



WSDOT SR-509 Completion Project: S 216th Bridge 18" Water Main Crossing

2024 CAPITAL IMPROVEMENT PROGRAM



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EXECUTIVE SUMMARY

Highline Water District's goal is to provide high quality and reliable water service to all customers in accordance with the rules and regulations governing water purveyors. The District's Capital Improvement Program (CIP) is an on-going effort with the primary mission of improving the District's aging infrastructure with modern, more reliable technology and materials.

In the fall of each year, District staff prepares a draft CIP plan for review by the Board of Commissioners. The plan includes budgets and narratives for the proposed Capital Additions for the upcoming year. Each narrative includes a project description; the purpose; a budget allocation and/or estimated project costs (if known from preliminary engineering at the time of budget preparation); a breakdown of funding sources; and an estimated project schedule.

Staff presents the draft CIP to the Commissioners at a regularly scheduled Board meeting. Management makes changes based on the Board's input and prepares a final draft. Typically, the Board considers the final draft of the CIP simultaneously with the District's annual Operations and Maintenance Budget for approval at a regularly scheduled meeting in December of each year.

The proposed 2024 CIP includes thirteen identified projects in various phases of planning, design, and construction. The 2024 projects include:

- Project 18-2 International Blvd S at SR 509 Road Improvements
- Project 21-1 24th Ave S Water Main Replacement (2022 AC Project)
- Project 21-2 32nd Ave S Water Main Replacement (City of SeaTac)
- Project 21-3 Mansion Hill 2.5MG Reservoir Int./Ext. Recoat and Safety Improvements
- Project 22-1 King County Lake to Sound Trail Relocation
- Project 22-3 SR509 Phase 2 Water Main Relocation
- Project 23-1 DMTP/PS2 Electrical Upgrades and Generator Project
- Project 23-2 McMicken Onsite Hypochlorite Generation Replacement
- Project 24-1 16th Ave S and S 192nd St Water Main Replacement (City of SeaTac)
- Project 24-2 Des Moines Memorial Drive Water Main Relocation (City of Des Moines)
- Project 24-3 Miller Creek and Walker Creek Culvert Relocation (City of Normandy Park)
- Project 24-4 Pump Station 6 Remote Telemetry Unit upgrade
- Project 24-5 S 204th St Improvements Water Main Replacement (City of SeaTac)

The estimated Total Capital Additions (expenditures) for 2023 is \$2.4 million. The approved 2023 CIP Budget included \$7.72 million in expenditures. Several projects scheduled for construction in 2023 were delayed by their lead agencies (City) for various reasons. Debt service for 2023 was \$416,000.

For 2024, the Total Capital Additions is estimated at \$8.0 million. The District will fund the CIP through a combination of water rates, capital reserves, and development connection charges. Debt service reduces to \$364,000 in 2024, as the District continues to retire existing loans.

See **Page 4** for overall capital addition funding and the body of this report for project narratives, budgets, and locations.

2023 CIP - OUTSTANDING FUNDING & DEBT SERVICE (2023-2027)

CAPITAL PROJECTS

	CAPITAL PROJECTS	Prior	Projected					
CIP#	Project Title	Years	2023	2024	2025	2026	2027	Totals
18-2	International Blvd at SR 509 Road Improvements (WSDOT)	\$ 4,752,312	\$ 102,169	\$ 88,360	\$ 20,000			\$ 4,962,841
21-1	24th Ave S Water Main Replacement (City of Des Moines)	\$ 42,843	\$ 532,474	\$ 948,034				\$ 1,523,351
21-2	32nd Ave S - S 180th St Water Main Replacement (City of SeaTac)	\$ 117,966	\$ 5,732	\$ 70,000	\$ 3,053,200	\$ 22,480		\$ 3,269,378
21-3	Mansion Hill 2.5MG Reservoir Int./Ext. Recoat and Safety Improvements	\$ 91,118	\$ 37,689	\$ 2,304,000	\$ 1,227,000			\$ 3,659,807
22-1	Des Moines Memorial Drive Water Main Relocation (King County)	\$ 24,516	\$ 191,730	\$ 967,520	\$ 12,500			\$ 1,196,266
22-2	2023 Water Main Replacement (Huntington Park)	\$ 16,261	\$ 262,652					\$ 278,913
22-3	SR509 Phase 2 Water Main Relocation (WSDOT)	\$ 22,277	\$ 5,447	\$ 549,518	\$ 25,000			\$ 602,242
23-1	DMTP/PS2 Electrical Upgrades and Generator Replacement		\$ 34,650	\$ 397,183	\$ 1,261,231			\$ 1,693,064
23-2	WTP Chlorine Generator Replacement (McMicken TP / Des Moines TP)			\$ 140,000				\$ 140,000
24-1	16th Ave S and S 192nd St Water Main Replacement (City of SeaTac)			\$ 81,650	\$ 780,000			\$ 861,650
24-2	DMMD and S 208th St Water Main Relocation (City of Des Moines)			\$ 112,500	\$ 900,000			\$ 1,012,500
24-3	Miller Creek and Walker Creek Culvert Relocation (City of Normandy Park)			\$ 70,000	\$ 680,400	\$ 15,000		\$ 765,400
24-4	PS-6 Remote Telemetry Unit (RTU) Upgrade			\$ 100,000				\$ 100,000
24-5	S 204th St Improvements Water Main Replacement (City of SeaTac)			\$ 92,250	\$ 30,750	\$ 1,230,000	\$ 1,050,000	\$ 2,403,000
Future	Water Main Replacement (Manhattan Cl Replacement AKA Project 19-2)	\$ 83,595					\$ 2,200,000	\$ 2,283,595
Future	Facility Security Improvements and Tank Recoating (Bow Lake)				\$ 100,000	\$ 1,250,000	\$ 1,250,000	\$ 2,600,000
Future	HQ Building and Site Improvements				\$ 100,000	\$ 1,000,000		\$ 1,100,000
Future	3-Tree Point Pressure Zone Improvements					\$ 250,000	\$ 2,500,000	\$ 2,750,000
Future	2026 Water Main Replacement (Budget Allocation)					\$ 2,200,000		\$ 2,200,000
	Subtotal of Capital Projects		\$ 1,211,762	\$ 5,921,015	\$ 8,190,081	\$ 5,967,480	\$ 7,000,000	\$ 33,441,226
	* Scope yet to be fully Defined							
	Small Works/Emergency Projects		\$ 324,754	\$ 350,000	\$ 350,000	\$ 350,000	\$ 350,000	\$ 1,724,754
	Mitigation Improvements		\$ -	\$ 350,000	\$ 40,000	\$ 40,000	\$ 40,000	\$ 510,000
	Meters/Hydrants/Services (Refer to O&M Budget)		\$ 425,000	\$ 450,000	\$ 450,000	\$ 475,000	\$ 475,000	\$ 2,275,000
	Capital Asset Purchases (Refer to O&M Budget)		\$ 94,658	\$ 1,112,006	\$ 300,000	\$ 350,000	\$ 350,000	\$ 2,206,664
	Total Capital Additions		\$ 2,056,174	\$ 8,183,021	\$ 9,330,081	\$ 7,182,480	\$ 8,215,000	\$ 40,157,644
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	Less: Outside Funding Sources	Prior Years	2023	2024	2025	2026	2027	Totals
	General Facility Charges		\$ 475,000	\$ 450,000	\$ 450,000	\$ 450,000	\$ 450,000	\$ 2,275,000
	Total Outside Funding		\$ 475,000	\$ 450,000	\$ 450,000	\$ 450,000	\$ 450,000	\$ 2,275,000
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	Debt Service		2023	2024	2025	2026	2027	Totals
			\$ 415,882	\$ 363,797	\$ 319,073	\$ 317,820	\$ 281,065	\$ 1,697,637
	Total Debt Service		\$ 415,882	\$ 363,797	\$ 319,073	\$ 317,820	\$ 281,065	\$ 1,697,637
			2023	2024	2025	2026	2027	Totals
		<u> </u>		2027		2020	2021	iotais

