

2025 WATER SYSTEM PLAN AMENDMENT

Review Draft

April 2025



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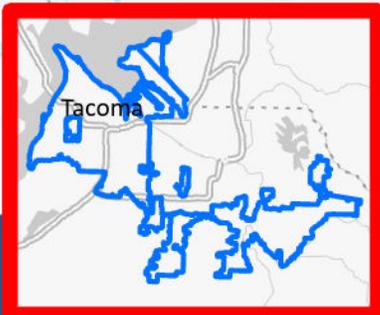
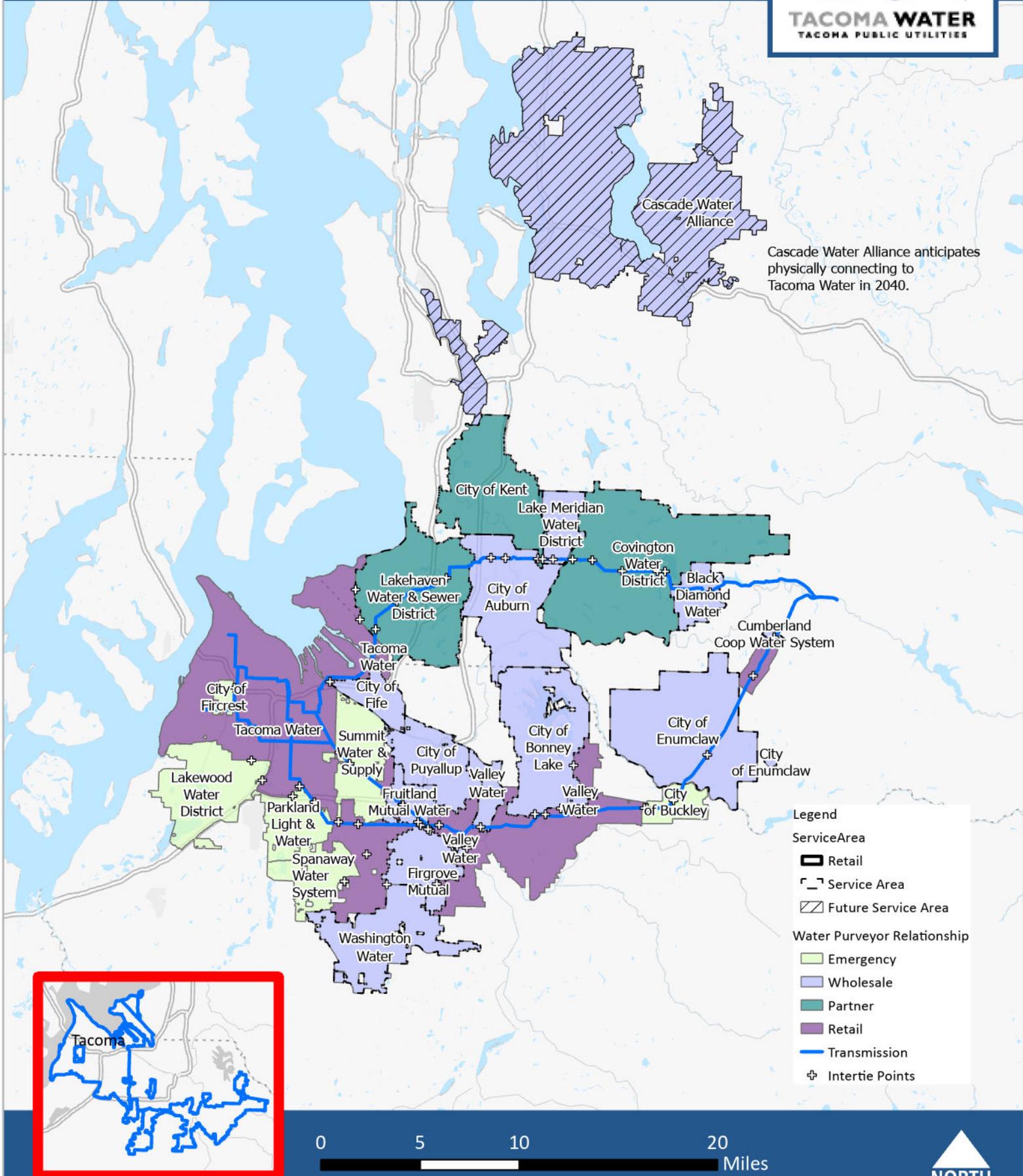
Chapter 11

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Chapter 12

- Current rates: [City of Tacoma Municipal Code Title 12 Utilities](#)
- [Tacoma Water Rate and Financial Policy](#)
- [Tacoma Water Long Range Financial Plan](#)
- [2023 Audited Tacoma Water Financial Statements](#)

Figure 2-2 Tacoma Water Service Area



11. Capital Improvement Plan

This chapter describes Tacoma Water’s planned capital improvements along with estimated costs and a proposed implementation schedule. Projects starting within 10 years (2025-2034) make up the Utility’s Capital Improvement Plan (CIP) and longer-term projects are captured in the Long-Range Financial Plan. Financing for the projects is discussed in Chapter 12 -Financial Plan.

11.1. Process and Development

Tacoma Water operates under the guidance of a Strategic Plan (last updated in 2020), which includes initiatives that are intended to be the strategic focus for Tacoma Water for five to 30-year increments. The 2020-2025 Strategic Plan has been substantially implemented and a new Strategic Plan will be developed for the period of 2026-2030.

11.2. Capital Improvement Plan

Tacoma Water maintains a 10-year CIP, which is a collection of capital projects necessary to meet the objectives of the Strategic Plan and is updated every two years (link provided in Section 11.3). The current 10-year CIP covers years 2025-2034.

Projects shown in the first two years of the CIP represent projects that have been approved in the Tacoma Water biennial capital budget. The biennial budget proposal is developed by the Tacoma Water Superintendent and the TPU Director and presented to the Public Utility Board (PUB) and City Council for approval.

All projects added to the biennial budget and 10-year CIP are approved through a decision-making framework. The decision-making framework is the supporting structure for building our capital and operating expense budgets. The framework supports collaboration and communication, reinforcing credibility and trust with our stakeholders (Utility leadership, policy makers, and ratepayers).

The decision-making framework and budget planning process identifies the projects and programs to be included in the budget proposal. These projects and programs, combined with the expenses of operations and maintenance (taxes, debt service, assessments, supplies, and personnel) are presented. This budget is then used to determine the revenue requirement, which is applied to the rate design process discussed in Chapter 12.

- **Project Identification:** Project needs are identified throughout the utility on a continual basis, not just at budget time. Each utility division has their own processes for identifying their project needs.
- **Project Justification:** Once a need is identified, the proposed project or program is justified in a consistent manner using the decision-making framework. A cross-functional team from the workgroups completing the project are tasked with analyzing and documenting the project justification. Initially, the project justification focuses on the problem we are trying to solve or the benefits of a potential opportunity. Then the justification identifies the business need for a given action, confirms that a project is feasible, considers internal and external drivers for the project and assesses the costs and benefits. Project justification is typically documented in a

Project Charter and/or a Business Case Evaluation. Funding for the project is determined to be either O&M or capital during project justification.

- **Management Team Review:** The proposed Biennial budget is presented to the Senior Leadership Team for discussion and ultimate approval by the Superintendent. Approved projects will be included in financial planning based on its schedule (Biennial Budget, CIP, or Long-range Financial Plan).
- **Biennial Budget and Rate Approval:** Projects that are approved by the Superintendent are included in the biennial budget proposal. This budget proposal is presented to the PUB for approval and inclusion in the consolidated Tacoma Public Utilities biennial budget. TPU's budget is then filed with the office of the City Clerk and included in the City of Tacoma's biennial budget proposal to the Tacoma City Council. The City Council reviews and approves a comprehensive budget for the City of Tacoma by the December 31st deadline.

The budget proposal or a separate proposal provides rate adjustments that support Tacoma Water's budget request and keeps our rates as low as is responsible. The Financial Stewardship team considers the entirety of Tacoma Water's financial planning (Biennial Budget, CIP, or Long-range Financial Plan) when developing rates; however, only projects in the biennial budget are approved for spending.

- **Long-Range Financial Planning:** Tacoma Water conducts ongoing long-range financial planning to assist with financing the Utility. Long-range financial planning assists with identifying financial opportunities and servicing debt.

11.3. Capital Improvement Plan (2025 – 2034)

11.3.1. Overview

Tacoma Water's capital projects are divided into five different categories:

- **General Projects:** Projects related to upgrading various Tacoma Water facilities and equipment. General capital projects include items such as plant/equipment failure contingency, advanced metering infrastructure, and GIS projects.
- **Source & Transmission Projects:** Projects related to upgrading, renewing, or expanding Tacoma Water's supply system and transmission system. Projects include well modifications; large valve upgrade/replacement; commercial, industrial, and institutional conservation rebate program; and transmission main renewal/replacement.
- **Treatment Projects:** Projects needed to maintain the quality of Tacoma Water's supply, which includes treatment and watershed management.
- **Water Distribution Projects:** Projects for upgrading, renewing, or expanding Tacoma Water's distribution system through capital programs such as public road projects, distribution main upgrade/renewal, Local Improvement Districts (LIDs), hydrant upgrade/replacement, water service replacement/renewal, and valve upgrade/replacement.
- **Regional Water Supply System (RWSS) Cost Share Eligible Projects:** Capital projects eligible for cost-sharing with the Partners in the RWSS. Project costs include First Diversion and RWSS related improvements that are allocated to Tacoma Water.

The current CIP covering years 2025 through 2034 is summarized for Tacoma Water-only projects in Table 11-1 and RWSS Cost Share Eligible Projects in Table 11-2. Projects and funding amounts listed for years 2025 and 2026 have been appropriated as part of the Tacoma Public Utilities 2025/2026 biennial budget. Projects and funding amounts listed for the remaining years are associated with planned projects from Tacoma Water’s CIP. A description of all projects is provided in Appendix C.

11.3.2. Key Programs and Projects

Tacoma Water has identified 109 capital projects and programs needed over the next 10 years. Below are descriptions of some of the larger, key projects planned in this CIP.

Pipeline 1 Pressurization Program

In 2018, the Washington State Department of Health identified a significant deficiency in Tacoma Water’s Pipeline No. 1 (P1) due to it not being fully pressurized. P1, which has been a critical part of Tacoma Water’s infrastructure since 1912, must meet regulatory requirements of maintaining a minimum pressure of 5 psi. Tacoma Water has agreed to pressurize P1 by 2051 and is conducting programmatic planning to address operational constraints and seismic concerns. The program includes rehabilitating or replacing sections of the pipeline, particularly the Hume pipe, to ensure compliance and improve resilience.

Wells Master Plan with PFAS Treatment

Tacoma Water is renewing groundwater wells and treatment to provide 55 MGD of instantaneous supply by 2070. To ensure sufficient supply, the Wells Master Plan is systematically upgrading wells and facilities to current standards. This includes rehabilitating wells, replacing aging equipment, and considering seismic resiliency. At the time of this plan, EPA has established a new PFAS rule and the State is in the process of determining how the rule will be enforced. Tacoma Water anticipates PFAS Treatment will be needed for some or all groundwater supply. General costs have been included in the Capital Improvement Plan for financial planning, which will be updated once specific PFAS Treatment needs are identified.

Water Operations Warehouse Building

The Water Operation Building (WOB) is essential for housing water employees and resources. A 1996 assessment identified it as structurally deficient. In 2015, further assessments predicted potential collapse or severe damage in major earthquakes. The 2024 master plan identified a phased replacement. The proposed master plan aims to construct a new warehouse, shops and loading dock facility to ensure safety, access post-seismic events, and accommodate future growth. Phase 1 is developing a new warehouse and shops. Future phases will provide office space for the Utility and other improvements to meet operational needs.

Howard A. Hanson Additional Water Storage Project and Related Projects

The Howard A. Hanson Dam Additional Water Storage Project (HAHD AWSP) Phase I is being completed by establishing downstream fish passage. Tacoma has invested in fish passage facilities and the HAHD AWSP USACE team has secured partial funding and is working towards full federal funding to complete the downstream fish passage by 2030. The HAHD AWSP Phase 1 project aims to support water supply and ecosystem restoration, providing 20,000 acre-feet of water storage. Tacoma is committed to funding its share through the Federal Project Cooperation Agreement signed in 2003. To support fish passage, the upstream fish passage facilities, constructed in 2006, require upgrades for full-scale operation.

Tacoma Water will also renew previously constructed fish habitat. Additional operational improvements are planned to support the planned construction and fish passage activities.

Main Replacement Projects

Main replacement projects are identified through multiple factor evaluation, including economics, capacity, risk, and maintenance. Tacoma Water often partners with other City of Tacoma departments to share the cost of common projects, such as resurfacing, resulting in lower costs for our rate payers. The CIP includes already identified projects and general funding for yet to be identified projects. Additionally, Tacoma Water continues to remove galvanized mains from our distribution system, which typically are in relatively poor condition and have limited capacity.

11.4. Future Projects

Tacoma Water identifies major future projects for infrastructure and financial planning purposes. These projects are typically large and anticipated to occur outside the CIP time period. Future projects may also need further investigation to support budgeting. Tracking these projects facilitates accelerating project initiation when conditions change, such as new regulations, greater than expected growth, or available funding and staff resources.

11.4.1. Highlighted Programs and Projects

Select future projects are described below.

Muckleshoot Indian Tribe Green River Fish Restoration Facility

Tacoma Water committed under the 1995 Muckleshoot Indian Tribe (MIT) Agreement to support the development of the Fish Restoration Facility (FRF) on the Green River. The MIT has requested this work begin to support fish restoration once Howard Hanson Dam downstream fish passage is completed. While driven by the HAHD AWSP Phase 1 Project, this work is not part of the USACE scope and requires separate funding. The project includes assisting MIT in acquiring up to 35 cfs of non-consumptive surface water rights and developing supply and conveyance systems to deliver water to the FRF.

Additionally, it involves acquiring and developing 2 cfs of groundwater for fish incubation. The project also requires transferring riverfront properties to MIT and adjusting existing easements. Tacoma Water is conducting pre-design analysis in 2025 that will identify a future budget request and implementation schedule. Timing will be driven by MIT needs and the ability to implement the required major infrastructure.

Water System Consolidation

Tacoma Water is a regional water provider, recognizing the importance of delivering safe and reliable drinking water to our region. Occasionally, adjacent utilities may request new wholesale water or consolidation. Tacoma Water evaluates each request based on the customer service manual, policies outlined in Table 2-3 Department of Health and Tacoma Water Policies, and technical analyses. In general, Tacoma Water requires any acquired systems to be brought up to our standards at their cost, as to not burden our existing customers. Cost recovery may be through an upfront charge or a bill surcharge until the cost is met.

McMillin Master Plan and 3rd Cell

The McMillin reservoir site is crucial for Tacoma Water, housing staff and equipment that serve rapidly expanding areas of Pierce County, as well as key infrastructure like the two 33-million-gallon (each) reservoirs, McMillin Operations building, and McMillin Pump Station No. 2. A 3rd 33-million-gallon reservoir is planned for approximately 2045. Tacoma Water is evaluating addressing aging infrastructure and additional future needs at the site, considering the Pipeline 1 Pressurization Program, future demand growth, system growth, seismic resiliency, and emerging contaminants. This may include additional warehouse and office space, a microwave tower, solar energy generation, fleet services, regulatory compliance staff, and infrastructure renewal.

