recoat Tank Exterior and Interior						225,000	$ 225,000
	Total Water Capital Expenses	$ 2,950,000	$ 3,551,125	$ 3,750,500	$ 3,767,045	$ 4,317,636	$ 4,346,275	$ 22,682,581

Water Pump Station at CRW Generator

Project Description

This project provides a backup power source for the potable water pump station at Clackamas River Water (CRW) water treatment plant. In the even OLWS's primary water source, North Clackamas Country Water Commission (NCCWC), cannot deliver water as usual, the station at CRW can instead pump treated water from CRW up to OLWS's Valley View Reservoirs, as well as to reservoirs within Sunrise Water Authority.

Project Justification

Many of the events that can interrupt the delivery of treated drinking water to OLWS can be regional, such as grid-wide power failure following a storm. Resiliency to such events is upheld with redundant water sources and independent backup power. These measures keep fresh water flowing for drinking and fire suppression when the water supply may be needed the most.

Future Operating Cost Impact

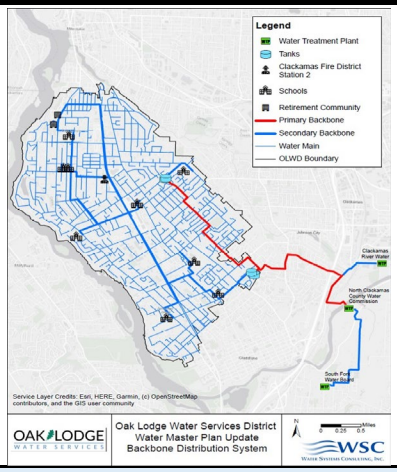
This generator will need to be inspected regularly and maintained annually.

Budget Information and Projected Costs

FY24	*FY25*	*FY26*	*FY27*	*FY28*	*FY29*	*Total (in CIP)*	*Post-CIP (>FY29)*
$ -	$ 225,000	$ -	$ -	$ -	$ -	$ 225,000	$ -

SDC Improvement Fee Eligibility: 0%

Seismic Study of 24-inch Supply Line



Project Description

To improve the reliability of the District's 24-inch water supply pipeline, a seismic study is recommended to assess the current condition and the potential site-specific ground deformations anticipated along the alignment based on geotechnical explorations. Identification of any excessive seismic risk and appropriate mitigation measures is a high priority for improving the overall system resilience.

Project Justification

Little is known about the District's 24" supply line from the Commission. This project would explore and identify any vulnerabilities the District should know about and plan for.

Future Operating Cost Impact

This study would not have a direct impact of future operating costs.

Budget Information and Projected Costs

FY24	*FY25*	*FY26*	*FY27*	*FY28*	*FY29*	*Total (in CIP)*	*Post-CIP (>FY29)*
$ -	$ 225,000	$ -	$ -	$ -	$ -	$ 225,000	$ -

SDC Improvement Fee Eligibility: 0%

Valley View Tank Upgrades (Fall Protection)

Project Description

This project will install fall protection around the top of both water storage tanks at Valley View. New safety railings around the perimeter of both circular tanks will provide ease and safety during regular maintenance.

Project Justification

The current fall protection system in place is not up to the standards of current safety regulations and has met its useful life.

Future Operating Cost Impact

Permanent railings will eliminate the need for temporary fall protection measures and greatly reduce the risk of serious injury or death from a fall.

Budget Information and Projected Costs

FY24	*FY25*	*FY26*	*FY27*	*FY28*	*FY29*	*Total (in CIP)*	*Post-CIP (>FY29)*
$ 150,000	$ -	$ -	$ -	$ -	$ -	$ 150,000	$ -

SDC Improvement Fee Eligibility: 0%

Valley View Leak Repair

Project Description

An ongoing leak has been occurring within the main valve vault that controls water flow into and out of the reservoirs. The central location of the leak makes it difficult to isolate for repairs, so engineering help has been sought to repair the damaged pipe.

Project Justification

Pipe leaks tend to worsen with time and can create further complications, such as corrosion or mildew growth, if not repaired.