CAPITAL IMPROVEMENT PROGRAM GOALS AND OBJECTIVES

The District's Mission Statement is:

"Our mission is to provide high quality water and excellent customer service while effectively managing District infrastructure for a reliable water system today and for future generations."

Highline Water District's goal is to provide high quality and reliable water service to all customers in accordance with the rules and regulations governing water purveyors. The District's Capital Improvement Program (CIP) is an on-going effort with the primary mission of improving the District's aging infrastructure with modern, more efficient, reliable technology and materials.

In the fall of each year, District staff prepares a draft CIP plan for review by the Board of Commissioners. The plan includes budgets for the proposed Capital Additions in the upcoming year. The Capital Additions budget includes the following five components:

- **Capital Projects** improvement projects identified in the approved Comprehensive Plan or other planning documents and capitalized over the life of the asset.
- **Small Works/Emergency Projects** improvement projects not identified or postulated during development of the annual CIP (e.g. a smaller main replacement project in advance of a city overlay). If an unplanned project spans beyond the budget year, the project will be converted to a Capital Project in subsequent budgets. If unused, these funds remain in capital reserves.
- **Mitigation Improvements** improvements to District facilities to ward against manmade and natural disasters or security improvements in support of the Hazard Mitigation Plan and the Security Vulnerability Assessment.
- Meters/Hydrants/Services purchases of materials for the installation of new pipe/meters/hydrants/services installed by District personnel and capitalized over the life of the asset.
- **Capital Asset Purchases** specific asset purchases greater than \$5,000 per item used to replace aging assets or to increase production and efficiency (e.g. vehicles or equipment).

This document includes narratives for Capital Projects, Small Works/Emergency Projects and the Mitigation Improvement budgets. Each narrative includes a project description; the purpose; a budget allocation and/or estimated costs (if known from preliminary engineering at the time of budget preparation); a breakdown of funding sources; and an estimated project schedule. The annual *Operation and Maintenance Budget* and the *District's Goals and Objectives* provides narratives and descriptions for the Meters/Hydrants/Services and Capital Asset Purchases.

District staff presents the draft CIP to the Commissioners at a regularly scheduled Board meeting. Staff makes changes based on the Board's input and prepares a final draft. Typically, the Board considers the final draft of the CIP simultaneously with the annual Operations and Maintenance Budget for approval at a regularly scheduled meeting in December of each year.

Prioritization of Projects

Several issues confront water agencies when evaluating and comparing projects. When completing the District's Comprehensive Water System Plan, the Board of Commissioners, management, staff, and consultants review the needs of the water system. Specifically, the Washington State Department of Health (DOH) requires water agencies to review the adequacy of its sources of supply, treatment facilities, storage, and distribution system. In addition, the District evaluates funding sources to ensure financial sustainability.

DOH places a priority on deficiencies in source, treatment, and storage. Generally, distribution mains are only required to be upgraded if they cannot provide adequate fire flow to support future development. Highline generally follows this priority strategy; however, the District emphasizes the need to improve the distribution system at a rate greater than the depreciation of the existing assets. In addition to fire flow limitations, Highline also considers historical issues of the water mains (main repairs, leaks, dead ends, water quality complaints, location, safety, looping, land use issues, etc.) when prioritizing replacement projects.

As of late, the District's primary factor in selecting projects is based on outside agencies impacting the existing water distribution system. Utilities must relocate their facilities to accommodate city-owned infrastructure and projects. In addition, many cities issue a moratorium on pavement cuts for up to five years after completion of a city project. It maximizes public value to replace water facilities with these road construction projects. Some projects included with city work may not be the District's highest replacement priority; however, partnering helps lower overall project costs and minimize public inconvenience during construction. The result is continued reinvestment into the water system at a lower cost and impact to the ratepayers.

Capital Addition Funding

Project funding is an important component in the process. Because of limited resources, the District cannot fund all projects contemplated in the Comprehensive Water System Plan. Capital Additions are typically funded by rates or other outside sources (General Facility Connection Charges [GFC], revenue bonds, low-interest loans, or developer contributions/reimbursements.) The estimated GFC revenue for 2023 is \$475,000 and \$450,000 for the proposed 2024 budget.

Public Works Trust Fund (PWTF) low interest loans are an excellent way to reinvest in infrastructure by reducing the financial burden to the ratepayers. Repayment periods are up to 30 years at interest rates as low as 1.5%, depending on the loan term, local funding match, and project completion incentives by the State. Typically, the District selects repayment schedules and local match funding to minimize interest over the life of the loan. However, due to fiscal constraints, the Washington State Legislature has reduced funding for the PWTF. Future PWTF resources continue to remain uncertain.

Grant money opportunities for infrastructure projects are limited and extremely competitive. The District will pursue grant funding, if available. The District's association memberships help to inform agencies of possible grant opportunities.

Each year, staff works with the Board to determine availability of outside funding (PWTF loans, Federal grants, etc.) for CIP projects that do not have other funding sources. Staff evaluates the water system's needs and prioritizes projects for outside funding. Applications for outside funding sources are subject to approval by the Board of Commissioners.