Pipeline 2 Replacement Program

Pipeline 2 concrete pipe sections condition varies, with some sections needing repeated repairs and in one case a new lining. Repairs to Pipeline 2 are currently completed on an as-needed basis. As the pipeline ages, it is anticipated that programmatic renewal will be needed. Renewed transmission main infrastructure would also improve seismic resiliency.

Headworks Master Plan Program

A Headworks Master Plan was completed in 2024. Phase 1 projects are included in the CIP Table. Phase 2 projects (estimated to 2044) will complete the bulk of the identified improvements, including:

- New Operations Center, Emergency Operations Center, Visitor and Education Center, additional shared conference space, and associated parking and stormwater improvements.
- Removal of all structures and critical infrastructure from the 100-year floodplain.
- New plant nursery facilities.
- Significant structural & seismic upgrades to existing buildings.
- Level 2 Electric Vehicle (EV) charging stations and solar panel installation.

Phase 3 projects (estimated to 2054) are reserved for improvements and upgrades that are not anticipated to be complete during the 20-year buildout as well as the following:

- New Level 3 Electric Vehicle (EV) charging station.
- Modest structural upgrades to existing support facilities.

Water Operations Building Master Plan Phase 2

The Water Operation Building (WOB) is essential for housing water employees, equipment, and resources. Identified as vulnerable to earthquakes in 2015 and undersized in 2021, it requires significant upgrades. Phase 1 of the Master Plan proposes a new Warehouse/Shops and Loading dock facility, while Phase 2 aims to convert the WOB into additional office space and storage areas. Current staff locations across two buildings are inefficient and costly. The project seeks to enhance safety, operational effectiveness, and accommodate future growth by exploring demolition or seismic upgrades.

Green River Filtration Facility (GRFF) Long-Term Plan

Downstream Fish Passage at Howard Hanson Dam will increase conservation storage and allow fish passage, thereby increasing supply resilience and flexibility. However, these changes will alter water flow and potentially impact raw water quality. The project will address potential issues such as warmer water release, changes in water chemistry, and increased organics. There is also a concern about potential

algae or cyanotoxin growth, which is not well understood. A planned 2025 project will review the water quality issues and develop a risk mitigation framework. These are anticipated to include further monitoring, previously planned additional filters and sedimentation basin with related solids handling, potential changes to ozone and chemical addition, and other operational improvements.

System Resiliency Improvements

A number of seismic improvements are planned long-term. These projects are intended to increase the resiliency of infrastructure during and following seismic events that were identified in the Vulnerability Assessment as being at higher risk during an earthquake (critical infrastructure with higher likelihood of failure).

11.5. Asset Rehabilitation and Replacement Program

Tacoma Water is completing Life-Cycle asset repair and replacement planning. This includes formalizing programmatic work efforts to maintain our pump stations, reservoirs, pressure reducing valves, treatment facilities, and wells. Due to the relatively good condition of our facilities, much of this work is planned for the medium- to long-term.

Table 11-1 Tacoma Water Only Capital Improvement Plan 2025-2034

TACOMA ONLY	Carryforward	'25	'26	'27	'28	'29	'30	'31	'32	'33	'34
General	8,004,449	6,481,239	2,707,072	6,373,502	4,873,501	3,750,337	3,750,337	5,671,290	5,671,289	3,087,224	3,087,224
2025/2026 Unanticipated Project Contingency		650,000	650,000	650,000	650,000	650,000	650,000	650,000	650,000	650,000	650,000
AI for Quality Assurance		99,164	-								
Enterprise Asset Management Solution - Phase 1		225,000	225,000	1,500,000	-	-	-	-	-	-	-
Land Acquisition Contingency		250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000
MyAccount Value Stream		360,798	360,797								
Smart Water Program, DMA Project 2	50,000	696,500	696,500	790,000	790,000	790,000	790,000				
Telephony Modernization - Phase 1		197,399	197,398								
Water Fleet Replacement	7,954,449	327,378	327,377	3,183,502	3,183,501	2,060,337	2,060,337	4,771,290	4,771,289	2,187,224	2,187,224
Water GIS Utility Network Migration		3,675,000	-								
Water Distribution	1,219,510	10,925,097	6,260,147	8,605,576	5,450,000	5,450,000	5,239,088	5,639,798	5,450,000	5,450,000	5,450,000
Blow-Off Capital Replacements Program		150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000
Capital Hydrant Program		300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000
Capital Meter Replacement Program		500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000
Capital Valve Program		225,000	225,000	225,000	225,000	225,000	225,000	225,000	225,000	225,000	225,000
Curran Road System Improvements Program		2,255,259	1,868,652	3,055,000	-	-	-	-	-	-	-
Decant Facility 2nd flocculation tank		-	143,332	356,668	-	-	-	-	-	-	-
Water Division Projects (WDP)		100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
Water Service Replace and Renewals		2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000
Franchise Required Projects (FRP)	-	475,500	466,300	183,000	175,000	175,000	175,000	175,000	175,000	175,000	175,000
Main Replacement Projects Model Driven	943,000	4,919,338	506,863	1,735,908	2,000,000	2,000,000	1,789,088	2,189,798	2,000,000	2,000,000	2,000,000
Curran Rd Bingham Stub Eval	186,510										
High Cedars PRV Station Demolition	40,000										
Lawrence St. & 40th Valve Replacement	20,000										
MRP 2021-0068 Prairie Line Trail	20,000										
MRP 2021-16 E 64th St Phase 2	10,000										
Water Source & Transmission	2,650,627	8,948,575	32,079,652	24,793,465	10,275,269	15,579,899	10,981,141	10,155,200	10,079,997	10,303,047	24,351,589
134th St E & Canyon View Blvd E Temporary Pumping Improvements		54,000	-	-	-	-	-	-	-	-	-
214th PS MCC Replacement		-	-	240,000	-	-	-	-	-	-	-
356th Pump Station Flow Control Modifications		-	-	-	-	-	-	-	96,349	231,925	446,726
Bismark and Fletcher Heights Standpipes' Re-Lining and Sanitary Improvement Project		-	-	-	-	-	-	-	-	125,000	125,000
Bismark Standpipe Intrusion Alarms		50,000	-	-	-	-	-	-	-	-	-
Build Microwave tower at J Street, Tear down J Street Standpipe		-	-	-	189,052	743,256	367,692	-	-	-	-
Cascadia Reservoir and PS		325,658	2,400,454	10,495,909	77,979	-	-	-	-	-	-
Condition and Sanitary Deficiency Correction for North End Site		-	-	175,000	1,650,000	1,175,000	-	-	-	-	-

Table 11-1 Tacoma Water Only Capital Improvement Plan 2025-2034 Continued

TACOMA ONLY	Carryforward	'25	'26	'27	'28	'29	'30	'31	'32	'33	'34
Eagle Lake Siphon		-	-	-	-	-	-	-	-	-	84,709
Fixed Ladder & Anchor Points		110,234	264,766	-	-	-	-	-	-	-	-
Fletcher Heights Standpipe Intrusion Alarms		50,000	-	-	-	-	-	-	-	-	-
GPL Wells Improvement and Treatment		-	-	-	-	-	-	-	-	-	1,550,000
Hood St Reservoir Overflow Check Valve		3,241	35,704	61,055	-	-	-	-	-	-	-
Hood Street Onsite Sodium Hypochlorite Generator Replacement		-	-	-	-	40,000	610,000	-	-	-	-
Hood Street Reservoir Overflow Sanitary Correction		-	-	-	21,504	192,761	785,736	-	-	-	-
Indian Hill Reservoirs Overflow Check Valve		-	36,456	63,544	-	-	-	-	-	-	-
Indian Hill Reservoirs Overflow Sanitary Correction		-	-	-	-	-	-	-	46,791	311,653	241,557
Land Mobile Radio System (LMRS) Upgrade		-	-	-	-	-	-	700,000	500,000	-	-
McMillin Microwave Tower	13,000	20,000	20,000	150,000	1,420,000	-	-	-	-	-	-
McMillin PS2 Electrical Improvements	733,627	-	-	-	-	-	-	-	-	-	-
Microwave Radio System Upgrade		-	-	-	-	-	-	650,000	450,000	-	-
North End Reservoir MCC Replacement		-	90,000	-	-	-	-	-	-	-	-
North End Reservoir Standpipe Overflow Check Valve		2,441	70,015	127,544	-	-	-	-	-	-	-
North End Reservoir Tank Intrusion Alarms		50,000	-	-	-	-	-	-	-	-	-
P1 Maintenance Bridge Handrail at the Green River Steep Slope		-	32,258	206,477	56,265	-	-	-	-	-	-
Pipeline No. 1 Pressurization Program	-	4,740,000	7,660,000	8,142,857	3,057,143	8,750,000	8,750,000	8,750,000	8,750,000	8,750,000	19,300,000
Prairie Ridge Reservoir Roof		-	-	-	-	-	-	55,200	236,857	730,470	57,473
Prairie Ridge Site 2nd Reservoir		-	-	-	-	-	-	-	-	104,000	1,366,000
Prairie Ridge Springs Tank Intrusion Alarms		20,000	60,000	-	-	-	-	-	-	-	-
Redundant Supply for 446 North Pressure zone		-	-	76,959	340,943	7,097	-	-	-	-	-
Replace aging Holiday testers with current technology and safer equipment.		10,000	-	-	-	-	-	-	-	-	-
Replace leaking zone valve at S 64th and S J St		-	-	-	-	55,286	4,714	-	-	-	-
Shirley St and N 31st Low Pressure Area		-	-	39,119	53,784	7,097	-	-	-	-	-
Structural Concerns on Elevated Pipeline 1 Supports near the Maintenance Bridge		100,000	-	-	-	-	-	-	-	-	-
Sunrise Standpipe Drainage, Coating, and Corrosion Issues		-	-	-	96,599	213,401	-	-	-	-	-
Sunrise Standpipe Intrusion Alarms		10,000	40,000	-	-	-	-	-	-	-	-
Sunrise Standpipe: Monitoring Equipment Upgrade		-	73,000	-	-	-	-	-	-	-	-
Water Operations Master Plan Phase 2 Upgrades		-	-	-	-	-	-	-	-	-	200,000
Water Operations Warehouse Building		3,403,000	21,297,000	4,000,000	-	-	-	-	-	-	-
Wells Master Plan	1,074,000	-	-	1,015,000	3,312,000	4,396,000	463,000	-	-	-	-
McMillin PS1 Upgrade	60,000	-	-	-	-	-	-	-	-	50,000	980,125
Pipeline No. 1 - Bridge and Safety Issues vicinity of STA H131+13	200,000	-	-	-	-	-	-	-	-	-	-
PL 1 Puyallup river crossing, bridge and pipe abatement and coating	200,000	-	-	-	-	-	-	-	-	-	-
Cathodic Protection - Impressed Current Wells	300,000										
Power Service to Cumberland Tank	70,000										
Water Treatment	103,000	465,000	1,595,000	1,590,000	23,335,000	22,890,000	465,175	902,501	812,324	345,000	2,045,000
2025-2026 Dedicated Sample Stations		15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000

Table 11-1 Tacoma Water Only Capital Improvement Plan 2025-2034 Continued

TACOMA ONLY	Carryforward	'25	'26	'27	'28	'29	'30	'31	'32	'33	'34
Built Forestland Assets		150,000	30,000	25,000	20,000	75,000	75,000	80,000	80,000	30,000	30,000
Finished Water Standpipe Downstream Isolation		-	-	-	-	-	75,175	507,501	417,324	-	-
MIT Agreement General Trust Fund		300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	2,000,000
South Tacoma Wells PFAS Treatment		-	1,250,000	1,250,000	23,000,000	22,500,000	-	-	-	-	-
Hood St Chlorination System Improvements	55,000										
West McDonald Genset & Batteries	48,000										
Grand Total	11,977,586	26,819,911	42,641,871	41,362,543	43,933,770	47,670,236	20,435,741	22,368,789	22,013,611	19,185,271	34,933,813

Table 11-2 RWSS Cost Share Eligible Capital Improvement Plan 2025-2034

RWSS - TOTAL PROJECT BUDGET	Carryforward	'25	'26	'27	'28	'29	'30	'31	'32	'33	'34
General	76,042	398,030	398,029	460,071	460,071	466,875	466,874	684,394	684,394	396,456	396,455
GRFF Visitor & Access Control Solution		200,000	200,000	-	-	-	-	-	-	-	-
RWSS Fleet Replacement	76,042	198,030	198,029	460,071	460,071	466,875	466,874	684,394	684,394	396,456	396,455
Water Source & Transmission		151,000	353,000	50,000	340,000	210,000	-	1,130,000	3,280,000	2,350,000	-
12.5kV Genset Load Banking		-	-	30,000	210,000	-	-	-	-	-	-
Backwash Tank Refill Flow Control		100,000	300,000	-	-	-	-	-	-	-	-
Covington Turnout Generator & ATS Replacement		4,000	20,000	-	-	-	-	-	-	-	-
Fluoride HMI/RTU Relocation & Profinet Conversion		47,000	33,000	-	-	-	-	-	-	-	-
Headworks Radio System (VHF) Upgrade		-	-	-	-	-	-	-	700,000	500,000	-
Piling Creek Bridge Electrical		-	-	20,000	130,000	-	-	-	-	-	-
Second Primary Electrical Feed to GRFF		-	-	-	-	210,000	-	780,000	780,000	-	-
Tacoma Water 2032 SCADA Network Modernization		-	-	-	-	-	-	350,000	1,800,000	1,850,000	-
Water Treatment	415,491	19,630,192	10,888,649	13,304,650	9,961,449	5,456,839	9,671,060	3,600,000	958,572	1,246,428	1,124,356
Chemical Tank Replacements		-	-	130,000	520,000	1,600,000	1,550,000	-	-	-	-
Fish Habitat Mitigation & Restoration		1,333,785	4,013,548	5,895,896	5,895,895	1,814,100	1,814,100	-	-	-	369,356
Fish Passage Facility Upgrades	66,615	759,207	835,901	2,867,923	2,439,550	832,784	19,951				
Green River Filtration Facility Stormwater Control		-	-	-	-	-	-	-	208,572	491,428	-
GRFF Critical Pump and Motor Spares		30,000	300,000	-	-	-	-	-	-	-	-
GRFF Sedimentation Sludge Scraper Study		-	-	-	-	-	600,000	2,800,000	-	-	-
Headworks Fueling Upgrades		-	-	-	-	-	100,000	250,000	200,000	-	-
Headworks Gate Access Control & Security Improvements		-	-	76,031	209,045	114,924	-	-	-	-	-
Howard Hanson Additional Water Storage Project		10,720,000	352,000	352,000	368,000	368,000	368,000				
Impact of Fish Passage Work on Pipeline 5 near SR169		49,500	92,500	127,300	-	-	-	-	-	-	-

Table 11-2 RWSS Cost Share Eligible Capital Improvement Plan 2025-2034 Continued

RWSS - TOTAL PROJECT BUDGET	Carryforward	'25	'26	'27	'28	'29	'30	'31	'32	'33	'34
Impact of SR167/SR509 Relocation on Pipeline 5		52,700	1,114,700	1,855,500	-	-	-	-	-	-	-
Install Isolation for Filter Effluent Valves								-	-	155,000	155,000
Ozone System Upgrades		3,615,000	3,500,000	1,000,000	-	-	-	-	-	-	-
Piling Creek Bridge		-	-	500,000							
Raw Water Conduit Bridge AND Pipe Recoating		-	-	-	53,960	227,031	4,719,009	-	-	-	-
RWSS Major Electrical Equipment		100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
RWSS Major Treatment and Equipment		150,000	150,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
RWSS NF Wells R&R		100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
RWSS Watershed Betterments		225,000	200,000	125,000	100,000	125,000	125,000	175,000	175,000	225,000	225,000
RWSS Watershed Tools		75,000	60,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000
Upper Green River Water Monitoring		30,000	70,000	-	-	-	-	-	-	-	-
Chemical Feed Lines at GRFF	348,876										
Pipeline No. 5 Relocation to Accommodate BPA Tower Installation		2,390,000	-	-	-	-	-	-	-	-	-
Grand Total	491,533	20,179,222	11,639,678	13,814,721	10,761,520	6,133,714	10,137,934	5,414,394	4,922,966	3,992,884	1,520,811

12. Financial Plan

This Chapter summarizes Tacoma Water’s financial management and demonstrates that the utility can fund its planned capital improvements. Tacoma Water’s Financial Stewardship section analyzes the utility’s revenue requirement at least every two years to determine if rates are adequate. Tacoma Water typically implements gradual annual rate adjustments to keep up with inflationary cost increases and meet anticipated needs.