Future Operating Cost Impact

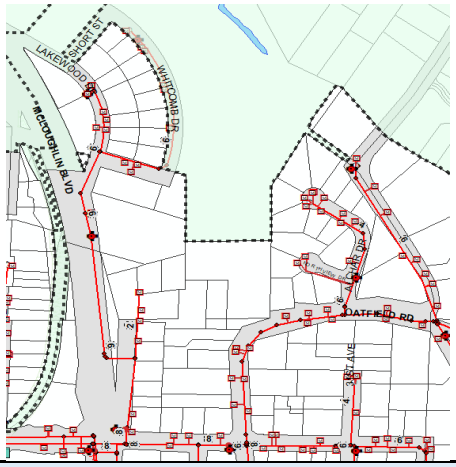
No expected change in operating cost.

Budget Information and Projected Costs

FY24	*FY25*	*FY26*	*FY27*	*FY28*	*FY29*	*Total (in CIP)*	*Post-CIP (>FY29)*
$ 50,000	$ -	$ -	$ -	$ -	$ -	$ 50,000	$ -

SDC Improvement Fee Eligibility: 0%

28th Avenue and Lakewood Drive



Project Description

This project replaces 4015 feet of 8-inch cast iron pipe with 8 and 12-inch ductile iron pipe. It will also create a loop in the system where the District has had to flush more often to keep the water fresh tasting.

Project Justification

This project was identified by the Water System Master Plan as one of the highest priority projects for water quality.

Future Operating Cost Impact

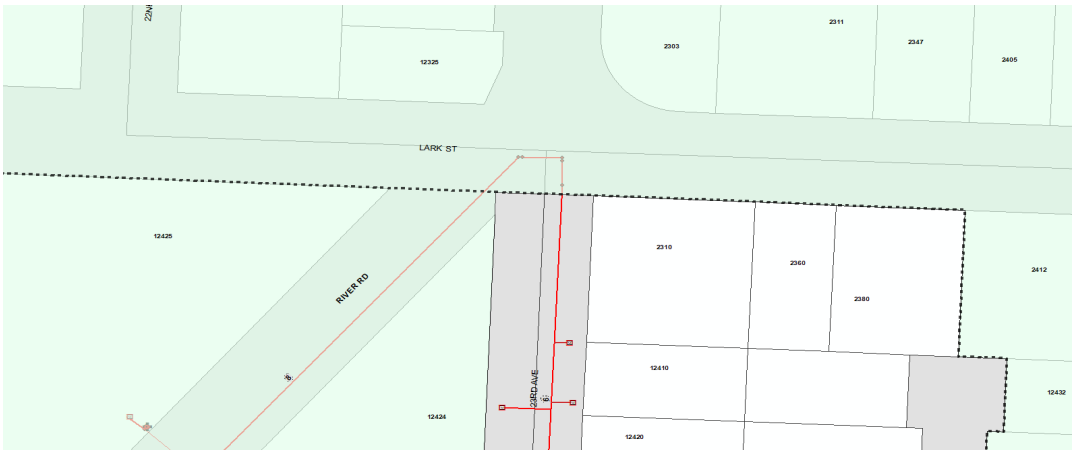
This project will lower operating costs due to reduced flushing this area less.

Budget Information and Projected Costs

FY24	*FY25*	*FY26*	*FY27*	*FY28*	*FY29*	*Total (in CIP)*	*Post-CIP (>FY29)*
$ 2,000,000	$ -	$ -	$ -	$ -	$ -	$ 2,000,000	$ -

SDC Improvement Fee Eligibility: 18.3%

Milwaukie-OLWSD Intertie Pump Station



Project Description

An existing 10-inch diameter main in the Milwaukie system is located adjacent to existing 8-inch diameter District main along River Road. A booster pump station could be used to pump water from Milwaukie's lower zone to the District's lower zone to fill the Valley View tanks. Upsizing of 2,000 feet of pipe along River Road to 12-inch diameter would be required at an estimated cost of $1,789,000.

Project Justification

With a single source of supply through the 24-inch pipeline from the NCCWC, the District is vulnerable to an outage caused by an unplanned pipe break. Portions of the pipeline closer to the Clackamas River are expected to have an increased risk of breakage due to lateral spreading and liquefaction induced settlement.