CIP Project Implementation

As projects secure funding and accepted by the Board, the following general steps are taken to design and construct a scheduled CIP project. Please note that these steps do not necessarily apply to emergency work:

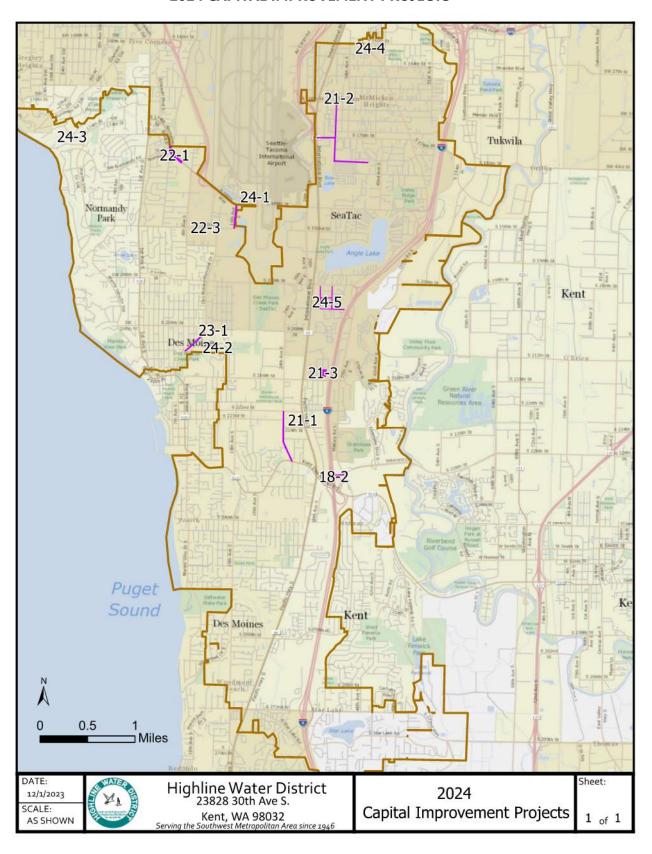
- Staff may issue a Request for Proposals for more technically challenging projects or may review listed and/or requested information from consultants identified on the MRSC Consultant Roster.
- 2. Staff evaluates the consultant's general Statement of Qualifications (SOQ) and/or Request for Proposals (RFP), may request interviews, and will recommend to the Board the most competent consultant to complete the project design.
- 3. Staff negotiates the contract then presents the consultant's proposal to the Board for their review and approval.
- 4. Upon approval, the consultant begins working with staff to complete the design. At each regular meeting, the Board receives a brief status report for each project in the Manager's Report.
- 5. Upon completion of the design, staff informs the Board of the project's advertisement and bid opening dates for soliciting a construction contract.
- 6. District staff and the consultant review the bids and make a recommendation to the Board to award to the lowest responsive, responsible bidder, in accordance with state public works statutes.
- 7. The recommendation to award/not award is brought before the Board along with an authorization to execute a construction contract at the next available Board meeting.
- 8. Construction of the project begins, and the Board receives updates on the status of each project in the Manager's Report.
- 9. The Board must approve or deny contract revisions over \$25,000 per contract unless contingency is authorized by resolution and/or included the contract.
- 10. Upon completion of the project, staff and the consultant make a recommendation to the Board to accept the project as complete. The recommendation is then considered at the next available Board meeting.
- 11. If the project was an approved PWTF project or Federal grant, staff will complete the close-out of the project as required by the PWTF Board or Federal agency.
- 12. Staff completes the necessary closeout paperwork.

2024 Capital Addition Budget

For 2024, the District's anticipated Capital Addition Budget is \$8.0 million. The figure includes budget to support the five Capital Addition components. The District will fund the 2024 CIP through water rates, capital reserves, connection charges, and developer reimbursements.

Please see Page 4 for a breakdown of the overall capital additions and funding sources.

2024 CAPITAL IMPROVEMENT PROJECTS



Project 18-2 International Blvd at SR509 Road Improvements (Phase 1B)

The Washington State Department of Transportation (WSDOT) proposes to extend the SR509 freeway from S 188th St to Interstate 5 as part of the Connecting Washington and the Puget Sound Gateway projects. Phase 1B will be the first section constructed starting from Kent-Des Moines Road and Interstate 5 and stopping at 24th Ave S in SeaTac. Subsequent phases include extending the road from 24th Ave S through the Tyee Golf Course to S 188th St and the existing SR509. WSDOT selected Atkinson Construction to be the Design-Build Contractor for Phase 1B (Interstate 5 to 24th Ave S).



SR 509 After

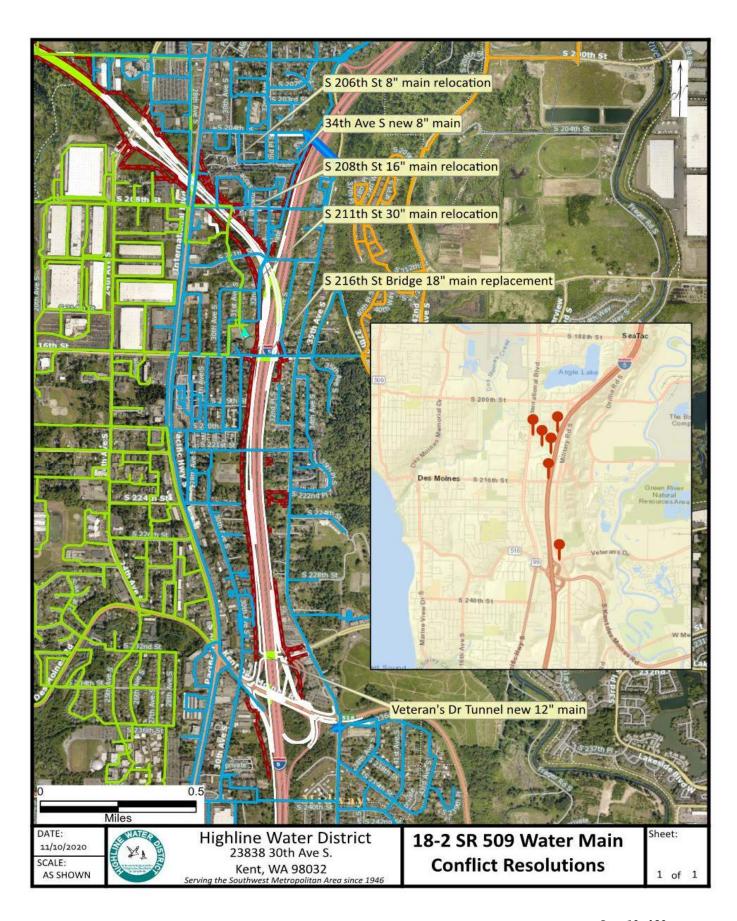
WSDOT's design of Phase 1B requires

a freeway overpass for International Blvd S (ILB) at SR509 near S 206th St. Sound Transit (ST) simultaneously plans for the Federal Way Link Light Rail to cross ILB in the same general vicinity. Because ST will construct their infrastructure first, WSDOT contracted with ST to construct the overpass on their behalf during the light rail construction. The effort helps avoid multiple contractors working in the same general area on separate Public Works contracts.