The Regional Water Supply System (RWSS) is a partnership that was formed to develop and maintain the Second Supply Project (SSP). The four participants are Tacoma Water, City of Kent, Lakehaven Water and Sewer District, and Covington Water District. Each participant’s share represents a proportional right to receive, and obligation to pay for, water delivered by the Second Supply Project. This chapter includes only the portion allocated to Tacoma Water.

12.1. Rate and Financial Policies

Rate and Financial policies along with the Tacoma Public Utility Board’s Guiding Principles, provide direction for the responsible management of the utility. These policies guide planning decisions and provide consistent direction in support of rates that are as low as is responsible while maintaining financial sustainability and stability. Staff conducts regular quantitative and qualitative reviews and recommends updates for approval by the Tacoma Public Utility Board. Final approval is required by the Tacoma City Council in order to adopt updated rate and financial objectives and policies. The Tacoma City Council adopted updates to the Water Rate and Financial Policy in November 2024 (Resolution No. 41559). The purpose of the rate and financial policies is to ensure robust supply of safe, clean water to all customers efficiently, reliably and at the lowest responsible cost consistent with prudent utility management. The policy is organized into five objectives:

- Water rates should ensure water quality and robust supply
- Water rates should be as low as responsible
- Water rates should be fair and equitable
- Water rates should be based on long-term planning and adjusted gradually
- Water rates should be the product of customer involvement

12.1.1. Past and Present Financial Status

Tacoma Water has consistently maintained a strong financial position with total operating and capital reserve fund balances above policy minimums. The balances include responsible, planned spend-down of the reserves in support of Rate and Financial Policy objectives. Historically the utility has strong debt service coverage and liquidity. Table 1 shows historical financial results, financial ratios, ending fund balances and rate increases. Table 2 below provides projected financials for the next 5 years and shows a continued pattern of strong fund balances and debt service coverage.

Table 12-1 – Historical Financials

(\$ Thousands)	2019	2020	2021	2022	2023
Operating Revenue	\$97,638	\$99,673	\$106,206	\$109,390	\$117,048
Non-Operating Revenue (Expense)	8,826	5,801	1,298	-1,770	13,329
Build America Bond Subsidy	2,793	2,825	2,810	2,803	2,803
System Development Charge	2,418	2,078	3,546	1,908	3,207
Transfer From Rate Stabilization Account	-	-	-	-	-
Total Revenue Available	111,675	110,377	113,860	112,331	136,388
Tacoma Share of RWSS Debt Service (CRO Operating Expense)	3,669	3,683	3,734	3,754	3,826
Other Operating Expenses less Depreciation	53,525	55,288	59,972	58,578	74,005
Net Revenue Available for Debt Service Senior Lien	\$54,481	\$51,406	\$50,154	\$49,999	\$58,557
Senior Debt Service (Water Bonds)	18,712	18,782	18,272	18,229	17,628
Gross Earnings Tax Transfer to City of Tacoma	8,020	7,816	8,307	8,729	9,789
Tacoma Share of RWSS Debt Service (CRO)	3,669	3,683	3,734	3,754	3,826
Net Revenue Available for Debt Service All In*	\$50,130	\$47,273	\$45,581	\$45,024	\$52,594
Junior Lien Debt Service	7,946	7,438	7,408	6,630	6,300
Total All In Debt Service (Senior + Tacoma RWSS + Junior)	30,327	29,903	29,414	28,613	27,754
Ratios and Other					
Debt Service Coverage - Senior Lien	2.91	2.74	2.74	2.74	3.32
Debt Service Coverage – All In*	1.65	1.58	1.55	1.57	1.90
Year End Operating Fund Balance	\$68,000	\$66,638	\$62,483	\$60,380	\$59,956
Year End SDC Fund Balance	\$73,294	\$77,260	\$78,768	\$80,044	\$65,005
Year End Capital Reserve Fund Balance	\$38,261	\$41,221	\$33,159	\$14,965	\$18,219
Days Cash on Hand	1,146	1,146	999	910	671
Adopted Rate Increase	2.5%	2.5%	1.5%	2.0%	4.0%

*Includes subordinate debt and gross earnings transfers to the City of Tacoma, Tacoma Share of RWSS debt service payments (not as CRO operating expense)

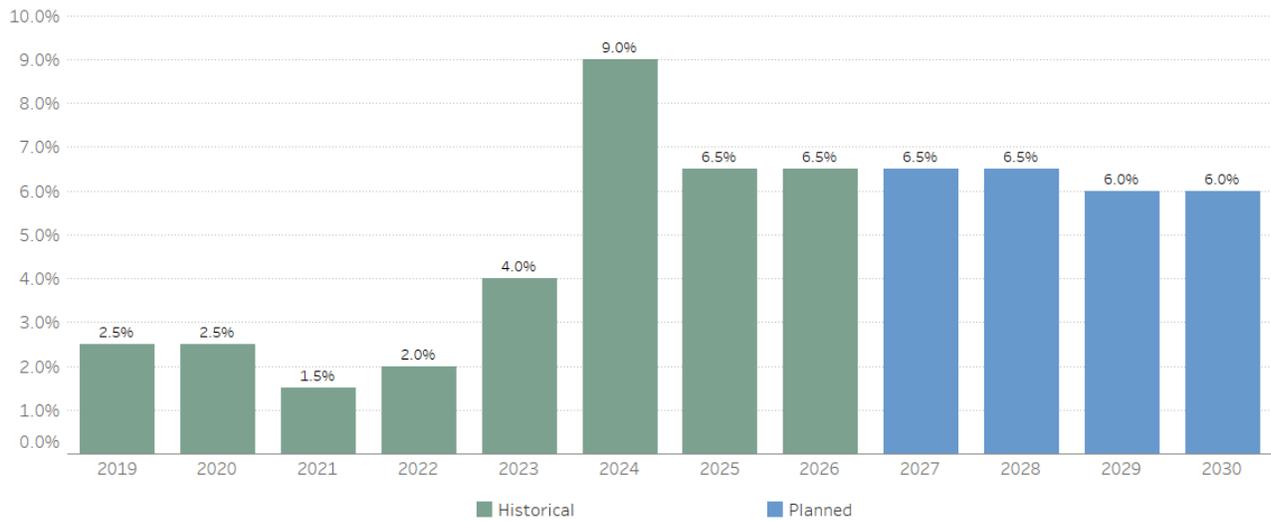
Table 12-2 – Projected Financials

(\$ Thousands)	2024	2025	2026	2027	2028
Operating Revenue	\$112,638	\$123,552	\$131,772	\$140,608	\$150,077
Non-Operating Revenue (Expense)	2,989	527	574	574	574
Build America Bond Subsidy	2,797	2,764	2,723	2,558	2,465
System Development Charge	2,041	3,000	2,500	2,500	2,500
Transfer From Rate Stabilization Account	-	12,000	5,000	-	-
Total Revenue Available	120,465	141,843	142,569	146,240	155,616
Tacoma Share of RWSS Debt Service (CRO Operating Expense)	4,876	4,360	4,360	4,360	4,358
Operating Expenses less Depreciation	80,601	91,329	93,343	96,864	100,491
Net Revenue Available for Debt Service Senior Lien	\$34,988	\$46,154	\$44,866	\$45,016	\$50,767
Senior Debt Service (Water Bonds)	15,962	18,517	22,174	22,081	28,511
Gross Earnings Tax Transfer to City of Tacoma	8,833	9,563	10,223	10,927	11,683
Tacoma Share of RWSS Debt Service (CRO)	4,876	4,360	4,360	4,360	4,358
Net Revenue Available for Debt Service All In*	\$31,031	\$28,951	\$34,003	\$38,449	\$43,442
Junior Lien Debt Service	6,209	6,137	6,074	5,640	5,578
Total All In Debt Service (Senior + Tacoma RWSS + Junior)	27,047	29,014	32,608	32,080	38,448
Ratios and Other					
Debt Service Coverage – Senior Lien	2.19	2.49	2.02	2.04	1.78
Debt Service Coverage – All In*	1.15	1.00	1.04	1.20	1.13
Year End Operating Fund Balance	\$59,900	\$47,167	\$39,674	\$38,922	\$36,569
Year End SDC Fund Balance	\$58,700	\$27,149	\$29,731	\$32,172	\$34,779
Year End Capital Reserve Fund Balance	\$17,300	\$12,433	\$17,097	\$13,921	\$19,059
Projected Days Cash on Hand	580	331	323	307	315
Adopted and Projected Rate Increases	9.0%	6.5%	6.5%	6.5%	6.5%

*Includes subordinate debt and gross earnings transfers to the City of Tacoma, Tacoma Share of RWSS debt service payments (not as CRO operating expense)

Tacoma Water rates are based on long-term planning and adjusted gradually in support of financial stability and sustainability. The following chart provides the historical and projected rate adjustments. The approved rate increase in 2024 includes 4% approved in 2022 plus an additional mid-biennium 5% system average increase due to the unprecedented closure of Tacoma Water’s largest customer, the WestRock Tacoma mill. The approved rate increases in 2025 and 2026 were 6.5% annually. Rates are projected to increase 6.5% each year in 2027 and 2028, and 6.0% each year in 2029 and 2030.

Figure 12-1 - Historical and Planned Rate Adjustments



Projections for 2027-2030 are subject to change, and is dependent upon actual financial performance in future years. Projections are from the 2025-2026 Base Case.

12.2. Sources and Uses of Funds

Water utilities develop a revenue requirement to determine revenue needed for funding operational and capital expenditures. A revenue requirement compares sources of funds to the uses of funds to determine if the current rates are fully funding the utility’s financial obligations.

12.2.1. Sources of Funds

Rate Revenue

Nearly 90% of Tacoma Water’s revenue is from rates charged for water service, as shown in Figure 2. Tacoma Water’s customer classes include:

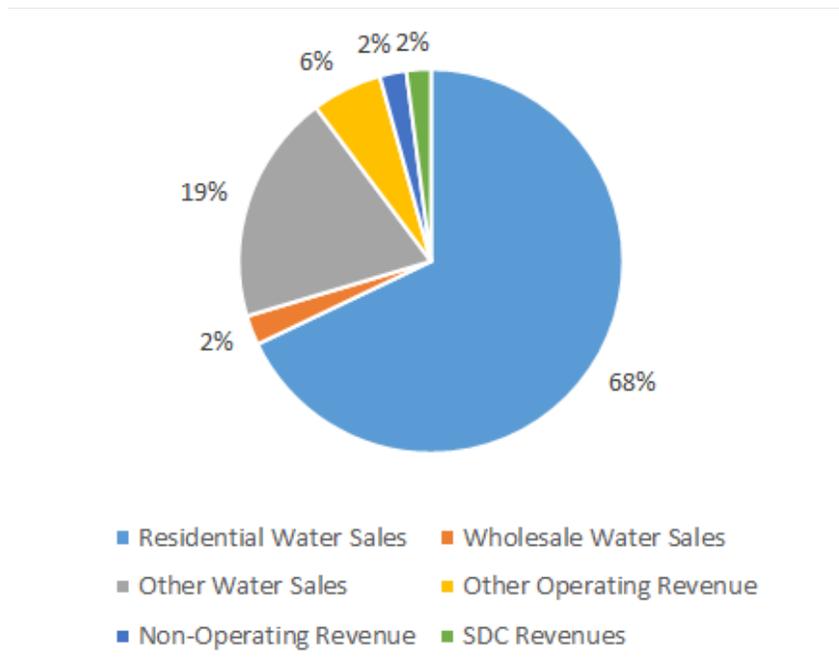
- Residential
- Commercial/Industrial – General
- Commercial/Industrial – Large Volume
- Parks and Irrigation
- Private Fire
- Wholesale

Other Revenue

Tacoma Water has established two special funds that provide flexibility in ensuring timely acquisition, replacement and upgrade of the Utility’s water system infrastructure and capital assets. The Capital Reserve Fund can be budgeted on a biennial basis as revenues become available for appropriate capital projects. Proceeds from the sale of surplus property, timber sales, and other one-time revenues may be deposited to this fund. The System Development Charge Fund is intended to provide funding for source development, transmission, storage and related facilities. Proceeds from new services are subject to a System Development Charge (SDC) charge and are deposited to this fund.

Tacoma water also has a number of smaller sources of revenue such as contract revenue from Cascade Water Alliance, late fees, fees for turn on or turn off, rental and easement revenue, interest earned on cash balances, and Build America Bond interest subsidy.

Figure 12-2 – Breakdown of Revenue Sources 2025/26 Biennial Budget



12.2.2. Uses of Funds

Operation and Maintenance

Tacoma Water’s budget is organized into six sections representing the functions of the utility, Water Administration (The Superintendent Office), Customer & Financial Services, Business Services, Source Water & Treatment Operations, Maintenance & Construction, and Planning & Engineering. Expenditures

are also categories as personnel costs, general government and Tacoma Public Utility internal service assessments, taxes, supplies, services, and other charges.