Future Operating Cost Impact

This emergency intertie would be an addition to the District's drinking water system. Pumps will need to be maintained, staff will need to be trained and power will be consumed when it is in use.

Budget Information and Projected Costs

FY24	*FY25*	*FY26*	*FY27*	*FY28*	*FY29*	*Total (in CIP)*	*Post-CIP (>FY29)*
$ 150,000	$ 2,500,000	$ 2,500,000	$ -	$ -	$ -	$ 5,150,000	$ -

SDC Improvement Fee Eligibility: 0%

Large Meter Testing and Replacement

Project Description

This project aims to keep up with testing of large meters throughout the service area. Testing will be conducted to make sure the meter is reading within an acceptable range. If it is not, it will be repaired to ensure proper readings.

Project Justification

By testing and repairing meters, OLWS can ensure that it is collecting correct revenues for usage.

Future Operating Cost Impact

This project is the operating cost for making sure correct revenues are collected.

Budget Information and Projected Costs

FY24	*FY25*	*FY26*	*FY27*	*FY28*	*FY29*	*Total (in CIP)*	*Post-CIP (>FY29)*
$ 75,000	$ 57,000	$ 59,000	$ 61,000	$ 63,000	$ 65,000	$ 380,000	$50,550 in FY29&32

SDC Improvement Fee Eligibility: 0%

Valley View Pole Storage Building

Project Description

This project will construct a simple roofed pole barn at the Valley View Reservoirs site.

Project Justification

The pole barn will protect OLWS-owned materials and equipment from moisture damage and preventable corrosion.

Future Operating Cost Impact

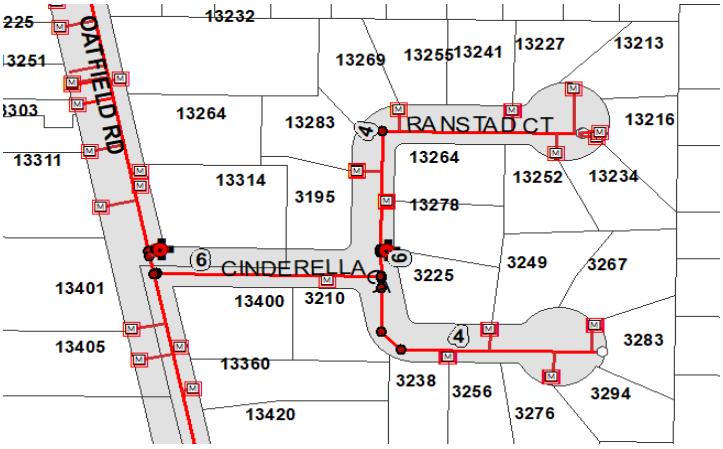
Equipment will last longer when properly stored and maintained, reducing operating costs.

Budget Information and Projected Costs

FY24	*FY25*	*FY26*	*FY27*	*FY28*	*FY29*	*Total (in CIP)*	*Post-CIP (>FY29)*
$ 25,000	$ 75,000	$ -	$ -	$ -	$ -	$ 100,000	$ -

SDC Improvement Fee Eligibility: 0%

Ranstad and Cinderella Courts



Project Description

This project replaces 760 feet of 4-inch cast iron pipe with 6-inch ductile iron pipe.

Project Justification

During the Water System Master Plan, Operations Staff identified and prioritized six pipeline projects based on age and condition. This project was prioritized by staff to be the single most important project to OLWS when trying to avoid main breaks.

Future Operating Cost Impact

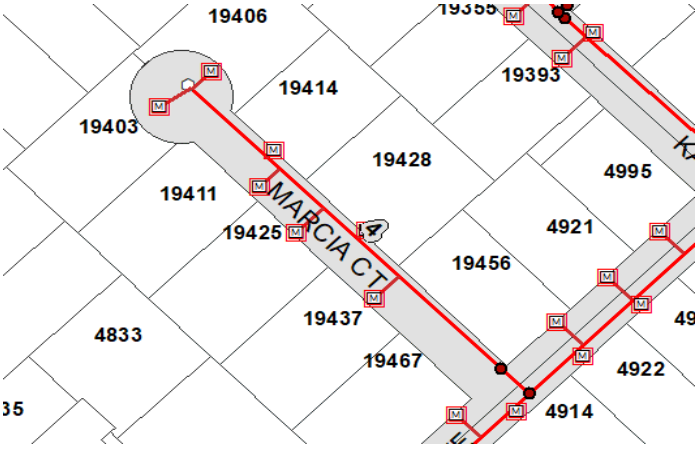
Completion of this project would lessen overall main breaks and thus lower operating costs.