Project 18-2 includes design and construction of the necessary improvements for the bridge work and crossing at International Blvd and for the other SR509 impacts identified for Phase 1B. The District entered into a Task Order Agreement with Sound Transit to construct the temporary bypass of the existing piping at SR99. The anticipated cost of the relocation is \$1.3 million. Construction of the bypass began in late 2020 and was complete in early 2021.

Other impacts to the District's infrastructure for Phase 1B include: relocating the existing 30" transmission main across the new freeway alignment; replacing several mains along S 208th St between ILB and I5, a new distribution main along a future 34th Ave S from S 204th St to S 208th St; a new freeway crossing at a new bridge at S 216th St and I5; and other water improvements near KDM and I5. At the end of 2023, the only remaining water main work will be the construction of a 12" water main through the new Veteran's Drive tunnel.

The District executed an ILA with WSDOT on May 20, 2020. The ILA included a negotiated lump sum payment to WSDOT for the water work. In 2021, the District paid the lump sum payment of \$3.2 million. The overall estimate to complete all SR509 work including the bridge bypass is \$5.0 million. Work will be funded by existing capital reserves and water rates.



PROJECT 18-2 INTERNATIONAL BLVD @ SR-509 ROAD IMPROVEMENTS ESTIMATED PROJECT COSTS

CATEGORY	F	Prior Years	2023	2024	2025	TOTAL
Engineering - Design	\$	196,109				\$ 196,109
WSDOT ILA Payment	\$	4,432,874				\$ 4,432,874
WSDOT Permits and Inspection	\$	2,973				\$ 2,973
Staff Labor and Benefits	\$	95,735	\$ 101,715	\$ 77,360	\$ 20,000	\$ 294,809
Miscellaneous / Other	\$	23,065	\$ 454	\$ 10,000		\$ 33,519
Legal	\$	1,557	\$ -	\$ 1,000		\$ 2,557
TOTAL	\$	4,752,312	\$ 102,169	\$ 88,360	\$ 20,000	\$ 4,962,841

FUNDING FOR PROJECT	FUNDING FOR PROJECT														
CATEGORY	Prior Years	2023	2024	2025	TOTAL										
Rates/Reserves	\$ 4,752,312	\$ 102,169	\$ 88,360	\$ 20,000	\$ 4,962,841										
					\$ -										
TOTAL	\$ 4,752,312	\$ 102,169	\$ 88,360	\$ 20,000	\$ 4,962,841										

ESTIMATED SCHEDULE FOR PROJECT COMPLETION										
Description	Date									
UI-33 216th Bridge	Dec 2023									
UI-160 Veteran's Tunnel	2024									
Closeout / Punch List / As-builts	2024 / 2025									

Project 21-1 24th Ave S Water Main Replacement (2022 AC Replacement Project)

This City of Des Moines project plans to widen 24th Ave, install sidewalks, and construct storm water improvements. The District maintains an existing 10-inch AC watermain along this section of road. To facilitate relocation of the watermain due to conflicts with the proposed storm design, the District entered into an interlocal agreement with the City of Des Moines per the utility franchise agreement to construct the watermain replacement under the City's contract.

The scope of work will include replacement of approximately 2,500 LF of 12-inch DI water main along with new hydrants and services. The City awarded the project to SCI Infrastructure in July 2023, with the bid for the District's work awarded at \$1.03 million.

Construction of the water mains began in November 2023 and is expected to continue through March 2024. The proposed project budget is \$1.5 million. The District will fund the project through existing water rates and capital reserves.

PROJECT 21-1 24th Ave S WATER MAIN REPLACEMENT ESTIMATED PROJECT COSTS

CATEGORY	Prior Years	2023	2024	TOTAL
Engineering - Design	\$ 38,347	\$ 28,750	\$ 10,000	\$ 77,097
Construction	\$ -	\$ 297,751	\$ 893,254	\$ 1,191,005
Construction Administration	\$ -	\$ 185,000		\$ 185,000
Staff Labor and Benefits	\$ 4,496	\$ 20,973	\$ 39,780	\$ 65,249
Miscellaneous / Other	\$ -		\$ 5,000	\$ 5,000
TOTAL	\$ 42,843	\$ 532,474	\$ 948,034	\$ 1,523,351

FUNDING FOR PROJECT				
CATEGORY	Prior Years	2023	2024	TOTAL
Rates and Reserves	\$ 42,843	\$ 532,474	\$ 948,034	\$ 1,523,351
TOTAL	\$ 42,843	\$ 532,474	\$ 948,034	\$ 1,523,351

ESTIMATED SCHEDULE FOR PROJECT COMPLETION											
Description Month Year											
Begin Water Construction	Nov	2023									
Water Construction Complete	Mar	2024									
Project Final Completion	Fall	2024									



Project 21-2 32nd Ave S – S 180th St Water Main Replacement (City of SeaTac)

In late summer 2020, the City of SeaTac informed the District of an upcoming road improvement project scheduled for design and construction. The project has two parts: roadway reconstruction and replacement of curb, gutter, and sidewalk improvements along 32nd Ave S from S 170th St to S 176th St; and pedestrian improvements along 32nd Ave S from S 176th St to S 180th St and along S 180th St to the Bow Lake Trailer Park. The project is part of the City Council's goal to improve multimodal transportation within the City.

The District operates approximately 5,000 LF of various sized water mains throughout the corridor. The mains are either cast iron or AC and it is beneficial for the District to replace the mains as part of the City's work. The District contracted KPG/PSOMAS in early 2022 to design the project. KPG is also the lead designer on behalf of the City. Project designs were brought to the 90% stage in 2023 and will finalize in 2024.

City of SeaTac initially planned for a 2024 award and construction for this project. Due to a variety of factors, including lengthy right of way acquisition, the City has pushed back the schedule on the project for the 2025 construction season. The budget includes \$100,000 and \$3.0 million for the costs of design and construction in 2024 and 2025, respectively. The project will be funded by existing water rates and reserves.