Figure 12-3 – Breakdown of Operating Expenses by Section 2025/26 Biennial Budget

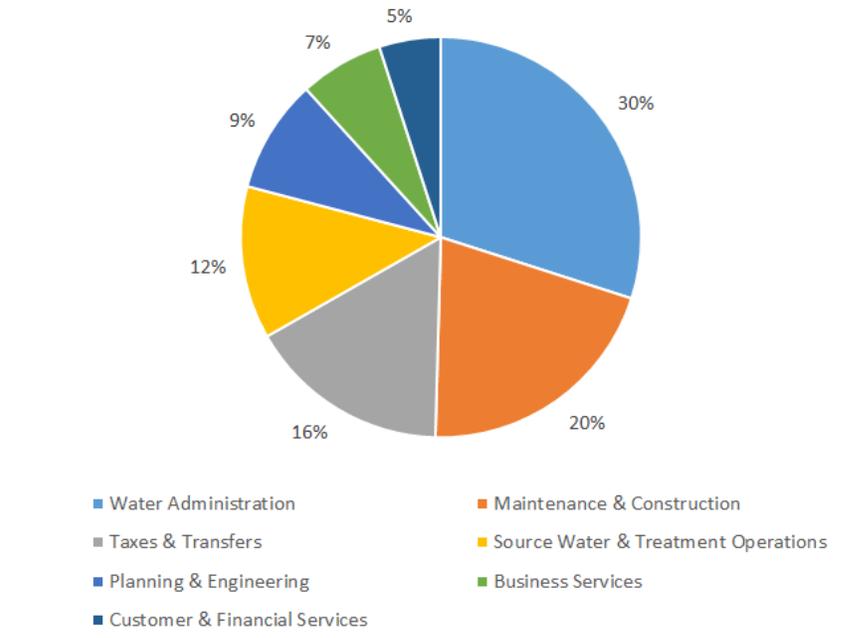
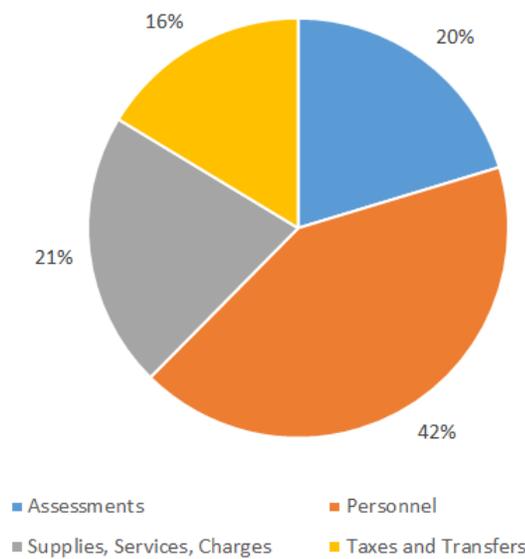


Figure 12-4 – Breakdown of Operating Expenses by Category 2025/26 Biennial Budget



12.2.3. Debt Service

Responsible use of debt funding for capital costs is an effective way to support gradual rate adjustments and eliminate sudden rate spikes, as well as provide generational equity, spreading a portion of those capital costs to future users of the system. Moody’s upgraded Tacoma Water’s credit rating to Aa1 in January 2024 while Standard and Poor’s reaffirmed the AA+ rating earned in April 2022, helping to keep borrowing costs low. These ratings are a result of the broad and diverse customer base, robust liquidity and strong debt service coverage, ample supply, and strong financial policies and planning.

12.2.4. Taxes

Tacoma Water customers pay a state utility tax and a local tax imposed by the City of Tacoma. The Washington State Tax for water utilities is 5.029% and the local City tax is 8% of gross revenue. In addition, customers in the City of University Place are subject to an additional City of University Place Utility tax of 6% of gross revenue earned in that jurisdiction.

12.2.5. Funding the Capital Improvement Plan

Table 3, the Capital Funding Plan shows how the utility is planning to fund future capital improvements. The mixture of funding sources is comprised of System Development Charges, Capital Reserves, Operating Reserves and Rate Revenue, and new revenue bonds. Table 3 also contains the ending fund balances for the two main reserves for funding capital. Throughout the analysis period the ending fund balances for the SDC and Capital Reserve Funds maintain balances above their minimum targets.

12.3. Assessment of Rates

12.3.1. Existing Rate Structure

Tacoma Water’s current rates are a combination of a ready to serve charge and consumption charges. The ready to serve charge varies depending on the size of the customer’s meter. The consumption charge is based on the quantity of water used. Current rates can be found at the link listed at the end of this chapter. Customers outside of City limits are charged a 20% differential for their rates.

12.3.2. Affordability

Tacoma Water policies support the development of rates that are as low as is responsible, while managing financial sustainability and stability for the utility. As of 2024, the average residential drinking water bill for customers inside the city of Tacoma was approximately 0.6% of area median income. Compared to the EPA affordability benchmark of 2.5%, Tacoma Water’s rates are considered affordable for most customers. Tacoma Water offers two programs for income-constrained customers. The first option provides a 35% discount to qualifying low-income senior and/or low-income disabled residential customers. Alternatively, the Bill Credit Assistance Program (BCAP) provides an automatic monthly credit of \$8 for customers that meet the income threshold, with an additional \$5 credit per month if bills are paid in-full and on-time.

Table 12-3 - Capital Funding Plan

(\$ Thousands)	2024	2025	2026	2027	2028
Tacoma Capital Improvement Plan	\$ 36,376	\$ 45,046	\$ 44,508	\$ 48,565	\$ 49,585
Less:					
Capital Funded from SDC Fund	18,025	34,419	-	-	-
Capital Funded from Capital Reserve Fund	5,659	8,627	-	8,072	-
Reserve Funded Capital	12,692	2,000	2,000	-	-
Total Tacoma Debt Funded Capital	\$ -	\$ -	\$ 42,508	\$ 40,493	\$ 49,585
Year End SDC Fund Balance	\$ 58,700	\$ 27,149	\$ 29,731	\$ 32,172	\$ 34,779
Year End Capital Reserve Fund Balance	\$ 17,300	\$ 12,433	\$ 17,097	\$ 13,921	\$ 19,059

12.4. Links to relevant materials

Current rates: [City of Tacoma Municipal Code Title 12 Utilities](#)

[Tacoma Water Rate and Financial Policy](#)

[Tacoma Water Long Range Financial Plan](#)

[2023 Audited Tacoma Water Financial Statements](#)

Appendix A: Consistency Statement, Correspondence, Plan
Comments and Public Information Materials

Appendix A5 – Amendment Local Government Consistency (To be Completed)

Appendix A6 – Amendment Correspondence (To be Completed)

Appendix A7 – Amendment Water System Plan Comments (To be Completed)

Appendix A8 – Amendment Public Meeting Information Materials
(To be Completed)

Appendix B: Checklists (DOH).

	✓/Required	Content Description	WSP Page #
Chapter 1		Description of Water System	
	(✓)	Ownership and management	_____
	(✓)	System history and background	_____
	(✓)	Related plans: Coordinated Water System Plan (CWSP), WRIA, groundwater mgmt., land use and zoning	_____
	(✓)	Service area map(s): Should clearly show the service area, including the retail service area, future service area, and water rights place of use. These can be depicted on one map if properly labeled. SEE DOH Pub# 331-432 & 331-391 for map update to DOH SWAP	_____
	(✓)	Facilities map: Showing the system's existing facilities, including sources, interties, distribution, storage, pump stations, PRVs, and treatment.	_____
	(✓)	Policies: Service area, SMA, conditions of service, annexation, ADU. See DOH Pub# 331-438	_____
	(✓)	Duty to serve ★: identify T & R with timeframes, process & appeals, service conditions, request for new service. See DOH Pub# 331-366 & 331-444	_____
	(✓)	Consistency from local planning ★ agencies (see above)	_____
Chapter 2		Basic Planning Data	
	(✓)	Analysis of current service population, number and type of connections, & number of ERUs supplied by the system.	_____
	(✓)	Water production and usage data: source and service meter data, monthly/annual production totals for each source, annual usage by customer class/water supplied to other systems, >1000, seasonal variations in consumption by customer class★	_____
	(✓)	Historical total water loss (DSL) — percent and volumes★	_____
	(✓)	Water supply characteristics: description & discussion on factors that affect reliability	_____
	(✓)	Interties: description and agreements	_____
	(✓)	Future water demand: Provide projections for population, service connections and ERUs. Consecutive Up to 5-6 years and 20 th year projections. The approval period can only be as long as the last WSP expiration date. Demand forecasts with & w/o expected efficiency savings★	_____
Chapter 3		System Analysis	
	(✓)	Asset Management: includes source, treatment, storage, and distribution system. Required for DWSRF funding. Free asset inventory spreadsheet available.	_____
	(✓)	Water quality analysis	_____
	(✓)	System design standards	_____
	(✓)	Capacity analysis: legal and physical capacity that shows source, water rights, pumping, treatment, storage, and distribution capacities. Include limiting factor analysis, analysis by pressure zone and whole system and water right self-assessment form for existing, 10 & 20th year projections. Need copies of water right certificates.	_____
	(✓)	Hydraulic analysis of distribution system: describe model used, evaluate the system based on PHD and MDD + fire flow, check minimum pressures and maximum velocities. Include assumptions of model, pressure zone boundary conditions, and a summary of model input information. Storage assumptions should be based on minimum reservoir levels. Include verification and calibration methods and results.	_____
	(✓)	Summary of system deficiencies	_____
	(✓)	Analysis of possible improvement projects	_____

	√/Required	Content Description	WSP Page #
Chapter 4		Water Use Efficiency Program	
	(√)	Source & Service Meters — Provide replacement schedule	_____
	(√)	Distribution System Leakage — If DSL is > 10%, water loss control action plan is required with a CIP schedule & budget line item for control methods	_____
	(√)	Water Use Efficiency Program per WAC 246-290-810; Establish goal(s) at a public meeting with notice to the public at large. DOH offers free 2-week notice prior to public forum. See DOH Pub# 331-375. Describe six measures that will be implemented to achieve the goal(s). Include schedule and costs in the budget. Describe annual consumer education. <	_____
	(√)	Estimate water use savings: Calculate ADD and MDD for consecutive years up to 10 years and 20 th year (coincides with Chapter 2: Demand Forecast).	_____
	(√)	≤1,000 Describe the evaluation process used to select water use efficiency measures.	_____
	(√)	≥1,000 connections explore reclaimed water opportunities★	_____
Chapter 5		Source Water Protection (Check One or Both)	
	(?)	Wellhead protection program: See DOH Pub# 331-018; map with protection zones, contaminant source inventory updated every two years, notification letter templates, contingency plan, legal documentation (covenants, easements)	_____
	(√)	Watershed control program	_____
Chapter 6		Operation and Maintenance Program	
	(√)	Water system management and personnel — who's your back-up? WAWARN	_____
	(√)	Operator certification — List the operator's name, certification numbers and expiration dates	_____
	(√)	Routine operating procedures and preventive maintenance	_____
	(√)	Water quality sampling procedures & program — See WQMS on DOH website	_____
	(√)	Coliform monitoring plan/map — Add Ground Water Rule (GWR), See DOH Pub # 331-447 & 331-036	_____
	(√)	Lead and copper monitoring plan — See DOH Pub# 331-111	_____
	(√)	Emergency program — See DOH Pub# 331-211	_____
	(√)	Water Shortage Response Plan — See DOH Pub# 331-301	_____
	(√)	Cross-connection control program — Provide a copy of the CCC program addressing all 10 elements per WAC 246-290-490. See DOH Pub# 331-744	_____
	(√)	Sanitary Survey Findings	_____
	(√)	Recordkeeping, reporting, and customer complaint program	_____
	(√)	Summary of O&M deficiencies.	_____
Chapter 7		Distribution Facilities Design and Construction Standards	
	(√)	Standard construction specification for distribution mains — if the water system wants to be exempted from submitting projects for new water main installation	_____

	√Required	Content Description	WSP Page #
Chapter 8	(√)	Improvement Program Capital improvement schedule for at least 5-6 years and up to 20 th year. The approval period can only be as long as the last WSP expiration date. Include wish list for DWSRF funding. Dan noted the following projects will be included in the WSP Amendment CIP: Tehaleh area new storage tank and BPS PFAS treatment Canyon Falls Creek BPS – a project that's part of the program to remedy Pipeline 1 fluming Howard Hansen downstream fish passage related projects	11-7
Chapter 9	(√)	Financial Program Balanced operational budget – for up to at least 5-6 years. The approval period can only be as long as the last WSP expiration date. Provide a summary of past income and expenses. Include existing and future loan payments for CIP. Show current and future proposed water rates. Dedicated reserve funds. Evaluation of affordable rate structure encouraging demand efficiency.	12-3
	(√)	Budget line item if Water Loss Control Action Plan is required *	
Chapter 10	(√)	State Environmental Policy Act (SEPA) required for systems with ≥ 1000 connections. Provide copies of the SEPA Environmental Checklist, the SEPA Determination, notice in the newspaper and on the Ecology SEPA registry.	
	(√)	Agreements (intertie, service area, mutual aid, inter local, SMA, franchise, etc.)	
	(√)	Satellite Management Program	
	(√)	Provide documentation of meeting of the consumers and adoption of the plan by the EGB – DOH will advise when the final draft is ready for adoption. Required for DOH approval.	
	(√)	County/Adjacent Utility Correspondence	
	(√)	WFI, signed and dated	

Appendix F

Appendix C: Capital Improvement Program Needs Assessment

Appendix C-1 Tacoma Only Capital Improvement Plan Selected Project Summaries

2025 Water System Plan Amendment

Apr-25
DRAFT

Project or Program Name	Budget Category	Project or Program Summary
2025/2026 Unanticipated Project Contingency	General	The 2025/2026 Unanticipated Project Contingency fund is allocated for reactionary projects within the Tacoma Water system, which contains over \$1 billion of original cost infrastructure. This budget covers the total project costs of plant/equipment failure capital-related expenses, including design, engineering, permitting, procurement, construction, and contract close-out. It does not cover RWSS-shared projects.
AI for Quality Assurance	General	The 'AI for Quality Assurance' project aims to enhance TPU's customer service QA by implementing an AI-enabled conversation intelligence platform. This will allow for 100% sampling of recorded calls with advanced speech analytics, improving agent performance and customer satisfaction while reducing costs.
Enterprise Asset Management Solution - Phase 1	General	The Enterprise Asset Management Solution - Phase 1 project aims to modernize Tacoma Water's EAM activities by configuring SAP Service Cloud, managing asset lifecycle, and integrating existing data. This foundational phase will enhance financial management, reporting, and user experience.
Land Acquisition Contingency	General	The Land Acquisition Contingency project aims to secure funding for purchasing lands that protect water quality or provide operational benefits to Tacoma Water. This includes opportunities within and outside the Green River Watershed, which supplies 90% of Tacoma Water's customers. The project also allocates approximately \$250,000 for additional opportunities.
MyAccount Value Stream	General	The MyAccount Value Stream project aims to enhance TPU's customer portal by adding new features such as online loan payments, guest pay options, and admin portal improvements. These upgrades will improve customer experience and agent productivity, while also enhancing accessibility and data integration.
Smart Water Program, DMA Project 2	General	The Smart Water Program, DMA Project 2 aims to enhance operational awareness in the Tacoma Water System by creating District Metered Areas (DMAs). This will allow for better tracking of water use and loss, improving response to leaks and optimizing water distribution.