Budget Information and Projected Costs

FY24	*FY25*	*FY26*	*FY27*	*FY28*	*FY29*	*Total (in CIP)*	*Post-CIP (>FY29)*
$ -	$ 165,375	$ -	$ -	$ -	$ -	$ 165,375	$ -

SDC Improvement Fee Eligibility: 28.9%

Marcia Court



Project Description

This project replaces 475 feet of 4-inch cast iron pipe with 6-inch ductile iron pipe.

Project Justification

During the Water System Master Plan, Operations Staff identified and prioritized six pipeline projects based on age and condition. This project was prioritized by staff to be the third most important project to OLWS when trying to avoid main breaks.

Future Operating Cost Impact

Completion of this project would lessen overall main breaks and thus lower operating costs.

Budget Information and Projected Costs

FY24	*FY25*	*FY26*	*FY27*	*FY28*	*FY29*	*Total (in CIP)*	*Post-CIP (>FY29)*
$ -	$ -	$ 200,000	$ -	$ -	$ -	$ 200,000	$ -

SDC Improvement Fee Eligibility: 32.2%

Oatfield Road

OAK LODGE WATER SERVICES

Project Description

This project replaces 15,995 feet of 6 and 8-inch cast iron pipe with 8-inch ductile iron pipe over three years.

Project Justification

During the Water System Master Plan, Operations Staff identified and prioritized six pipeline projects based on age and condition. This project was prioritized by staff to be the fifth most important project to OLWS when trying to avoid main breaks.Oatfiled Road and it's ADA ramps were also identified by Clackamas County to be replaced before 2030. This has since been delayed, but the project is still a high priority for replacement. Therefore, getting ahead of the paving will help OLWS avoid substantial paving requirements.

Future Operating Cost Impact

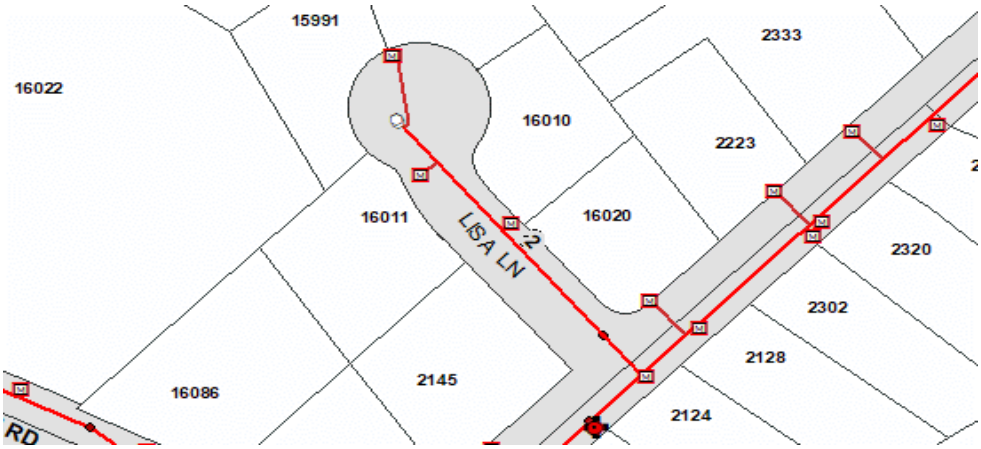
Completion of this project would lessen overall main breaks and thus lower operating costs.

Budget Information and Projected Costs

FY24	*FY25*	*FY26*	*FY27*	*FY28*	*FY29*	*Total (in CIP)*	*Post-CIP (>FY29)*
$ -	$ -	$ 400,000	$ 3,000,000	$ 2,000,000	$ 2,000,000	$ 7,400,000	$ -

SDC Improvement Fee Eligibility: 7.9%

Lisa Lane



Project Description

This project replaces 300 feet of 2-inch pipe with 6-inch ductile iron pipe.