PROJECT 21-2 32nd Ave S - S180th St Water Main Replacement (City of SeaTac) ESTIMATED PROJECT COSTS

CATEGORY		Prior Years		2023		2024		2025		2026		TOTAL	
Engineering - Design	\$	115,403	\$	2,192	\$	50,000			\$	10,000	\$	177,595	
Construction							\$	2,700,000			\$	2,700,000	
Construction													
Administration (10%)							\$	270,000	\$	-	\$	270,000	
Staff Labor and													
Benefits	\$	2,562	\$	3,540	\$	20,000	\$	83,200	\$	12,480	\$	121,783	
Miscellaneous / Other											\$	-	
TOTAL	\$	117,966	\$	5,732	\$	70,000	\$	3,053,200	\$	22,480	\$	3,269,378	

FUNDING FOR PROJECT														
CATEGORY	Prior Years		2023		2024	2025	2026		TOTAL					
Rates and Reserves	\$ 117,966	\$	5,732	\$	70,000	\$ 3,053,200	\$	22,480	\$	3,269,378				
TOTAL	\$ 117,966	\$	5,732	\$	70,000	\$ 3,053,200	\$	22,480	\$	3,269,378				

	ESTIMATED SCHEDULE FOR PROJECT COMPLETION												
Description	Month	Year											
100% Design													
Complete	Jun	2024											
Advertise	Q4	2024											
Begin Construction	Q1	2025											
Construction													
Complete	Q4	2026											

Project 21-3 Mansion Hill 2.5MG Reservoir Int./Ext. Recoat and Safety Improvements

The District completed the Sound Transit improvements at the Mansion Hill tank site in 2021. The previous work included completion of the new, 4.5 MG reservoir and Pump Station No 9. The next phase of work will include retrofitting the existing 2.5 MG 490 Zone ground reservoir.

The existing 2.5MG reservoir was constructed in 1959. The tank was last coated in 2002 and the coatings are nearing the end of their useful life. The base layer of the exterior contains lead and has been top coated several times in the past. The recoating effort will require a complete removal of the exterior with lead abatement and surface preparation for a full recoat on the interior and exterior. The exterior color will match the new 4.5 MG reservoir.

In addition to the recoating, the District would benefit by installing safety and security improvements to the tank. The scope includes installing stairs to replace the existing ladder and safety cage to meet current safety regulations and installing a handrail around the perimeter roof. These measures will improve safety for District personnel.





The project was advertised in August 2023. After evaluations of the proposed bids, the District rejected all bids and did not award the project. Staff anticipates that readvertising the project in 2024 would be in the best interest of the District.

The project budget is \$3.7 million. The project will be funded by existing water rates and capital reserves.

PROJECT 21-3 MANSION HILL 2.5 MG RESERVOIR INTERIOR/EXTERIOR RECOAT AND SAFETY IMPROVEMENTS ESTIMATED PROJECT COSTS

CATEGORY	Prior Years		2023		2024	2025	TOTAL
Engineering - Design	\$	89,492	\$ 36,943	\$	5,000		\$ 131,435
Construction				\$	2,210,000	\$ 1,190,000	\$ 3,400,000
Permits	\$	1,626		\$	2,000		\$ 3,626
Construction Administration				\$	75,000	\$ 25,000	\$ 100,000
Staff Labor and Benefits				\$	10,000	\$ 10,000	\$ 20,000
Miscellaneous / Other			\$ 746	\$	2,000	\$ 2,000	\$ 4,746
TOTAL	\$	91,118	\$ 37,689	\$	2,304,000	\$ 1,227,000	\$ 3,659,807

FUNDING FOR PROJECT											
CATEGORY	Pri	or Years		2023		2024		2025		TOTAL	
Rates and Reserves	\$	91,118	\$	37,689	\$	2,304,000	\$	1,227,000	\$	3,659,807	
									\$	-	
TOTAL	\$	91,118	\$	37,689	\$	2,304,000	\$	1,227,000	\$	3,659,807	

ESTIMATED SCHEDULE FOR PROJECT COMPLETION										
Description	Month	Year								
Design Engineering										
(Complete)	July	2023								
Award Construction										
Contract	March	2024								
Begin Construction	Spring	2024								
Project Final										
Completion	Spring	2025								

Project 22-1 Des Moines Memorial Drive Water Main Relocation (King County)

King County, in partnership with the cities of Burien and SeaTac, plans to construct a new trail from S 200th St to S Normandy Road and Des Moines Memorial Drive. The trail will connect the Des Moines Creek trail to the regional trail network operated by King County.

In early 2021, the District received notice by the City of Burien to relocate an approximately 1,200 LF of existing 16-inch cast iron water main in conflict with several retaining walls. The proximity of the main prevents excavation work for the foundation of the walls.

The District contracted with Parametrix, the same consultant retained by King County for the engineering designing the trail, to facilitate design of the relocation. The design was completed in 2023 and following negotiations and legal review the District entered into an ILA with King County to include the water main relocation on their project contract; the ILA was approved by the Board under resolution 23-4-19A.

The project was advertised by King County in June 2023. After review of the bids it was determined that the four lowest bidders were deemed unresponsive in not meeting the mandatory bidder criteria. The County notified the District of their intent to reject all bids and readvertise the project with revised specifications.

The project was readvertised on November 16, 2023, with a bid opening date of December 13, 2023. The proposed 2024 budget for this project is \$1.1 million. Water work will be funded by existing rates and capital reserves.



PROJECT 22-1 Des Moines Memorial Drive Water Main Relocation

ESTIMATED PROJECT COSTS

CATEGORY	Pri	or Years	2023		2024		2025		TOTAL	
Engineering - Design	\$	22,999	\$ 118,700			\$	10,000	\$	151,699	
Construction			\$ 66,900	\$	829,200			\$	896,100	
Construction Administration (10%)				\$	82,920			\$	82,920	
Staff Labor and Benefits	\$	1,517	\$ 6,130	\$	54,400	\$	2,500	\$	64,547	
Miscellaneous / Other				\$	1,000			\$	1,000	
TOTAL	\$	24,516	\$ 191,730	\$	967,520	\$	12,500	\$	1,196,266	

FUNDING FOR PROJECT										
CATEGORY	Pri	or Years		2023		2024		2025	TOTAL	
Rates and Reserves	\$	24,516	\$	191,730	\$	967,520	\$	12,500	\$ 1,196,266	
TOTAL	\$	24,516	\$	191,730	\$	967,520	\$	12,500	\$ 1,196,266	

ESTIMATED SCHEDULE FOR PROJECT COMPLETION									
Description	Month	Year							
Design Engineering									
(Complete)	November	2022							
Award Construction Contract	December	2023							
Begin Construction	March	2024							
Project Final Completion	December	2024							

Project 22-3 SR509 Phase 2 Water Main Relocation

As part of the Connecting Washington and Puget Sound Gateway Project, WSDOT proposes to construct a new tollway connecting Interstate 5 and SR509. Phase 1 (Project 18-2) includes constructing a 4-lane highway between Interstate 5 and 24th Ave S in SeaTac. The second phase (this project) includes completing the freeway from 24th Ave S to Des Moines Memorial Dr and S 188th St where SR509 currently ends.