Appendix C-1 Tacoma Only Capital Improvement Plan Selected Project Summaries

2025 Water System Plan Amendment

Apr-25

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Project or Program Name	Budget Category	Project or Program Summary
Telephony Modernization - Phase 1	General	The 'Telephony Modernization - Phase 1' project focuses on upgrading telephony services for customer contact to enhance flexibility and scalability. This phase aims to improve the tools used by Customer Services, anticipating better customer and employee experiences.
Water Fleet Replacement	General	The Water Fleet Replacement project involves purchasing vehicles in the next biennium to replace those at the end of their life and to meet business needs. This includes vehicles delayed from the previous biennium due to supply chain issues and replacing vehicles reaching end of life in 2025 and 2026.
Water GIS Utility Network Migration	General	Tacoma Water is upgrading its GIS platform from ArcMap to ArcGIS Pro, transitioning from the Geometric Network to the Utility Network. This migration will enhance modeling, network-enabled applications, and asset maintenance, aligning with Smart Water strategies to improve efficiency and reliability.
Blow-Off Capital Replacements Program	Water Distribution	The Blow-Off Capital Replacements Program ensures that blowoffs are accessible and operational to maintaining water quality at dead-ends and reducing potential property damage in the case of a failure. The Program repairs, replaces, and installs new blow-offs.
Capital Hydrant Program	Water Distribution	The Capital Hydrant Program ensures hydrants provide reliable access to pressurized water for fire protection and other uses. The program reviews hydrant renewal needs, addressing damages, corrosion, and unrepairable hydrants, while coordinating with main work and franchise agreements.
Capital Meter Replacement Program	Water Distribution	The Capital Meter Replacement Program supports the City of Tacoma's AMI program, new meter installations for development, and replacement of failed meters. It ensures accurate consumption for revenue and includes costs for meters, with labor and parts covered by other projects.

Appendix C-1 Tacoma Only Capital Improvement Plan Selected Project Summaries 2025 Water System Plan Amendment

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Project or Program Name	Budget Category	Project or Program Summary
Capital Valve Program	Water Distribution	The Capital Valve Program focuses on replacing broken or malfunctioning valves to minimize customer impact during shutdowns, assist with uni-directional flushing, and improve system reliability during emergencies and planned work. This project ensures the continued integrity and reliability of main valves.
Curran Road System Improvements Program	Water Distribution	The Curran Road System Improvements Program involves water main replacements through 2028 to bring the recently acquired Curran Road Mutual Water System up to Tacoma Water Standards. The work is initially funded by Tacoma Water and recovered through a customer surcharge.
Decant Facility 2nd flocculation tank	Water Distribution	The Decant Facility 2nd flocculation tank project aims to enhance the treatment capacity of the Tacoma Public Utilities Decant Facility, which is crucial for preventing contaminants from entering the sewer system. The project involves coordination with Tacoma Power and Environmental Services, and may include new treatment processes or a new tank.
Franchise Required Projects (FRP)	Water Distribution	Tacoma Water operates as a franchise utility and must relocate its infrastructure as required by franchise agreements. The Franchise Required Projects (FRP) are established to design, construct, and commission these relocations.
Main Replacement Projects Model Driven	Water Distribution	Tacoma Water uses advanced asset management techniques to strategically select water mains for replacement based on risk, lifecycle costs, and net present value. By coordinating with other city departments, they can reduce pavement restoration costs, making it economical to replace mains before their optimal replacement year.
Water Division Projects (WDP)	Water Distribution	The Water Division Projects (WDP) aim to improve service by identifying new main segments based on hydraulic models, new developments, or planned developments. These projects focus on enhancing pressure, water quality, demand, and system reliability. Planning & Engineering initiates WDP requests to complete these distribution main improvements.

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Project or Program Name	Budget Category	Project or Program Summary
Water Service Replace and Renewals	Water Distribution	The Water Service Replace and Renewals project aims to replace water services using the SAMP decision tree alongside other ongoing work by Tacoma Water or other jurisdictions. The funding request covers the replacement of City-side water service lines from the main distribution to the meter, driven by factors such as damages, leaks, and development projects.
214th PS MCC Replacement	Water Source & Transmission	The 214th PS MCC Replacement project aims to reduce the risk of failure and improve the operational effectiveness of the 214th Ave. East pump station. The project involves replacing the aging motor control center and switchgear with modern technology to ensure reliable water supply to the rapidly growing Tehaleh area.
356th Pump Station Flow Control Modifications	Water Source & Transmission	The 356th Pump Station Flow Control Modifications project aims to address significant labor and mechanical wear issues caused by uncontrolled Pipeline 5 (P5) pressure fluctuations. The project includes evaluating existing problems, conducting an energy audit, and designing new PRVs with improved flow/pressure controls to stabilize P5 pressure and improve operations.
Bismark and Fletcher Heights Standpipes' Re-Lining and Sanitary Improvement Project	Water Source & Transmission	The Bismark and Fletcher Heights Standpipes' Re-Lining and Sanitary Improvement Project aims to address failing interior coatings and sanitary deficiencies. The project includes a study to evaluate maintenance versus retirement, and detailed designs for re-lining, hatch seal repairs, and new overflows.
Bismark Standpipe Intrusion Alarms	Water Source & Transmission	The Bismark Standpipe Intrusion Alarms project aims to restore reliable alarming at the Bismark Standpipe, a 65-foot tall water reservoir serving the 478 - High Service Pressure Zone. Due to unreliable wireless radios currently in use, the project will install wired systems to ensure consistent monitoring and reduce maintenance. The installation work will be completed in-house, including conduit installation and coordination with telecommunication providers.

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Project or Program Name	Budget Category	Project or Program Summary
Build Microwave tower at J Street, Tear down J Street Standpipe	Water Source & Transmission	The project involves building a new microwave tower at J Street and demolishing the existing J Street Standpipe, which is at risk of failure during a seismic event. The objective is to ensure reliable communication redundancy between the Green River Filtration Facility and Tacoma Public Utilities.
Cascadia Reservoir and PS	Water Source & Transmission	The Cascadia Reservoir and Pump Station project aims to address the growing demands of the Tehaleh Master Planned development, which is expected to nearly double in the next decade. It includes the construction of a 2.5-MG tank and the new Fennel Creek Pump Station to ensure adequate water storage and supply.
Condition and Sanitary Deficiency Correction for North End Site	Water Source & Transmission	The North End Reservoir, a 10 MG buried concrete reservoir built in 1989, is crucial for the 446 – North End Pressure Zone. The project aims to address issues identified in a 2019 assessment, including roof cracking, outdated appurtenances, and seismic under-design, as well as sanitary deficiencies noted in a 2018 survey.
Eagle Lake Siphon	Water Source & Transmission	The Eagle Lake Siphon project aims to provide improved access to approximately 1,000 acre feet of water for drought mitigation and 357 acre feet of streamflow to offset impacts of non-exempt wells in the Green River Watershed. This involves designing, permitting, and constructing a permanent siphon system at Eagle Lake.
Fixed Ladder & Anchor Points	Water Source & Transmission	The Fixed Ladder & Anchor Points project aims to ensure all external ladders on tanks comply with safety regulations. Third-party inspections in 2023 identified multiple deficiencies, necessitating actions from minor modifications to full ladder replacements. Tacoma Water will rely on Tacoma Power Generation or third-party contractors for inspections.
Fletcher Heights Standpipe Intrusion Alarms	Water Source & Transmission	The Fletcher Heights Standpipe Intrusion Alarms project aims to restore reliable alarming at the Fletcher Standpipe, a critical water reservoir, by replacing unreliable wireless radios with wired systems. This is essential to prevent unauthorized access and potential water contamination.

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Project or Program Name	Budget Category	Project or Program Summary
GPL Wells Improvement and Treatment	Water Source & Transmission	The GPL Wells Improvement and Treatment project aims to ensure Tacoma Water has adequate groundwater supply with effective corrosion control treatment. The project includes new pumping equipment, electrical upgrades, and a new corrosion control treatment facility.
Hood St Reservoir Overflow Check Valve	Water Source & Transmission	The Hood St Reservoir Overflow Check Valve project aims to address the overflow issues identified by the Washington State Department of Health. The project involves designing and installing a check valve to prevent cross-connection contamination and ensure compliance with DOH requirements.
Hood Street Onsite Sodium Hypochlorite Generator Replacement	Water Source & Transmission	The Hood Street Onsite Sodium Hypochlorite Generator Replacement project aims to maintain reliable disinfection for the South Tacoma Well groundwater supply. The current systems, installed in 2016, need replacement by 2029/2030. The project includes analyzing equipment sizing, designing, procuring, installing new equipment, and SCADA integration.
Hood Street Reservoir Overflow Sanitary Correction	Water Source & Transmission	The Hood Street Reservoir Overflow Sanitary Correction project aims to redesign the overflow and drain chamber to meet DOH requirements. This includes creating a conceptual design, gaining DOH approval, detailed design, and execution. The key deliverable is a compliant overflow/drain system.
Indian Hill Reservoirs Overflow Check Valve	Water Source & Transmission	The Indian Hill Reservoirs Overflow Check Valve project aims to address sanitary deficiencies identified by the Washington State Department of Health. The project involves installing a check valve to the overflow piping of the 0.25 MG reservoirs to prevent cross-connection contamination and ensure compliance with DOH requirements.
Indian Hill Reservoirs Overflow Sanitary Correction	Water Source & Transmission	The Indian Hill Reservoirs Overflow Sanitary Correction project aims to address sanitary deficiencies identified by the Washington State Department of Health in the 0.25M gallon reservoirs. The project involves redesigning the overflow/drain chamber to meet DOH requirements, including the installation of an overflow pipe with an air gap to prevent cross-connection contamination.

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Project or Program Name	Budget Category	Project or Program Summary
Land Mobile Radio System (LMRS) Upgrade	Water Source & Transmission	The Land Mobile Radio System (LMRS) Upgrade project aims to ensure reliable communication for Tacoma Water by updating the LMRS, which is crucial for operations and emergency situations. The current system will become obsolete by 2030, necessitating design and implementation of upgrades.
McMillin Microwave Tower	Water Source & Transmission	The McMillin Microwave Tower project aims to enhance Tacoma Water's communication infrastructure by providing resilient, reliable, and redundant communications. This involves rezoning the property, obtaining necessary permits, and constructing a 200-foot microwave tower, communication shelter, and backup Water Control Center.
McMillin PS1 Upgrade	Water Source & Transmission	The McMillin PS1 Upgrade project aims to rehabilitate or replace the aging PS #1 to support the growing 706-McMillin Pressure Zone. This upgrade will ensure redundancy, assist during maintenance, and improve flow modulation and fire flow support. The project includes preliminary design, final design, and construction, requiring an outside contractor.
McMillin PS2 Electrical Improvements	Water Source & Transmission	The McMillin PS2 Electrical Improvements project aims to upgrade Pump Station 2, which is critical for filling the Sunrise standpipe. The upgrades include replacing the emergency diesel generator, motor control center, automatic transfer switch, and switchgear to prevent significant electrical failures and meet future demand.
Microwave Radio System Upgrade	Water Source & Transmission	The Microwave Radio System Upgrade project aims to ensure reliable communication for Tacoma Water by updating the system used for operational information, corporate network, security, and telephony. The current system will become obsolete by 2030, necessitating design and implementation of upgrades.
North End Reservoir MCC Replacement	Water Source & Transmission	The North End Reservoir MCC Replacement project aims to upgrade the aging Motor Control Center, which powers the pump station built in 1955. The current MCC has several sections tagged-out and old parts that are difficult to replace, posing safety risks. The project includes design, procurement, and installation of new electrical components by Tacoma Water staff.

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Project or Program Name	Budget Category	Project or Program Summary
North End Reservoir Standpipe Overflow Check Valve	Water Source & Transmission	The North End Reservoir Standpipe Overflow Check Valve project aims to address the overflow issues identified by the Washington State Department of Health. The project involves installing check valves to ensure compliance with DOH requirements and prevent cross-connection contamination.
North End Reservoir Tank Intrusion Alarms	Water Source & Transmission	The North End Reservoir Tank Intrusion Alarms project aims to restore reliable alarming at the North End Standpipe, a critical water reservoir, due to unreliable wireless radios currently in use. The project will involve in-house installation of wired systems to ensure consistent monitoring and reduce maintenance costs.
P1 Maintenance Bridge Handrail at the Green River Steep Slope	Water Source & Transmission	The P1 Maintenance Bridge at the Green River Steep Slope has a failing handrail system, posing a safety hazard to staff and the public. The bridge is used monthly for maintenance of Pipeline 1 and is accessible to the public, necessitating safety improvements.
Pipeline No. 1 - Bridge and Safety Issues vicinity of STA H131+13	Water Source & Transmission	Pipeline No. 1 near STA 131+13 is on a steep slope by the Green River, requiring an elevated bridge for maintenance access. Safety inspections have restricted commercial vehicle access due to load rating concerns and erosion. The project aims to ensure a safe bridge for maintenance by hiring consultants to assess and recommend solutions.
Pipeline No. 1 Pressurization Program	Water Source & Transmission	The Pipeline No. 1 Pressurization Program addresses a significant deficiency identified by the Washington State Department of Health in 2018, where the pipeline was not fully pressurized. Tacoma Water has committed to pressurizing the pipeline by 2051, ensuring compliance with regulatory requirements and addressing operational and seismic concerns. The Program includes condition assessment, transmission pipe replacement, transmission pressure and flow control, and pump station retrofits.
PL 1 Puyallup river crossing, bridge and pipe abatement and coating	Water Source & Transmission	The PL 1 Puyallup river crossing project involves abating and replacing the failed exterior coating on the bridge and pipe, and installing a new fall protection system. This is critical to ensure the asset's dependability for the next 30 years and to provide safe maintenance access.

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Project or Program Name	Budget Category	Project or Program Summary
Prairie Ridge Reservoir Roof	Water Source & Transmission	The Prairie Ridge Reservoir Roof project aims to address structural deficiencies identified in a 2019 assessment. Key issues include inadequate roof plate thickness, undersized rafters and girders, and insufficient room for slosh waves. The project will require the tank to be offline, necessitating the construction of a redundant tank first.
Prairie Ridge Site 2nd Reservoir	Water Source & Transmission	The Prairie Ridge Site 2nd Reservoir project aims to construct a new 2.5 million gallon reservoir to meet the storage needs of the 810-Prairie Ridge Pressure Zone due to customer growth. It will also address deferred maintenance and structural improvements of the existing reservoir and pump station, with the project expected to be online by 2030.
Prairie Ridge Springs Tank Intrusion Alarms	Water Source & Transmission	The Prairie Ridge Springs Tank Intrusion Alarms project aims to restore reliable alarming systems for two water storage tanks used for water quality treatment. Current wireless radios are unreliable, and the project seeks to install wired systems to ensure effective monitoring and prevent unauthorized access.
Redundant Supply for 446 North Pressure zone	Water Source & Transmission	The 446 North Pressure Zone relies on a single main from the North End Reservoir, which has operational challenges and no redundancy, risking service loss for 3,600 customers. The project aims to create a secondary supply to ensure service continuity during unplanned outages.
Replace aging Holiday testers with current technology and safer equipment.	Water Source & Transmission	The project aims to replace the aging holiday testers with modern, safer equipment. The current tester, over 20 years old and assembled from five original testers, is obsolete and lacks compatible parts. The scope includes purchasing a new tester and training personnel on its use.
Replace leaking zone valve at S 64th and S J St	Water Source & Transmission	The project involves replacing a leaking 12" gate valve at S 64th and S J St, which serves as a zone valve between the 581 and 478 High Service zones. The leak affects system operations and impacts the 478 zone. The objective is to evaluate the pipe setup and condition to address the leak and other complicating factors.