Project Justification

During the Water System Master Plan, Operations Staff identified and prioritized six pipeline projects based on age and condition. This project was prioritized by staff to be the single most important project to OLWS when trying to avoid main breaks.

Future Operating Cost Impact

Completion of this project would lessen overall main breaks and thus lower operating costs.

Budget Information and Projected Costs

FY24	*FY25*	*FY26*	*FY27*	*FY28*	*FY29*	*Total (in CIP)*	*Post-CIP (>FY29)*
$ -	$ -	$ 340,000	$ -	$ -	$ -	$ 340,000	$ -

SDC Improvement Fee Eligibility: 33%

Pressure Reducing Valve Rebuild (Every 5 years)

Project Description

OLWS operates three pressure-reducing valves within the water distribution system. PRVs protect low-lying pipes and plumbing by reducing the pressure of potable water being delivered. OLWS has indicated that each of the PRVs should be rebuilt every five years. Typically this work is performed by an outside contractor.

Project Justification

Rebuilding these valves every 5 years ensures that OLWS can control operating pressures throughout the system. Failure of these valves could cause both private property damage as well as damage to the pubics infrastructure if pressure gets too high.

Future Operating Cost Impact

These valves should be inspected at least once per year and rebuilt every 5 years to prevent failures.

Budget Information and Projected Costs

FY24	*FY25*	*FY26*	*FY27*	*FY28*	*FY29*	*Total (in CIP)*	*Post-CIP (>FY29)*
$ -	$ 20,000	$ -	$ -	$ -	$ -	$ 20,000	25K in FY30

SDC Improvement Fee Eligibility: 0%

Hydrant Capital Repair and Replacement

Project Description

Over the next 20- years OLWS plans to replace all 4 ½-inch hydrants to meet the current standard. Replacements are likely to occur in conjunction with condition based replacements as described in the previous section and with fire flow projects described in the previous chapter. There will still be a remaining number of hydrants outside of the scope of the condition and fire flow projects that will also need to be replaced within the next 20 years.

Project Justification

OLWS' current potable water system standards require each fire hydrant to use a 5 ¼-inch valve. Older hydrants exist throughout the distribution system that have a 4 ½-inch valve.

Future Operating Cost Impact

This project will not increase operating costs.

Budget Information and Projected Costs

FY24	*FY25*	*FY26*	*FY27*	*FY28*	*FY29*	*Total (in CIP)*	*Post-CIP (>FY29)*
$ 175,000	$ 183,750	$ -	$ -	$ -	$ -	$ 358,750	$ -

SDC Improvement Fee Eligibility: 0%

McLoughlin - Jennings to Arista

OAK LODGE WATER SERVICES

Project Description

This project replaces 180 feet of 8-inch cast iron pipe with 8-inch ductile iron pipe.

Project Justification

This section of water main had a break 3 years ago that was fixed. The section was closed on the north and south end with valves and was not put back in service. The paving requirement for digging up both ends of the line gives the opportunity to replace the pipe in full rather that flush an old line and put back in service. This section is part of a looped system in the area, which currently is not in service and therefore OLWS does not have a working looped piping system.

Future Operating Cost Impact

No expected change in operating cost.

Budget Information and Projected Costs

FY24	*FY25*	*FY26*	*FY27*	*FY28*	*FY29*	*Total (in CIP)*	*Post-CIP (>FY29)*
$ 250,000	$ -	$ -	$ -	$ -	$ -	$ 250,000	$ -

SDC Improvement Fee Eligibility: 0%

AWIA Risk and Resilience Assessment - Update

OAK LODGE WATER SERVICES

Project Description

In 2018 the AWIA was signed into law and requires OLWS to conduct a risk and resilience assessment (RRA) and a subsequent development of an emergency response plan (ERP) prior to June 30, 2021. The law also mandates that the that the RRA and ERP are updated every 5 years.

Project Justification

This project is required by Federal Law.

Future Operating Cost Impact

This update may identify risks for OLWS which would then be contrasted with other water projects during a scheduled Water Master Plan Update.