The number of and magnitude of the conflicts identified for the SR509 Phase 2 are less than those being addressed as part of project 18-2 SR509 Stage 1b. The District utilized internal crews to address the minor relocation and abandonments. To address the remaining conflicts the District entered into an ILA with WSDOT in June 2023.

The remaining conflicts include:

- Removal of abandoned AC water mains within the project footprint.
- At S 192nd St near Des Moines Memorial Drive, a new WSDOT bridge will be constructed as an overpass. The existing 8" water main on S 192nd St will be abandoned and a new water main affixed to the overpass bridge.
- Potentially a conflict at the S 188th St interchange. Due to the design build nature of the
 project, preliminary designs showed a small chance for a conflict, but this conflict may not
 manifest in the final design. WSDOT and the District agreed not to include this conflict in
 the negotiated ILA fee. An amendment will be made if this conflict appears in the final
 design.

An advance payment of \$10,000 will be paid to WSDOT for administrative and engineering efforts in preparation of the ILA. The negotiated \$587,000 will be paid to WSDOT upon award of the Stage 2 project, anticipated in March 2024. Project is funded by existing water rates and capital reserves.



PROJECT 22-3 SR509 Phase 2 Water Main Relocation ESTIMATED PROJECT COSTS

CATEGORY	Pri	Prior Years		2023		2024	2025	TOTAL	
Engineering - Design	\$	17,200	\$	1,113				\$	18,313
WSDOT ILA Payment					\$	523,518		\$	523,518
Staff Labor and Benefits	\$	5,077	\$	4,334	\$	25,000	\$ 25,000	\$	59,411
Miscellaneous / Other								\$	-
Legal					\$	1,000		\$	1,000
TOTAL	\$	22,277	\$	5,447	\$	549,518	\$ 25,000	\$	602,242

FUNDING FOR PROJECT										
CATEGORY	Pric	or Years		2023		2024		2025		TOTAL
Rates/Reserves	\$	22,277	\$	5,447	\$	549,518	\$	25,000	\$	602,242
TOTAL	\$	22,277	\$	5,447	\$	549,518	\$	25,000	\$	602,242

ESTIMATED SCHEDULE FOR PROJECT COMPLETION								
Description	Date							
30% RFP Documents	Complete							
WSDOT RFP Advertisement	March 2023							
Relocation Work (Complete)	September 2023							
WSDOT Contractor Selection (Complete)	June 2023							
WSDOT Contractor Retention (Complete)	September 2023							
Begin Construction	June 2024							
Project Final Completion	2025							

Project 23-1 DMTP/PS2 Electrical Upgrades and Generator Replacement

The District has an existing generator serving Pump Station No 2 at the Des Moines Treatment Plant site. The generator is nearing the end of its useful life, is not connected to the well or

treatment plant, and is undersized to power the remaining facility. This project will replace the generator with one adequately sized to provide backup power to the Des Moines Well, the Treatment Plant and Pump Station No 2.

The District contracted with RH2 Engineering to prepare an analysis and recommendations report covering the electrical upgrades, generator sizing, and site development requirements for a generator upgrade meeting the current needs of the Des Moines Treatment Plant.



The evaluation from RH2 Engineering recommends a total project cost of \$1.5 million; \$400,000 in 2024 for design, bid, and materials procurement, and \$1.3 million in 2025 for site construction, and installation. Current lead times on ordering generators of this size are estimated at 6 to 12 months. Project is funded by existing water rates and capital reserves.

PROJECT 23-1 DMTP/PS2 Electrical Upgrades and Generator Replacement ESTIMATED PROJECT COSTS

CATEGORY	Prior Years	2023	2024	2025	TOTAL
Engineering - Design		\$ 29,650	\$ 75,000		\$ 104,650
Construction			\$ 307,183	\$ 1,228,731	\$ 1,535,914
Construction Administration				\$ 25,000	\$ 25,000
Staff Labor and Benefits		\$ 5,000	\$ 15,000	\$ 7,500	\$ 27,500
Miscellaneous / Other					\$ -
Legal					\$ -
TOTAL		\$ 34,650	\$ 397,183	\$ 1,261,231	\$ 1,693,064

FUNDING FOR PROJECT										
CATEGORY	Prior Ye	ars	2023	2024	2025	TOTAL				
Rates/Reserves	\$	-	\$ 34,650	\$ 397,183	\$ 1,261,231	\$ 1,693,064				
TOTAL	\$	-	\$ 34,650	\$ 397,183	\$ 1,261,231	\$ 1,693,064				

ESTIMATED SCHEDULE FOR PROJECT COMPLETION								
Description	Date							
Report and Estimates	Nov 2023							
Specifications and Bid Package	April 2024							
Project Award	June 2024							
Materials Procurement	Q3 2024							
Construction and Site								
Development	Q3 2025							



Project 23-2 McMicken Onsite Hypochlorite Generation Replacement

The District operates a Wallace & Tiernan onsite hypochlorite generation system at the McMicken Treatment Plant. The unit uses salt and electricity to create a weak solution of sodium hypochlorite (bleach) used for water disinfection at the treatment plant. The system has been in operation for 10 years and is nearing the end of its useful life.

Since the commissioning of the original system, newer technologies are available to increase production and lower costs. The District completed evaluation of viable alternatives and ordered a new replacement unit in 2023. Receipt and installation will occur in Spring of 2024. The 2024 budget includes \$140,000 to replace the unit at the Des Moines Treatment Plant. The replaced unit will be repurposed to serve at the McMicken site.

Project 24-1 16th Ave S Water Main Replacement

Thes City of SeaTac plans to replace sidewalks, road surface, and upgrade stormwater conveyance along 16th Ave S between S 188th St and S 192nd St. The District maintains a 6" AC water main along the project corridor that is nearing the end of its useful life. The District has an opportunity to partner with the City to replace approximately 1,200 LF of aging water main, hydrants, and services.

The City is utilizing Atwell Engineering group (formerly Blueline) for design consulting services on the project. The District has not worked with Atwell in the past. After initial discussions and review of Atwell's statement of qualifications the District proposes to use Atwell to tackle the water main design and will retain their services for this project.

The budget for this project is \$82,000 for design in 2024 and \$780,000 for construction in 2025. A more refined budget will be determined up on completion of the design. Water work will be funded by existing rates and capital reserves.