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Project or Program Name	Budget Category	Project or Program Summary
Shirley St and N 31st Low Pressure Area	Water Source & Transmission	The project aims to address low water pressure issues for five customers near N Shirley St and N 31st St by extending a 2" lateral main from the 538 – Westgate Pressure Zone. This will increase pressure by approximately 25 psi, but individual pressure reducing valves may be needed to prevent leaks.
Structural Concerns on Elevated Pipeline 1 Supports near the Maintenance Bridge	Water Source & Transmission	The project addresses the separation of three concrete pipe supports on Pipeline 1 near the Maintenance Bridge, observed during 2023 inspections. A study scheduled for 2025/2026 will determine the extent, cause, and impact of the separation and propose mitigation options.
Sunrise Standpipe Drainage, Coating, and Corrosion Issues	Water Source & Transmission	The Sunrise Standpipe project aims to clean and inspect the standpipe in 2025. This involves draining the standpipe into a storm water system, repairing the hatch, and assessing the coating condition. Key deliverables include ensuring operational drainage and understanding the coating's remaining life.
Sunrise Standpipe Intrusion Alarms	Water Source & Transmission	The Sunrise Standpipe Intrusion Alarms project aims to restore reliable alarming at the Sunrise Standpipe, a 104-foot tall water reservoir serving the 706 – McMillin Pressure Zone. Due to unreliable wireless radios currently used for intrusion alarms, the project will install wired systems to ensure consistent monitoring and reduce maintenance costs.
Sunrise Standpipe: Monitoring Equipment Upgrade	Water Source & Transmission	The Sunrise Standpipe project aims to replace the outdated chlorine analyzer with a new Rosemount chlorine/pH analyzer. This upgrade will eliminate the need for CO2 buffering and allow pH monitoring. A new structure will be designed and built to house the analyzer and HMI panel.
Water Operations Master Plan Phase 2 Upgrades	Water Source & Transmission	The Water Operations Master Plan Phase 2 Upgrades aims to remodel or rebuild the Water Operation Building (WOB) to meet seismic safety standards and accommodate future growth. This project will enhance operational efficiency by co-locating staff and providing seismically resilient storage for essential equipment.

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Project or Program Name	Budget Category	Project or Program Summary
Water Operations Warehouse Building	Water Source & Transmission	The Water Operations Warehouse Building project aims to design and construct or remodel the Water Operations Building to meet life safety standards, ensure access to resources after a seismic event, and provide space for future growth. The project also seeks to co-locate staff for improved safety and efficiency.
Wells Master Plan	Water Source & Transmission	The Wells Master Plan aims to ensure Tacoma Water has a reliable groundwater supply by maintaining fewer but more reliable wells. Key tasks include rehabilitating pumps, motors, electrical, instrumentation and controls, as well as addressing well productivity. The Plan considers water quality, such PFAS, and seismic resiliency.
2025-2026 Dedicated Sample Stations	Water Treatment	The 2025-2026 Dedicated Sample Stations project aims to renew and replace water quality monitoring stations within Tacoma Water's distribution system. This ensures compliance with regulatory requirements and accurate water quality monitoring, which is critical for consumer confidence.
Built Forestland Assets	Water Treatment	The Built Forestland Assets project focuses on upgrading and replacing aging culverts on Tacoma Water's forest roads. It aims to create a comprehensive plan for inspecting, inventorying, and replacing culverts, ensuring efficient resource allocation and cost reduction.
Finished Water Standpipe Downstream Isolation	Water Treatment	The project aims to install new equipment to isolate the Finished Water Discharge Standpipe (FWSP) from Pipeline 1 (P1) to facilitate maintenance without requiring a P1 shutdown. This involves designing and constructing valves and valve chambers, considering both automated and manual control of the P1 Clearwell.
MIT Agreement General Trust Fund	Water Treatment	The MIT Agreement General Trust Fund project involves annual payments from Tacoma Water to the Muckleshoot Indian Tribe, as per a 1995 settlement agreement. These payments, which began in 2005 and will continue until 2044, are placed in a trust fund to secure the tribe's present and future needs.

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Project or Program Name	Budget Category	Project or Program Summary
South Tacoma Wells PFAS Treatment	Water Treatment	The South Tacoma Wells PFAS Treatment project aims to comply with the USEPA's regulations for PFAS in drinking water. Tacoma Water will need to treat groundwater to remove PFAS by 2029, with the project involving design, permitting, land acquisition, and construction of treatment facilities.

Appendix C-2 RWSS-Shared Capital Improvement Plan Selected Project Summaries

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Project or Program Name	Budget Category	Project or Program Summary
GRFF Visitor & Access Control Solution	RWSS-General	The GRFF Visitor & Access Control Solution aims to implement a new visitor management system to track visitor entry/departure, location, and permit status at the Tacoma Water Green River Filtration Facility. This project will replace the outdated MS Access database, streamline processes, and improve security and reporting capabilities.
12.5kV Genset Load Banking	RWSS-Water Source & Transmission	The 12.5kV Genset Load Banking project aims to install equipment and camlock enclosures to enable safe and efficient annual load testing of emergency generators at Headworks and North Fork Wells. This will prevent potential failures or reduced performance during emergencies. The project includes design, procurement, installation, and commissioning, ensuring compliance with NFPA110 standards.
Backwash Tank Refill Flow Control	RWSS-Water Source & Transmission	The Backwash Tank Refill Flow Control project aims to address chemical dosing issues caused by low plant flows due to the P5 shutdown and WestRock Mill closure. The project will explore control changes and new equipment options to maintain consistent water quality and simplify plant operations.
Covington Turnout Generator & ATS Replacement	RWSS-Water Source & Transmission	The Covington Turnout project involves replacing an unreliable 24-year-old LPG generator with a new one to ensure continuous water quality monitoring for Pipeline 5. The new generator will power the entire site, including Covington Water equipment, and an automatic transfer switch will be installed for monthly tests. Coordination with Covington and Tacoma Water Quality personnel is required, and cost-sharing needs to be established.
Fluoride HMI/RTU Relocation & Profinet Conversion	RWSS-Water Source & Transmission	The Fluoride HMI/RTU Relocation & Profinet Conversion project involves moving the Telemetry/HMI cabinet from the hazardous fluoride room to a safer location in the solids handling facility. Additionally, it includes converting the PLC hardware from Profibus to Profinet and ensuring proper equipment tag updates.
Headworks Radio System (VHF) Upgrade	RWSS-Water Source & Transmission	The Headworks Radio System (VHF) Upgrade project aims to ensure reliable communication between Watershed Inspectors and Headworks Operators, as the current system will become obsolete by 2032. The project includes designing and implementing necessary upgrades to maintain operational continuity.

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Piling Creek Bridge Electrical	RWSS-Water Source & Transmission	Tacoma Water is replacing an existing culvert at Piling Creek with a 70-foot-long, 28-foot-wide bridge to allow fish passage. The project includes relocating the North Fork Well Field power supply and is scheduled for completion before the USACE Fish Passage project.
Second Primary Electrical Feed to GRFF	RWSS-Water Source & Transmission	The project aims to install a second Primary Feed to the Plant, including a new Switchgear, to reduce the likelihood of total power failure. This will improve the ability to maintain the switchgear and reduce associated risks. The project involves complex coordination with multiple parties.
Tacoma Water 2032 SCADA Network Modernization	RWSS-Water Source & Transmission	The Tacoma Water 2032 SCADA Network Modernization project aims to update the SCADA system to ensure it remains efficient and secure. This involves designing, procuring, and installing new telemetry units, integrating SCADA data, and upgrading WinCC. The project addresses the obsolescence and cybersecurity risks of outdated technology.
Chemical Tank Replacements	RWSS-Water Treatment	The Chemical Tank Replacements project aims to replace bulk chemical feed tanks in town and at the GRFF as they approach the end of their 10-15 year lifespan by 2029 and 2030. The project is recommended to start in 2027/2028 to allow time for planning, procurement, and coordination with other maintenance activities. The work will involve designing tank replacements, operational planning, and installing new tanks and appurtenances.
Fish Habitat Mitigation & Restoration	RWSS-Water Treatment	The Fish Habitat Mitigation & Restoration project aims to meet fish habitat obligations under the AWSP by conducting regulatory reviews, habitat assessments, and long-term monitoring. It includes designing, permitting, and constructing new habitat projects while maintaining existing ones.
Fish Passage Facility Upgrades	RWSS-Water Treatment	The Fish Passage Facility Upgrades project aims to prepare the Tacoma Water fish passage facilities for full-scale operation. The program focuses on improving worker safety, reducing fish injury and mortality, and enhancing facility efficiency. It involves hiring a consultant to assess the facility and suggest improvements, with construction occurring incrementally alongside downstream passage construction at Howard Hanson Dam.

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Green River Filtration Facility Stormwater Control	RWSS-Water Treatment	The Green River Filtration Facility Stormwater Control project aims to address stormwater management issues that occur during heavy runoff periods. The project includes identifying the sources of flooding, meeting regulatory requirements, and potentially upgrading stormwater pumps.
GRFF Critical Pump and Motor Spares	RWSS-Water Treatment	The GRFF Critical Pump and Motor Spares project aims to mitigate the risk of supply disruption by procuring critical spares for the Green River Filtration Facility. The project involves reviewing the list of critical spares, determining appropriate sizing and specifications, assisting with procurement, and installing new pumps and motors.
GRFF Sedimentation Sludge Scraper Study	RWSS-Water Treatment	The GRFF Sedimentation Sludge Scraper Study aims to replace the JMS Mega Scraper system in the sedimentation basins and improve the washwater clarifiers sludge scrapers. The project will design and construct new equipment to enhance sediment collection and removal, addressing maintenance issues and improving overall system performance.
Headworks Fueling Upgrades	RWSS-Water Treatment	The Headworks Fueling Upgrades project aims to address the inefficiencies in the current fueling system by adding additional fuel storage by 2028 to support the growing fleet. The project will relieve staff resources and accommodate the increased need for diesel fuel.
Headworks Gate Access Control & Security Improvements	RWSS-Water Treatment	The Headworks Gate Access Control & Security Improvements project aims to enhance security and address safety concerns at the Headworks Main Gate and Pipeline Road. This includes installing an after-hours electronically actuated gate with remote access, signage, lighting, and cameras, as well as additional security cameras along Pipeline Road to prevent vandalism.
Howard Hanson Additional Water Storage Project (AWSP)	RWSS-Water Treatment	The Howard Hanson Additional Water Storage Project (AWSP) is a multi-purpose initiative aimed at supporting water supply and ecosystem restoration. Phase I is incomplete due to the pending construction of the downstream fish passage, with partial funding secured and full federal funding being pursued. The project will provide an additional 20,000 acre-feet of water storage and is supported by Tacoma's financial commitments.

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Impact of Fish Passage Work on Pipeline 5 near SR169	RWSS-Water Treatment	The project involves relocating a segment of Pipeline No. 5 (P5) near SR 169 and Roberts Road to accommodate WSDOT's fish passage improvements. P5 is crucial for supplying water to Tacoma and its partners, and the relocation aims to minimize service interruptions while establishing a new franchise agreement with WSDOT.
Impact of SR167/SR509 Relocation on Pipeline 5	RWSS-Water Treatment	The project involves relocating a segment of Pipeline No. 5 (P5) due to road construction connecting SR167 to SR509 near the Port of Tacoma. Initially estimated at \$9.82 million, the scope was reduced to \$500,000 after design changes. Additionally, P5 will be relocated at Wapato Creek to accommodate a new fish passage culvert.
Install Isolation for Filter Effluent Valves	RWSS-Water Treatment	The project aims to physically isolate the North and South filter galleries at the Green River Filtration Facility to allow continued operation during maintenance. This involves designing mechanisms to isolate the galleries, ensuring sufficient water supply, and planning for operational coordination during construction.
Ozone System Upgrades	RWSS-Water Treatment	The Ozone System Upgrades project addresses the aging ozone system at the Green River Filtration Facility, which is critical for providing safe drinking water. A consultant will conduct a comprehensive study to recommend long-term solutions for maintaining the system's reliability and performance.
Piling Creek Bridge	RWSS-Water Treatment	The Piling Creek Bridge project addresses the last identified fish blockage culvert on Tacoma Water property. Due to high costs and limited habitat benefits, Tacoma Water received approval to postpone the correction until the culvert's condition necessitates replacement or salmon are reintroduced above Howard Hanson Dam.
Raw Water Conduit Bridge AND Pipe Recoating	RWSS-Water Treatment	The Raw Water Conduit Bridge and Pipe Recoating project aims to address the failing exterior coatings on the bridge and pipelines that convey raw water to the GRFF. Inspections revealed that the top and middle coatings have failed, risking corrosion and potential failure of the infrastructure. The project includes recoating, seismic improvements, and potential replacement of the raw water conduits.
RWSS Major Electrical Equipment	RWSS-Water Treatment	The RWSS Major Electrical Equipment project ensures timely renewal and replacement of critical Electrical and Instrumentation & Control equipment at the Green River Filtration Facility and other RWSS funded facilities. This is essential for maintaining safe drinking water for Tacoma Water customers and addressing aging infrastructure.

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RWSS Major Treatment and Equipment	RWSS-Water Treatment	The RWSS Major Treatment and Equipment project ensures the timely renewal and replacement of water treatment and monitoring equipment at the Green River Filtration Facility (GRFF) and other RWSS-funded facilities. This is crucial for maintaining safe drinking water for Tacoma Water customers and addressing emerging water quality issues.
RWSS NF Wells R&R	RWSS-Water Treatment	The RWSS NF Wells R&R project addresses the unanticipated failure of equipment in the North Fork Wellfield, which is crucial for the Green River Filtration Facility operations. The project involves the renewal and replacement of well pumping equipment to ensure continued functionality and support for the GRFF.
RWSS Watershed Betterments	RWSS-Water Treatment	The RWSS Watershed Betterments project focuses on maintaining and improving the Green River Watershed, which is crucial for providing drinking water to Tacoma and surrounding communities. The project includes regular inspections and upgrades of water crossings, road maintenance, and the development of new rock resources to ensure long-term sustainability and water quality.
RWSS Watershed Tools	RWSS-Water Treatment	The RWSS Watershed Tools project aims to support the Watershed Operations team in maintaining the Green River Watershed. Funds will be used to acquire new equipment, improve old or failing tools, and enhance security and access control measures. This ensures the team can manage the watershed effectively despite challenging terrain and climate.
Upper Green River Water Monitoring	RWSS-Water Treatment	The Upper Green River Water Monitoring project aims to address water quality risks identified by Tacoma Water's consultant, focusing on high turbidity levels from Howard Hanson Dam. The project includes evaluating suitable monitoring locations and installing or upgrading monitoring stations to enhance water quality monitoring and mitigate impacts on aquatic resources and treatment operations.