Budget Information and Projected Costs

FY24	*FY25*	*FY26*	*FY27*	*FY28*	*FY29*	*Total (in CIP)*	*Post-CIP (>FY29)*
$ -	$ -	$ 50,000	$ -	$ -	$ -	$ 50,000	$ -

SDC Improvement Fee Eligibility: 0%

Water System Master Plan - Update

Project Description

This project would update OLWS' Water System Master Plan. Specific updates would be removing completed CIP's from the list, updating population demand forecasts and re-running the water model to make sure OLWS is staying ahead of growth and failures within the system.

Project Justification

Planning capital improvements beyond 5 years can be a challenge for water utilities; however, a targeted update to the master plan on a 5-year cycle can dramatically improve the utility of the WSMP.

Future Operating Cost Impact

This project would identify projects to be completed, but has not direct impact on future operating costs.

Budget Information and Projected Costs

FY24	*FY25*	*FY26*	*FY27*	*FY28*	*FY29*	*Total (in CIP)*	*Post-CIP (>FY29)*
$ -	$ 50,000	$ 150,000	$ -	$ -	$ -	$ 200,000	$ -

SDC Improvement Fee Eligibility: 0%

SCADA System Upgrades

Project Description

The supervisory control and data acquisition (SCADA) system is a network of computers that control pumps, valves, and other water delivery infrastructure in real time. This project will update the programable logic controllers and other computer components.

Project Justification

Computerized controls regularly reach the end of their service life and need to be replaced.

Future Operating Cost Impact

A well-functioning SCADA system saves countless hours of OLWS staff time by automating common tasks.

Budget Information and Projected Costs

FY24	*FY25*	*FY26*	*FY27*	*FY28*	*FY29*	*Total (in CIP)*	*Post-CIP (>FY29)*
$ -	$ 50,000	$ 51,500	$ 53,045	$ 54,636	$ 56,275	$ 340,456	$ -

SDC Improvement Fee Eligibility: 0%

Radio Telemetry Activation Study

Project Description

OLWS' Water System Master Plan identified a benefit to reactivating radio telemetry communications to serve as a backup communications system to the cellular modems. Radio telemetry units would be necessary at four OLWS facilities including Valley View, View Acres, the central operations shop, and the North Clackamas County Water Commission Water Treatment Plant.

Project Justification

Staff are constantly monitoring a number of variables that relate to serving safe drinking water. One example of this would be the level in a water reservoir. Radio telemetry allows staff to monitor this data remotely. During emergencies radio telemetry helps staff stay focused on fixing main breaks and fueling generators rather that making sure the tanks are at an appropriate level.

Future Operating Cost Impact

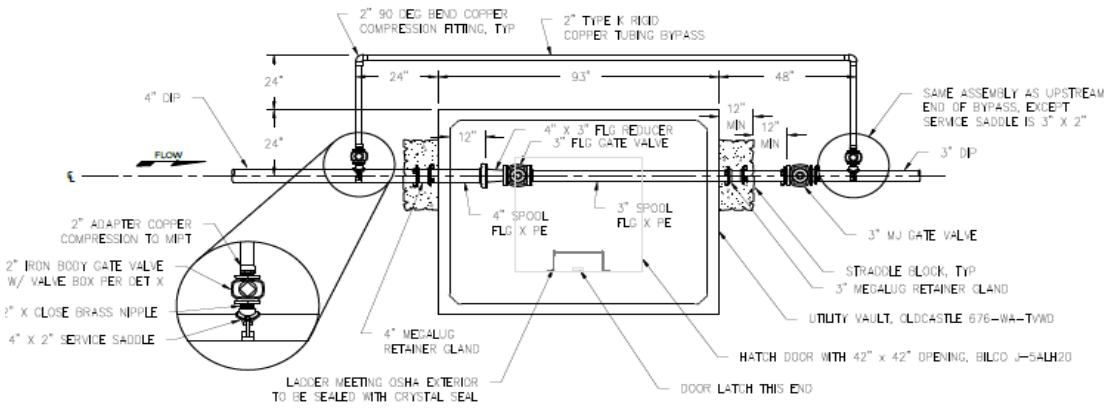
Annual User License Fees would apply to the telemetry system.