PROJECT 24-1 16th Ave S. Water Main Replacement ESTIMATED PROJECT COSTS

CATEGORY	Prior Years	2024	2025	2026	TOTAL
Engineering - Design		\$ 71,000			\$ 71,000
Construction			\$ 650,000		\$ 650,000
Construction Administration			\$ 65,000		\$ 65,000
Staff Labor and Benefits		\$ 10,650	\$ 65,000		\$ 75,650
TOTAL		\$ 81,650	\$ 780,000		\$ 861,650

FUNDING FOR PROJECT					
CATEGORY	Prior Years	2024	2025	2026	TOTAL
Rates and Reserves		\$ 81,650	\$ 780,000		\$ 861,650
TOTAL		\$ 81,650	\$ 780,000		\$ 861,650

ESTIMATED SCHEDULE FOR PROJECT COMPLETION								
Description Month Year								
Begin Design	Q1	2024						
Project Bid	Q4	2024						
Begin Construction	Q1	2025						
End Construction	Q4	2025						



Project 24-2 Des Moines Memorial Dr and S 208th St Water Main Relocation

In mid-2023 the City of Des Moines notified the District of its intent to install stormwater along the west side of Des Moines Memoria Dr (DMMD) between S 208th St and S 212th St. This new stormwater would replace the existing culvert and earthen ditch conveyance system that currently exists along that corridor. The City is working with Perteet engineering for their design and the 30% designs for the stormwater are in direct conflict with the District's 8" duction iron water main.

The District and the City continue to have ongoing discussions evaluating options to address the conflict that would be in the best interest of both agencies. The budget for 2024 includes an estimate of the preferred solution including design and construction for \$200,000 and \$650,000 in 2024 and 2025, respectfully. The project will be funded by existing water rates and reserves.

PROJECT 24-2 DMMD Water Line Relocation ESTIMATED PROJECT COSTS

CATEGORY	Prior Years	2024	2025	2026	TOTAL
Engineering - Design		\$ 112,500			\$ 112,500
Construction			\$ 750,000		\$ 750,000
Construction Administration			\$ 75,000		\$ 75,000
Staff Labor and Benefits			\$ 75,000		\$ 75,000
TOTAL		\$ 112,500	\$ 900,000		\$ 1,012,500

FUNDING FOR PROJECT					
CATEGORY	Prior Years	2024	2025	2026	TOTAL
Rates and Reserves		\$ 112,500	\$ 900,000		\$ 1,012,500
TOTAL		\$ 112,500	\$ 900,000		\$ 1,012,500

ESTIMATED SCHEDULE FOR PROJECT COMPLETION								
Description	Month	Year						
Alternatives Analysis	Dec	2023						
Begin Design	Q1	2024						
Project Bid	Q4	2024						
Begin Construction	Q1	2025						
Construction Complete	Q4	2025						



Project 24-3 Miller Creek and Walker Creek Culvert Relocation

The City of Normandy Park is in the process of designing improvements to 12th Avenue SW. The project includes replacing existing culverts with a bridge. The City anticipates the Sequoia Creek/Walker Creek Replacement Project will be constructed in 2025.

The District seeks to have an existing 12-inch diameter water main and appurtenances located in 12th Avenue SW replaced as part of the project including installing a new water main under the new bridge structure. The project will be designed and bid in coordination with the City project.

The District intends to retain the services of Gray & Osborne, Inc. for the water main design, the same firm handling the design for the City. The 2024 budget includes \$75,000 for design and engineering, and an estimated \$725,000 for construction in 2025. Water work will be funded by existing rates and capital reserves.

24-3 Miller Creek and Walker Creek Culvert Relocation ESTIMATED PROJECT COSTS

CATEGORY	Prior Years	2024	2025	2026	TOTAL
Engineering - Design		\$ 60,000		\$ 10,000	\$ 70,000
Construction			\$ 567,000		\$ 567,000
Construction Administration			\$ 56,700		\$ 56,700
Staff Labor and Benefits		\$ 10,000	\$ 56,700	\$ 5,000	\$ 71,700
Miscellaneous / Other/Permits					
TOTAL		\$ 70,000	\$ 680,400	\$ 15,000	\$ 765,400

FUNDING FOR PROJECT					
CATEGORY	Prior Years	2024	2025	2026	TOTAL
Rates and Reserves		\$ 70,000	\$ 680,400	\$ 15,000	\$ 765,400
TOTAL		\$ 70,000	\$ 680,400	\$ 15,000	\$ 765,400

ESTIMATED SCHEDULE FOR PROJECT COMPLETION							
Description	Month	Year					
Begin Design	Jan	2024					
90% Design	Jul	2024					
Project Bid	Jan	2025					
Construction Start	Mar	2025					
Construction End	Nov	2025					



Project 24-4 Pump Station 6 Remote Telemetry Unit Upgrade

The District's existing telemetry unit at Pump Station 6 is nearing the end of its useful life. The District's SCADA consultant, S&B, conducted an initial review and assessment establishing a proposal to replace the RTU, replace several meters, and add wireless communication to the site. The proposed solution from S&B Inc. involves the installation of a new Siemen's Remote Terminal Unit (RTU), Siemens flow meters, Siemens software, and cellular communication to address the specific issues experienced with Pump Station 6's alarms, controls, and communication. The choice of using Siemens equipment is based on its compatibility with the existing proprietary Siemens hardware and software already established in the District's SCADA network.

The 2024 budget includes \$100,000 for this work and will be funded by existing rates and capital reserves.

Project 24-5 S 204th St Water Main Relocation

The City of SeaTac notified the District of its intent to expand the scope of the previously planned S 204th St road improvement project. The new project scope will include road widening, sidewalk improvements, storm water improvements, and telecommunication utility undergrounding in the vicinity of S 204th St between 30th Ave S and 34th Ave S. and both 30th Ave S and 34th Ave S between S 200th St and S 204th St.

The District operates approximately 4,000 LF of 6" AC water mains in the project corridor. It will be beneficial to the District to replace the mains as a partner on the project with the City. This will both replace aging infrastructure and address any potential relocation concerns as part of the City's design. The District and the City have a proven track record for executing partnerships on this type of project through interlocal agreements.

The City has retained the services of Perteet Inc for engineering and design. The District intends to contract directly with Perteet to complete the water design work. The District has budgeted \$2.3 million to fund design in 2024 and construct in 2025. The project will be funded by existing water rates and reserves.