Appendix F: Water Facilities Inventory (WFI) and Water Right Self-Assessment (WRSA).



WATER FACILITIES INVENTORY (WFI) FORM

Quarter: 1
Updated: 08/02/2024

ONE FORM PER SYSTEM

Printed: 4/18/2025
WFI Printed For: On-Demand
Submission Reason: Source Update

RETURN TO: Central Services - WFI, PO Box 47822, Olympia, WA, 98504-7822 or email wfi@doh.wa.gov

1. SYSTEM ID NO. 86800 N	2. SYSTEM NAME TACOMA WATER DIVISION CITY OF	3. COUNTY PIERCE	4. GROUP A	5. TYPE Comm
6. PRIMARY CONTACT NAME & MAILING ADDRESS HEATHER L. PENNINGTON [WATER SUPERINTENDENT] PO BOX 11007 TACOMA, WA 98411		7. OWNER NAME & MAILING ADDRESS TACOMA, CITY OF HEATHER L. PENNINGTON PO BOX 11007 TACOMA, WA 98411-0007 WATER SUPERINTENDENT		
STREET ADDRESS IF DIFFERENT FROM ABOVE ATTN ADDRESS 3628 S 35TH S CITY TACOMA STATE WA ZIP 98409		STREET ADDRESS IF DIFFERENT FROM ABOVE ATTN ADDRESS 3628 S 35TH ST CITY TACOMA STATE WA ZIP 98409-3192		
9. 24 HOUR PRIMARY CONTACT INFORMATION		10. OWNER CONTACT INFORMATION		
Primary Contact Daytime Phone: (253) 502-8384		Owner Daytime Phone: (253) 502-8384		
Primary Contact Mobile/Cell Phone: (253) 405-4225		Owner Mobile/Cell Phone: (253) 405-4225		
Primary Contact Evening Phone: (xxx)-xxx-xxxx		Owner Evening Phone: (xxx)-xxx-xxxx		
Fax:	E-mail: hxxxxxxg@cityoftacoma.org	Fax: (253) 502-8694	E-mail: hxxxxxxg@cityoftacoma.org	
11. SATELLITE MANAGEMENT AGENCY - SMA (check only one)				
<input type="checkbox"/> Not applicable (Skip to #12) <input checked="" type="checkbox"/> Owned and Managed SMA NAME: TACOMA, CITY OF SMA Number: 129 <input type="checkbox"/> Managed Only <input type="checkbox"/> Owned Only				
12. WATER SYSTEM CHARACTERISTICS (mark all that apply)				
<input checked="" type="checkbox"/> Agricultural <input checked="" type="checkbox"/> Commercial / Business <input checked="" type="checkbox"/> Day Care <input checked="" type="checkbox"/> Food Service/Food Permit <input checked="" type="checkbox"/> 1,000 or more person event for 2 or more days per year <input checked="" type="checkbox"/> Hospital/Clinic <input checked="" type="checkbox"/> Industrial <input checked="" type="checkbox"/> Licensed Residential Facility <input checked="" type="checkbox"/> Lodging <input checked="" type="checkbox"/> Recreational / RV Park <input checked="" type="checkbox"/> Residential <input checked="" type="checkbox"/> School <input type="checkbox"/> Temporary Farm Worker <input checked="" type="checkbox"/> Other (church, fire station, etc.): _____				
13. WATER SYSTEM OWNERSHIP (mark only one)				14. STORAGE CAPACITY (gallons)
<input type="checkbox"/> Association <input checked="" type="checkbox"/> City / Town <input type="checkbox"/> County <input type="checkbox"/> Federal <input type="checkbox"/> Investor <input type="checkbox"/> Private <input type="checkbox"/> Special District <input type="checkbox"/> State				140,748,032

- SEE NEXT PAGE FOR A COMPLETE LIST OF SOURCES -

WATER FACILITIES INVENTORY (WFI) FORM - Continued

1. SYSTEM ID NO. 86800 N	2. SYSTEM NAME TACOMA WATER DIVISION CITY OF	3. COUNTY PIERCE	4. GROUP A	5. TYPE Comm
------------------------------------	--	----------------------------	----------------------	------------------------

	ACTIVE SERVICE CONNECTIONS	DOH USE ONLY! CALCULATED ACTIVE CONNECTIONS	DOH USE ONLY! APPROVED CONNECTIONS
25. SINGLE FAMILY RESIDENCES (How many of the following do you have?)		157132	Unspecified
A. Full Time Single Family Residences (Occupied 180 days or more per year)	96224		
B. Part Time Single Family Residences (Occupied less than 180 days per year)	0		
26. MULTI-FAMILY RESIDENTIAL BUILDINGS (How many of the following do you have?)			
A. Apartment Buildings, condos, duplexes, barracks, dorms	0		
B. Full Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied more than 180 days/year	60908		
C. Part Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied less than 180 days/year	0		
27. NON-RESIDENTIAL CONNECTIONS (How many of the following do you have?)			
A. Recreational Services and/or Transient Accommodations (Campsites, RV sites, hotel/motel/overnight units)	0	0	
B. Institutional, Commercial/Business, School, Day Care, Industrial Services, etc.	4661	4661	
28. TOTAL SERVICE CONNECTIONS		161793	

29. FULL-TIME RESIDENTIAL POPULATION												
A. How many residents are served by this system 180 or more days per year?	353057											

30. PART-TIME RESIDENTIAL POPULATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many part-time residents are present each month?												
B. How many days per month are they present?												

31. TEMPORARY & TRANSIENT USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many total visitors, attendees, travelers, campers, patients or customers have access to the water system each month?	999999	999999	999999	999999	999999	999999	999999	999999	999999	999999	999999	999999
B. How many days per month is water accessible to the public?	31	28	31	30	31	30	31	31	30	31	30	31

32. REGULAR NON-RESIDENTIAL USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. If you have schools, daycares, or businesses connected to your water system, how many students, daycare children and/or employees are present each month that are NOT already included in the residential population?	60000	60000	60000	60000	60000	60000	60000	60000	60000	60000	60000	60000
B. How many days per month are they present?	31	28	31	30	31	30	31	31	30	31	30	31

33. ROUTINE COLIFORM SCHEDULE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	180	180	180	180	180	180	180	180	180	180	180	180

34. NITRATE SCHEDULE	QUARTERLY	ANNUALLY	ONCE EVERY 3 YEARS
(One Sample per source by time period)			

35. Reason for Submitting WFI:

Update - Change
 Update - No Change
 Inactivate
 Re-Activate
 Name Change
 New System
 Other _____

36. I certify that the information stated on this WFI form is correct to the best of my knowledge.	
SIGNATURE: _____	DATE: _____
PRINT NAME: _____	TITLE: _____

WS ID **WS Name**

86800 TACOMA WATER DIVISION CITY OF

Total WFI Printed: 1



Water Facilities Inventory (WFI)

Report Create Date: 4/18/2025
Water System Id(s): 86800N
Print Data on Distribution Page: ALL
Print Copies For: DOH Copy
Water System Name: ALL
County: -- Any --
Region: ALL
Group: ALL
Type: ALL
Permit Renewal Quarter: ALL
Water System Is New: ALL
Water System Status: ALL
Water Status Date From: ALL To ALL
Water System Update Date ALL To ALL
Owner Number: ALL
SMA Number: ALL
SMA Name: ALL
Active Connection Count From: ALL To: ALL
Approved Connection Count ALL To: ALL
Full-Time Population From: ALL To: ALL
Water System Expanding ALL
Source Type: ALL
Source Use: ALL
WFI Printed For: On-Demand

Water Right Self-Assessment Form for Tacoma Water 2025 Water System Plan Amendment

Mouse-over any link for more information. Click on any link for more detailed instructions.

Source Name or Number	Water Right Permit, Certificate, or Claim # <small>*If water right is interruptible, identify limitation in yellow section below</small>	WFL Source # <small>If a source has multiple water rights, list each water right on separate line</small>	Existing Water Rights				Current Source Production – Most Recent Calendar Year					10-Year Forecasted Source Production (determined from WSP)				20-Year Forecasted Source Production (determined from WSP)			
			<small>Qi = Instantaneous Flow Rate Allowed (GPM) Qa = Annual Volume Allowed (Acre-Feet/Year) This includes wholesale water sold</small>				<small>Qi = Max Instantaneous Flow Rate Withdrawn (GPM) Qa = Annual Volume Withdrawn (Acre-Feet/Year) This includes wholesale water sold</small>					<small>This includes wholesale water sold</small>				<small>This includes wholesale water sold</small>			
			Primary Qi	Non-Additive Qi	Primary Qa	Non-Additive Qa	Total Qi	Current Excess or (Deficiency) Qi	Total Qa	Maximum Developed Capacity From Previous Years	Current Excess or (Deficiency) Qi	Total Qi	10-Year Forecasted Excess or (Deficiency) Qi	Total Qa	10-Year Forecasted Excess or (Deficiency) Qa	Total Qi	20-Year Forecasted Excess or (Deficiency) Qi	Total Qa	20-Year Forecasted Excess or (Deficiency) Qa
Maximum Rate Allowed	Maximum Rate Allowed	Maximum Volume Allowed	Maximum Volume Allowed	Maximum Instantaneous Flow Rate Withdrawn		Maximum Annual Volume Withdrawn			Maximum Instantaneous Flow Rate in 10 Years		Maximum Annual Volume in 10 Years		Maximum Instantaneous Flow Rate in 20 Years		Maximum Annual Volume in 20 Years				
FDWR - Green River	S1-002298CL	S01	50719		81800		50719	0	42139	80053	39661	50719	0	44000	37800	50719	0	45000	36800
SDWR - Green River	S1-00726	S01	44886		72397		44886	0	26457	43544	45940	44886	0	43000	29397	44886	0	45000	27397
PRS & ("existing rights")	S2-*21332CWRIS	S04	565			450	0	565	0	195	450	0	565	0	450	565	0	100	350
North Fork Wells & (FDWR&SDWR)	G1-00469	S06		58300		30244	41391	16909	6967.6	22746	23276.4	20000	38300	10000	20244	25000	33300	14000	16244
Well 1B	G2-GWC216D	S14	3075		605		2969	106	106.3	605	498.7	2400	675	605	0	2400	675	605	0
Wells 1B & (3A,5A,7B,8B)	G2-*00755AFCWRIS	S14			1028		0	0	0	1028	1028		0	295	733		0	1028	0
Wells 2B & (6B)	G2-*01042CWRIS	S15	3600		2122		0	3600	0	959	2122	0	3600	0	2122	0	3600	2122	0
Well 2C	G2-*00169SWRIS	S46	2025		393		0	2025	0	393	393	0	2025	0	393	2000	25	100	293
Wells 2C & (4A,6B)	G2-*00756AFCWRIS	S46			681		0	0	0	0	681	0	0	0	681		0	0	681
Wells 3A	G2-*00170SWRIS	S16	3820		749		3109	711	108.6	749	640.4	0	3820	0	749	2800	1020	100	649
Wells 3A & (1B,5A,7B,8B)	G2-*00755AFCWRIS	S16			1277		0	0	0	1068	1277	0	0	0	1277		0	0	1277
Well 4A	G2-*00171SWRIS	S17	1572		322		569	1003	6.1	322	315.9	900	672	300	22	900	672	322	0
Wells 4A & (2C,6B)	G2-*00756AFCWRIS	S17			512		0	0	0	213	512		0	0	512		0	512	0
Well 5A	G2-*00172SWRIS	S18	5900		1154		4290	1610	645.3	1154	508.7	4500	1400	1154	0	4500	1400	1154	0
Wells 5A & (1B,3A,7B,8B)	G2-*00755AFCWRIS	S18			1975		0	0	0	1975	1975		0	446	1529		0	1975	0
Well 6B	G2-*00173SWRIS	S44	3210		629		3210	0	0	629	629	2700	510	629	0	2700	510	629	0
Wells 6B & (2C,4A)	G2-*00756AFCWRIS	S44			1073		0	0	0	1065	1073		0	371	702		0	1073	0
Wells 6B & (2B)	G2-*01042CWRIS	S44		3600		2122	1307	2293	0	0	2122		3600	0	2122		3600	198	1924
Well 7B	G2-*00174S	S20	1126		221		0.1	1125.9	123	221	98	0	1126	0	221	0	1126	0	221
Wells 7B & (1B,3A,5A,8B)	G2-*00755AFCWRIS	S20			375		0	0	0	374	375	0	0	0	375	0	0	0	375
Well 8B	G2-*00175S	S21	4337		853		3771	566	131.5	853	721.5	3100	1237	853	0	3100	1237	853	0
Wells 8B & (1B,3A,5A,7B)	G2-*00755AFCWRIS	S21			1447		0	0	0	1444	1447		0	247	1200		0	1347	100
Well 9A	G2-*01075CWRIS	S22	5500		3730		0	5500	0.8	1894	3729.2	3100	2400	1100	2630	3100	2400	2200	1530
Well 10B	G2-*00631BPC		600		952		0	600	0	267	952	0	600	0	952	0	600	0	952
Well 10C	G2-*00631APC	S23	600		968		0	600	198.4	672	769.6	0	600	0	968	0	600	0	968
Well 11A	G2-*00632CCWRIS	S24	6000		3100		6000	0	377.1	3100	2722.9	6000	0	2200	900	6000	0	3100	0
Well 11A	G2-*01648CCWRIS	S24	3500		2000		665.4	2834.6	0	2000	2000	100	3400	0	2000	100	3400	1200	800
Well 12A	G2-*04088CWRIS	S25	6000		4242		3524.3	2475.7	1241.2	3605	3000.8	3500	2500	2000	2242	3500	2500	2500	1742
Well 13A	G2-27860	S26	750		890		750	0	24.2	890	865.8	750	0	300	590	750	0	500	390
Well 14A & ("Existing rights")	G2-27861		2700			3000	0	2700	0	0	3000	0	2700	0	3000	0	2700	0	3000
Well UP1	G2-*00835CWRIS	S11	300		480		0	300	0	480	480	300	0	400	80	300	0	480	0
Well UP1 & ("other UP wells")	G2-*01741CWRIS	S11	1000			700	0	1000	0	275	700	800	200	0	700	800	200	320	380
Well UP3			300		214		0	300	0	85	214	0	300	0	214	0	300	0	214
Well UP4			500		356		0	500	0	148	356	0	500	0	356	0	500	0	356
Well UP8	G2-*02744CWRIS		750		528		0	750	0	270	528	0	750	0	528	0	750	0	528
Well UP8 & ("other UP wells")	G2-*02744CWRIS					672	0	0	0	0	672	0	0	0	672	0	0	0	672
Well UP9	G2-*05936CWRIS		1200		1920		0	1200	0	314	1920	0	1200	0	1920	0	1200	0	1920
Well UP10 & ("other UP wells")	G2-*08249CWRIS	S08	1500			2400	0	1500	0	759	2400	0	1500	0	2400	0	1500	0	2400
Well UP11 & ("other UP wells")	G2-*00097C		1000			800	0	1000	0	506	800	0	1000	0	800	0	1000	0	800
Well UP12	G2-00033CWRIS		1400		143		0	1400	0	143	143	0	1400	0	143	0	1400	0	143
Well UP12 & ("other UP wells")	G2-00033CWRIS					1457	0	0	0	565	1457	0	0	0	1457	0	0	0	1457
Flow1	G2-*00089SWRIS		25		33		0	25	0	0	33	0	25	0	33	0	25	0	33
Flow3	G2-*00090SWRIS		5		7		0	5	0	0	7	0	5	0	7	0	5	0	7

Water Right Self-Assessment Form for Tacoma Water 2025 Water System Plan Amendment

Mouse-over any link for more information. Click on any link for more detailed instructions.