Budget Information and Projected Costs

FY24	*FY25*	*FY26*	*FY27*	*FY28*	*FY29*	*Total (in CIP)*	*Post-CIP (>FY29)*
$ -	$ -	$ -	$ 24,000	$ -	$ -	$ 24,000	TBD

SDC Improvement Fee Eligibility: 0%

Vault Meter Bypass Installations



Project Description

This projects aims to begin adding bypasses on some of the OLWS' larger meters.

Project Justification

During the creation of OLWS' Water System Master Plan, Staff raised awareness to the fact that some of OLWS' (older) larger meters do not have a bypass. Not having a bypass makes it difficult for staff to test and/or replace a customer's meter without putting them out of service.

Future Operating Cost Impact

This project would speed up the process of testing and/or larger meters throughout the service area. Accurate measurement of water consumed by each customer is vital to OLWS' ability to properly bill.

Budget Information and Projected Costs

FY24	*FY25*	*FY26*	*FY27*	*FY28*	*FY29*	*Total (in CIP)*	*Post-CIP (>FY29)*
$ -	$ -	$ -	$ 129,000	$ -	$ -	$ 129,000	$ -

SDC Improvement Fee Eligibility: 0%

River Road

Project Description

This project designs the replacement of 6,805 feet of 4, 6, and 8-inch ductile iron pipe with 8 and 12-inch ductile iron pipe.

Project Justification

Identified by the Master Plan as a high priority backbone project that would help fire flows and meet future demand near River Road.

Future Operating Cost Impact

Completion of this project would lessen the chance of main breaks which in turn would lower operating costs.

Budget Information and Projected Costs

FY24	*FY25*	*FY26*	*FY27*	*FY28*	*FY29*	*Total (in CIP)*	*Post-CIP (>FY29)*
$ -	$ -	$ -	$ 500,000	$ 2,000,000	$ 2,000,000	$ 4,500,000	$ 1,500,000

SDC Improvement Fee Eligibility: 9.5%

Seal Coat on Valley View Reservoir Domes

Project Description

The Valley View tanks are prestressed concrete tanks and require a seal coat on the domed roofs of the two tanks to protect small surface cracks in the concrete from further deterioration. Timing of a seal coat will depend on continued monitoring of the tank roof condition through periodic inspections. Application of a seal coat is anticipated to be necessary within the next 5 to 10 years unless observed crack propagation indicates a more immediate need.

Project Justification

Preservation of OLWS' water storage tanks is vital to providing safe drinking water to our customers. These tanks also provide water to Clackamas River Water, Gladstone and Sunrise Water Authority customers.

Future Operating Cost Impact

This project will not change current operating costs.

Budget Information and Projected Costs

FY24	*FY25*	*FY26*	*FY27*	*FY28*	*FY29*	*Total (in CIP)*	*Post-CIP (>FY29)*
$ -	$ -	$ -	$ -	$ 200,000	$ -	$ 200,000	$ -

SDC Improvement Fee Eligibility: 0%

View Acres Recoat Tank Exterior and Interior

OAK LODGE WATER SERVICES

Project Description

The tall steel View Acres tanks require new coatings regularly to protect the steel structure from corrosion and deterioration. This project will coat both the outside of the tanks against weather-induced corrosion, and the inside of the tanks, which can corrode from the potable water and moist air within.

Project Justification

Application of fresh coatings is essential for the long-term maintenance of steel structures.

Future Operating Cost Impact

Regular recoatings will be needed in the future as coatings wear off over time.

Budget Information and Projected Costs

FY24	*FY25*	*FY26*	*FY27*	*FY28*	*FY29*	*Total (in CIP)*	*Post-CIP (>FY29)*
$ -	$ -	$ -	$ -	$ -	$ 225,000	$ 225,000	$ -

SDC Improvement Fee Eligibility: 0%

OAK LODGE
WATER SERVICES

Contact Us

Technical Services

PW Director/District Engineer — Brad Albert PE, brada@olwsd.org

Civil Engineer — Haakon Ogbeide PE, haakon@olwsd.org

Operations

WWTP Superintendent — David Hawkins, david@olwsd.org

Wastewater Field Supervisor — Chad Martinez, chad@olwsd.org

14496 SE River Road

Oak Grove, Oregon 97267

(503) 654-7765

oaklodgewaterservices.org