PROJECT 24-5 S 204th St Improvements (ST-134) ESTIMATED PROJECT COSTS

CATEGORY	Prior Years	2024		2025		2026	2027			TOTAL
Engineering - Design		\$	92,250	\$	30,750		\$	25,000	\$	148,000
Construction						\$ 1,025,000	\$ 1	,025,000	\$ 2	2,050,000
Construction						¢ 102 500			.	102.500
Administration						\$ 102,500			\$	102,500
Staff Labor and										
Benefits						\$ 102,500			\$	102,500
TOTAL		\$	92,250	\$	30,750	\$ 1,230,000	\$ 1	,050,000	\$ 2	2,403,000

FUNDING FOR PROJECT								
CATEGORY	Prior Years	2024		2025		2026	2027	TOTAL
Rates and Reserves		\$	92,250	\$	30,750	\$ 1,230,000	\$ 1,050,000	\$ 1,353,000
TOTAL		\$	92,250	\$	30,750	\$ 1,230,000	\$ 1,050,000	\$ 1,353,000

ESTIMATED SCHEDULE FOR PROJECT COMPLETION									
Description Month Year									
Begin Design	Q1	2024							
Project Bid	Q4	2024							
Begin Construction	Q1	2025							
End Construction	Q4	2026							

SMALL WORKS / EMERGENCY PROJECTS

The Small Works / Emergency Projects budget is an allocation of funds set aside for capital projects not specifically identified during the budgeting process but arise during the year. It is typically used for smaller sized projects, such as a short main replacement in anticipation of a City driven overlay project. In addition, the District can also use the budgeted money to fix facilities that have immediate maintenance issues or improve system efficiency.

For 2024, the District allocated \$350,000 for the Small Works budget. The District will continue to work with the local Cities to determine the replacement of water mains in conjunction with road improvement projects.

FUTURE UNSCHEDULED IMPROVEMENTS

Per the District's 2016 Comprehensive Water System Plan, the following needs were assessed:

1. <u>Source/Treatment:</u> The District's contract with SPU satisfactorily addresses source of supply needs through 2062. SPU and HWD are discussing amendments to the source contract during the current 20-year renegotiation provision.

The District will continue to explore the feasibility of purchasing water from Lakehaven Water and Sewer District (LWSD). LWSD is a stakeholder in the Tacoma Public Utilities filtration plant that became operational in 2015. LWSD has approximately 2.0 MGD excess water supply available for purchase. The District selected Carollo Engineers to study the potential source in 2020 and their report was complete in 2021. The District will also need to evaluate the Tyee Well mitigation.

The District plans to add backup power generation at the Angle Lake Well and Des Moines Treatment Plant/Pump Station 2 site. The latter project is included in the 2024 CIP.

- 2. <u>Storage</u>: There are no significant short-term storage deficits. The City of Tukwila and KCWD 54 expressed interest in purchasing or leasing additional storage from Highline.
- 3. <u>Distribution System</u>: The District will continue to use its 2008 Asset Management Plan (AMP) to use as a guide to create prioritization strategies for future projects to evaluate water mains that will soon begin to meet the end of their useful life and need to be replaced. The next scheduled update of the Asset Management Plan is 2020 but subsequently delayed due to the required Vulnerability Assessment and Emergency Response Plan updates as required by EPA. We will reevaluate the AMP in a subsequent year.

In 2012, staff discussed with the Board the goal to replace AC water mains within in the District over the next 30 years. The District will continue to focus efforts replacing small diameter mains adjacent to sensitive/critical areas like steep slopes or wetlands. In addition, the District will work to replace mains identified in the comprehensive plan to improve fire suppression. The District will work with Cities to replace water mains in consort with City projects to reduce costs. Future budgets include allocation of funds for this effort.

The District will explore the feasibility of changing the 560 Pressure Zone into a 600 Pressure Zone. The effort will increase pressures around Mansion Hill, eliminate some aging infrastructure and improve reliability and redundancy. The District will proceed with a feasibility study in the next few years.

The District also intends to begin preliminary investigations toward addressing high pressure areas and system stability within the Three Tree Point pressure zone. There are a variety of options including the potential for additional PRV stations, reconfiguration of the zone boundary, booster pump stations, or an additional pressure zone. The District intends to determine the feasibility and return on investment for out year budgeting.

MITIGATION IMPROVEMENTS FOR 2024

The District allocates funding for improvements to District facilities to ward against man-made and natural disasters. Improvements include security cameras and technologies, fencing, security software, access control devices and other types of security improvements. The budget for 2024 includes \$40,000 for mitigation improvements.

METERS, HYDRANTS AND SERVICES BUDGET

The Meter, Hydrants and Services budget is an allocation of funds used for new or replaced capital assets performed by District personnel. Typically, the assets are pipes, meters, hydrants and/or water services. For example, the budget would fund a small water main replacement project by District crews. The costs are capitalized over the life of the asset. The budget is evaluated annually by reviewing the goals and objectives for the subsequent year and comparing the figures with the overall annual budget.

For 2024, the budget includes \$450,000 for the meters, hydrants, and services. The budget includes materials for the replacement of approximately 25 hydrants, 50 water services, and three (3) small water main replacement projects for the field crew. There are several projects identified for the service crews to replace mains for upcoming city projects in 2024. Please see the **2024 Goals and Objectives** document for more specific information on specific goals by the field crews for capital improvements.

ENGINEERING INTIATIVES

While the following initiatives are non-capitalized expenses, the labor and resources required to execute in 2024 are significant enough to merit inclusion in this report. The engineering department has identified three key initiatives to begin in 2024:

2026 Water Comprehensive Plan Update. The 2026 Water Comprehensive Plan Update is a crucial initiative for Highline Water District, considering the 10-year renewal cycle of our current Comprehensive Plan. This comprehensive engineering effort, led by both our Engineering department and an external consultant, will begin with the issuance of an RFP in Q3 2024. The preliminary schedule aims for the completion of the comp plan by Q2 2026, with an estimated budget of \$500,000.

Developer Extension Standards Update. The Developer Extension Standards Update is a response to the evolving landscape of District operations and the establishment of new best practices since the issuance of our initial standards in October 2020. Our Engineering department plans to comprehensively update and revise these standards for Developer Extension (DE) projects throughout 2024. Anticipated schedules include preliminary drafts by the end of Q2, with a final a finalized version in Q4.

WSDOT Special Provisions Update. The WSDOT Special Provisions Update aims to enhance the consistency and efficiency of executing CIP projects by developing standardized special provisions and unit bid items. For each CIP project, the District currently incorporates WSDOT Standard Specifications for Road, Bridge, and Municipal Construction with a set of special provisions specific to the District's execution of CIP projects. The Engineering Department plans to draft a standardized set of special provisions targeting a draft set by Q3 and a finalized version by Q4 of 2024.