Source Name or Number	Water Right Permit, Certificate, or Claim # <small>*If water right is interruptible, identify limitation in yellow section below</small>	WFL Source # <small>If a source has multiple water rights, list each water right on separate line</small>	Existing Water Rights				Current Source Production – Most Recent Calendar Year					10-Year Forecasted Source Production (determined from WSP)				20-Year Forecasted Source Production (determined from WSP)				
			Qi = Instantaneous Flow Rate Allowed (GPM) Qa = Annual Volume Allowed (Acre-Feet/Year) This includes wholesale water sold				Qi = Max Instantaneous Flow Rate Withdrawn (GPM) Qa = Annual Volume Withdrawn (Acre-Feet/Year) This includes wholesale water sold					This includes wholesale water sold				This includes wholesale water sold				
			Primary Qi	Non-Additive Qi	Primary Qa	Non-Additive Qa	Total Qi	Current Excess or (Deficiency) Qi	Total Qa	Maximum Developed Capacity From Previous Years	Current Excess or (Deficiency) Qi	Total Qi	10-Year Forecasted Excess or (Deficiency) Qi	Total Qa	10-Year Forecasted Excess or (Deficiency) Qa	Total Qi	20-Year Forecasted Excess or (Deficiency) Qi	Total Qa	20-Year Forecasted Excess or (Deficiency) Qa	
Maximum Rate Allowed	Maximum Rate Allowed	Maximum Volume Allowed	Maximum Volume Allowed	Maximum Instantaneous Flow Rate Withdrawn		Maximum Annual Volume Withdrawn			Maximum Instantaneous Flow Rate in 10 Years		Maximum Annual Volume in 10 Years		Maximum Instantaneous Flow Rate in 20 Years		Maximum Annual Volume in 20 Years					
Flow5	G2-*00091SWRIS		100		115			0	100	0	0	115	0	100	0	115	0	100	0	115
Flow6	C52D		100		115			0	100	0	0	115	0	100	0	115	0	100	0	115
Well DP1	C5632A	S05	250			313.6		0	250	0	139	313.6	0	250	0	313.6	0	250	0	0
Well DP2	C159A	S05	400		200			0	400	0	139	200	0	400	0	200	0	400	0	200
Well DP3	C5656A	S05	250			313.6		0	250	0	139	313.6	0	250	0	313.6	0	250	0	0
Well SE2	G2-*00363C	S28	350		526			0	350	0	526	526	0	350	0	526	350	0	100	426
Well SE2	G2-01036CWRIS	S28	250		146			0	250	0	146	146	0	250	0	146	50	200	0	146
Well SE6 & ("existing rights")	G2-*07933C	S29	750			1210		0	750	0	442	1210	0	750	0	1210	400	350	100	1110
Well SE6 & ("existing rights")	G2-*08324C	S29	50			80		0	50	0	0	80	0	50	0	80	0	50	0	80
Well SE7 & ("existing rights")	G2-GWC6490	S33	800			466		0	800	0	186	466	0	800	0	466	0	800	0	466
Well SE7 & ("existing rights")	G2-GWC3374	S33	230			370		0	230	0	23	370	0	230	0	370	0	230	0	370
Well SE8 & ("existing rights")	G2-*10469C	S34	500			400		0	500	0	251	400	0	500	0	400	0	500	0	400
Well SE10 & ("existing rights")	G2-20021C	S35	1000			800		0	1000	0	218	800	0	1000	0	800	0	1000	0	800
Well SE11 & ("existing rights")	G2-26094C	S37	1000			800		0	1000	0	467	800	0	1000	0	800	800	200	100	700
Well SE11A	G2-*00015C	S38	500		811			0	500	0	811	811	0	500	0	811	400	100	100	711
Well SE11A	G2-GWC2872	S38	260		416			0	260	0	416	416	0	260	0	416	0	260	0	416
Well TF1	G2-27023CWRIS	S09	1050		740			0	1050	0	0	740	0	1050	0	740	0	1050	0	740
Well TF1 & ("existing rights")	G2-27023CWRIS	S09	1050			100		0	1050	0	358	100	0	1050	0	100	0	1050	0	100
Well TF1 & ("existing rights")	G2-*00167SWRIS	S09	1050			100		0	1050	0	0	100	0	1050	0	100	0	1050	0	100
Well TF2	G2-28279		500			271		0	500	0	0	271	0	500	0	271	0	500	0	271
Well TF2 & ("existing rights")	G2-28279			800		271		0	800	1	484	270	0	800	0	271	0	800	0	271
Well TF2	CG2-GWC1028		400		484			0	400	0	645	484	0	400	0	484	0	400	0	484
Well TF2	CG2-GWC2217		400		645			0	400	0	3380	645	0	400	0	645	0	400	0	645
Well GPL1&2 & ("existing rights")	G2-*06571AFCWRIS	S12,S13		6400		5120		0	6400	0	3381	5120	5400	1000	1900	3220	5400	1000	3200	1920
Well Fred1 & (GPL1&2)	G2-28977			1000		1075		0	1000	0	0	1075	0	1000	0	1075	0	1000	0	1075
Well PA1	G2-23895CWRIS	S10	1200		1130			0	1200	0	1126	1130	0	1200	0	1130	0	1200	0	1130
TOTALS =			170,905		194,504			167,161	73844	78,527	188,840	169512	149,155	91,850	109,800	138,239	161,520	79,485	130,018	118,021

Column Identifiers for Calculations: A B C =A+A'-C D =B+B'-D E = A+A'-E F =B+B'-F G =A+A'-G H =B+B'-H

PENDING WATER RIGHT APPLICATIONS: Identify any water right applications that have been submitted to Ecology.

Application Number	New or Change Application?	Date Submitted	Quantities Requested			
			Primary Qi	Non-Additive Qi	Primary Qa	Non-Additive Qa

Appendix N: Water System Plan Amendment Engineering Analysis

MEMORANDUM



Date: April 18, 2025
To: Daniel Reisinger, P.E.
From: Washington Department of Health
Subject: Water System Plan Amendment Engineering Analysis

Tacoma Water is amending our Water System Plan (WSP) to update the Capital Improvement Plan and related Financial Analysis to incorporate projects not identified in the existing 2018 WSP adopted in 2019 and approved in 2020. Our intent is still to update the entire WSP as required by January 6, 2030. We believe the WSP's technical analysis are still valid, as presented below.

Tacoma Water has experienced major changes that impact our financial planning and water supply use. These include:

- Westrock's Tacoma Pulp Mill (Pulp Mill) permanently closed in 2023, eliminating approximately 16 MGD of relatively constant demand. Served since 1912, the Pulp Mill accounted for approximately at third of Tacoma Water's retail water use, and its closure significantly impacted revenue for the water utility. Water system operations were also impacted, and multiple projects and programs were adjusted, delayed, or eliminated.
- US Army Corps of Engineers (Corps) is constructing downstream fish passage by 2031 at Howard Hanson Dam, completing the Additional Water Storage Project (AWSP) Phase 1, Part 2. The project will restore salmon access to over 100 miles of Green River and tributary habitat and will increase our reliable water supply. Additionally, we are implementing multiple related projects to support salmon recovery and meet our water supply agreements.
- PFAS has been detected above the levels set by EPA in some of Tacoma Water's groundwater wells. Significant PFAS treatment is anticipated to comply with new regulations. Tacoma Water will likely have short-term reductions to groundwater capacity starting in 2029 until treatment is constructed.
- Tacoma Water has agreed to new contracts with Cascade Water Alliance (Cascade) that exceed the Pulp Mill water use: 1) Permanent wholesale of 12 MGD average and 15 MGD peak 2) Additional temporary wholesale of 12 MGD average and 17 MGD peak from 2041 through 2061. To take the supply, Cascade is building a transmission pipeline to connect to Tacoma Water's Pipeline 5 in King County by 2041. Cascade's water use is anticipated to increase steadily from 2041 to 2061 as their contract with Seattle Public Utility declines.
- Pipeline 1 Pressurization. Tacoma Water entered into a consent decree to pressurize Pipeline 1 over 30 years by 2051. Tacoma Water has begun the P1 Pressurization Program to reach this goal, where we anticipate replacing approximately 7 miles of large diameter main to allow pressurization and implement pressure controls on the pipeline.

MEMORANDUM

Water use is anticipated to be temporarily lower through approximately 2050 due to the Pulp Mill closure and Cascade's limited initial use of their wholesale supply. By 2061 we anticipate needing all operationally significant groundwater during dry years to meet our combined retail and wholesale customers, including Cascade. The Water Rights Self-Assessment has been updated to reflect the temporarily reduced water use. By Cascade's peak use in 2061, Tacoma Water is anticipated to use of all operationally significant supplies to meet our retail, partner, and wholesale obligations.

The System Analysis (Chapter 6) findings of the distribution system are still valid. The Pulp Mill was supplied through large diameter transmission mains; therefore, its closure has had only minor impacts on distribution system pressures. Additionally, supply improvements from AWSP Phase 1 and PFAS Treatment are not anticipated to substantially change system hydraulics. Further, Cascade Wholesale use and Pipeline 1 Pressurization will occur after the current WSP analysis period; therefore, they do not impact the system analysis findings. Our distribution system remains well sized with sufficient capacity, except the noted challenges in pumped closed pressure zones. Tacoma Water remains committed to addressing those challenges, as shown in our updated CIP.

Of note, as a result of the Pulp Mill closure, we mothballed Portland Avenue Reservoir to assist in maintaining water quality in the pressure zone with reduced demands. This reservoir primarily served as standby storage to the Pulp Mill. The Hood St Reservoir, the primary reservoir in Pulp Mill's pressure zone, has continued to operate at similar levels and customers have not experienced a major change in service. The 10 MG Hood St Reservoir, supported by the 66 MG McMillin Reservoir, has sufficient storage capacity for existing and future customers through 2045 as shown in Attachment A.

The new PFAS regulations will restrict use of some ground water supply, starting in 2029, until treatment is constructed. Tacoma Water anticipates being able to meet our supply needs during the WSP planning period through a combination of to-be-determined blending and PFAS treatment. We will achieve full use of our groundwater supply in the future though constructing PFAS treatment in phases, as necessary. The initial phase of PFAS Treatment has been included in the WSP Amendment with the intent to construct by 2029. To better understand the timing for subsequent PFAS treatment phases, the coordinated PFAS Implementation Study and Integrated Resource Plan (long-range supply plan) are ongoing. Once complete, these studies will allow Tacoma Water to refine the PFAS treatment and related well rehabilitation costs presented in Chapter 11 – Capital Improvement Plan.

Tacoma Water is the non-federal sponsor of the AWSP Phase 1, Part 2 project to construct Downstream fish passage at the Howard Hanson Dam – completing the requirements of the AWSP Phase 1 Project. Additionally, we are completing large, related capital projects to support salmon recovery and meet water supply related agreements, including operational and security improvements to mitigate AWSP construction impacts, upstream fish passage improvements, watershed habitat improvements, and supporting the Muckleshoot Indian Tribe Fish Restoration Facility. The AWSP Phase 1 project provides 20,000 acre-feet of Eagle Gorge reservoir storage to Tacoma Water and the Regional Water Supply System (RWSS) Partners. Draft 2025 Integrated Resource Plan results incorporating the additional AWSP Phase 1 storage identified greater green

MEMORANDUM

river supply reliability from the additional storage. Additionally, the 2025 IRP reaffirmed that the groundwater improvements discussed in Chapter 4 are still needed.

The above analyses are summaries of more detailed work completed by Tacoma Water. Please contact Daniel Reisinger at dreisinger@cityoftacoma.org and at 253-316-2477 if you have any questions or would like additional information.



MEMORANDUM

Attachment A Low Service Operating Area Reservoir Calculations

251 - Low Service Operating Area Storage Calculations					
	2020	Forecasted Year			
	2025	2030	2035	2040	
Projected Demands (gpm)					
Average Day Demands of Areas Directly Served via Gravity					
251 - Low Service ¹	16,100	3,100	3,600	4,100	4,700
Projected Total Average Day Demand	16,100	3,100	3,600	4,100	4,700
Projected ERUs	126,000	24,261	28,174	32,087	36,783
Projected Maximum Day Demand (gpm)	21,604	5,700	6,200	6,700	7,800
Projected Peak Hour Demand (gpm)	23,805	7,800	8,300	8,800	11,900
Sources (gpm)					
Hood St Hydroelectric Generator			17,000		
South Tacoma Aquifer Groundwater ²			20,833		
Carr St & Tacoma Ave PRV Station			1,000		
Bennet St - N 52nd St PRV Station			1,000		
Milwaukee Way & SR509 PRV Station			5,600		
Total Available Sources, All Online			24,600		
Total Available Sources, Largest Offline			28,433		
Required Storage Volumes (MG)					
Operational Storage		2.79	2.79	2.79	2.79
Equalizing Storage		0.00	0.00	0.00	0.00
Standby Storage		4.85	5.63	6.42	7.36
Fire Suppression Storage		3.84	3.84	3.84	3.84
Storage required at 30 psi		2.79	2.79	2.79	2.79
Storage required at 20 psi		7.64	8.43	9.21	10.15
Hood St Reservoir Available Storage Volumes (MG)					
Existing Storage Greater than 30 psi			2.4		
Existing Storage Greater than 20 psi			9.3		
Storage Surplus / (Deficiency) (MG)					
30 psi Required Storage ³		-0.41	-0.41	-0.41	-0.41
20 psi Required Storage ⁴		1.66	0.88	0.10	-0.84
Shared Storage (McMillin Reservoir)		0.00	0.00	0.00	0.84
20 psi Storage Surplus / (Deficiency)		0.00	0.00	0.00	0.00

MEMORANDUM

Notes:

¹ The City of Fife wholesale water is included in the demand. The redundant uncontrolled connections between Tacoma Water and Fife inherently provides wholesale supply with the same water storage as our retail customers in the Tideflats. Fife intends to use this supply for fire flow availability and during emergencies.

² Hood St. Hydroelectric Generator and South Tacoma Groundwater are currently unable to be operated at the same time with the loss of the Pulp Mill's demand. Supply is "nonadditive".

³ Hood St Reservoir and much of the distribution system was constructed prior to pressure regulations, where a small number of customers may fall slightly below 30 psi on a peak hour. Tacoma Water rezones high elevation, low pressure distribution mains when opportunities arise.

⁴ The 251 - Low Service Pressure Zone is considered as part of the McMillin Reservoir Operating Area, where the Hood St Reservoir Hydroelectric Generator and Milwaukee & SR509 PRV Station supplies are supported by the 66 MG reservoir.