King County

1200 King County
Courthouse
516 Third Avenue
Seattle, WA 98104

Meeting Agenda

Regional Water Quality Committee

Councilmembers:
Claudia Balducci, Chair
Reagan Dunn, Dave Upthegrove
Alternate:

Sound Cities Association: Conrad Lee, Bellevue, Vice Chair; Sarah Moore, Burien; Laura Mork, Shoreline; Jessica Rossman, Medina

Alternates: Kelli Curtis, Kirkland; Yolanda Trout Manuel, Auburn

Sewer/Water Districts: Chuck Clarke, Woodinville Water District; Lloyd Warren, Sammamish Plateau Water District
Alternate: Ryika Hooshangi, Sammamish Plateau Water

City of Seattle: Joy Hollingsworth, Robert Kettle
Alternate: Rob Saka

Lead Staff: Jenny Giambattista (206-477-0879)
Committee Clerk: Blake Wells (206-263-1617)

3:00 PM | **Wednesday, November 6, 2024** | **Hybrid Meeting**

REVISED AGENDA

Hybrid Meetings: Attend the King County Council committee meetings in person in Council Chambers (Room 1001), 516 3rd Avenue in Seattle, or through remote access. Details on how to attend and/or to provide comment remotely are listed below.

Pursuant to K.C.C. 1.24.035 A. and F., this meeting is also noticed as a meeting of the Metropolitan King County Council, whose agenda is limited to the committee business. In this meeting only the rules and procedures applicable to committees apply and not those applicable to full council meetings.

HOW TO PROVIDE PUBLIC COMMENT: The Regional Water Quality Committee values community input and looks forward to hearing from you on agenda items.

Sign language and interpreter services can be arranged given sufficient notice (206-848-0355).
TTY Number - TTY 711.
Council Chambers is equipped with a hearing loop, which provides a wireless signal that is picked up by a hearing aid when it is set to 'T' (Telecoil) setting.

The Committee will accept public comment on items on today's agenda in writing. You may do so by submitting your written comments to kcccomitt@kingcounty.gov. If your comments are submitted before 8:00 a.m. on the day of the meeting, your comments will be distributed to the committee members and appropriate staff prior to the meeting.

HOW TO WATCH/LISTEN TO THE MEETING REMOTELY: There are three ways to watch or listen to the meeting:
1) Stream online via this link: www.kingcounty.gov/kctv, or input the link web address into your web browser.
2) Watch King County TV on Comcast Channel 22 and 322(HD) and Astound Broadband Channels 22 and 711(HD).
3) Listen to the meeting by telephone.

Dial: 1 253 215 8782
Webinar ID: 827 1536 1574

To help us manage the meeting, please use the Livestream or King County TV options listed above, if possible, to watch or listen to the meeting.

1. **Call to Order**

2. **Roll Call**

To show a PDF of the written materials for an agenda item, click on the agenda item below.

3. **Approval of Minutes** p. 4

September 4, 2024 and October 2, 2024 meeting minutes

4. **Chair's Report**

Chair Balducci

5. **MWPAAC Report**

John McClellan, Chair, MWPAAC

6. **Wastewater Treatment Division (WTD) Report**

Kamuron Gurol, Director, Wastewater Treatment Division, Department of Natural Resources and Parks

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Briefings

7. Briefing No. 2024-B0085 **p. 10**

   Regional Wastewater Services Plan

   Darren Greve, Government Relations Administrator, Wastewater Treatment Division, Department of Natural Resources and Parks

8. Briefing No. 2024-B0123 **p. 17**

   2025 Proposed Budget for Wastewater Treatment Division

   Jenny Giambattista, Council staff

9. Briefing No. 2024-B0042 **p. 69**

   2024 Regional Water Quality Committee (RWQC) Work Plan

   Jenny Giambattista, Council staff

Other Business

Adjournment

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Meeting Minutes

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Auburn

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Committee Clerk: Blake Wells (206-263-1617)

3:00 PM **Wednesday, September 4, 2024** **Hybrid Meeting**

DRAFT MINUTES - SPECIAL MEETING
REVISED AGENDA

1. Call to Order

Chair Balducci called the meeting to order at 3:09 PM.

2. Roll Call

Present: 12 - Balducci, Clarke, Dunn, Lee, Mork, Moore, Rossman, Warren, Hollingsworth, Kettle, Curtis and Hooshangi

Excused: 1 - Upthegrove

3. Approval of Minutes

Vice Chair Lee moved approval of the July 15, 2024 meeting minutes. There being no objections, the minutes were approved.

4. Chair's Report

Chair Balducci provided an overview of the agenda.

5. MWPAAC Report

John McClellan, Chair, MWPAAC, provided updates on recent and upcoming MWPAAC meetings, reviewed his notes on the Wastewater Treatment Division's document regarding major policy questions, and answered questions from the members.

6. Wastewater Treatment Division (WTD) Report

Kamuron Gurol, Director, Wastewater Treatment Division, Department of Natural Resources and Parks, provided updates on the Heathfield Pump Station mechanical failure on August 15, 2024, site visits from the First Amendment Auditors, documents that were sent by RWQC members to the Wastewater Treatment Division regarding biosolids, and recent tours of Wastewater Treatment Division facilities by legislators and University of Washington employees.

Briefings

7. Briefing No. 2024-B0085

Regional Wastewater Services Plan

John McClellan, Chair, MWPAAC, briefed the committee on MWPAAC's approach to the Regional Wastewater Services Plan. Jim Simmonds, Supervisor, Comprehensive Planning, Wastewater Treatment Division, Department of Natural Resources and Parks, also addresses the committee and answered questions from the members.

The committee held an open discussion on the scoping of this issue and guiding principles moving forward.

This matter was Deferred

8. Briefing No. 2024-B0042

2024 Regional Water Quality Committee (RWQC) Work Plan

Chair Balducci provided updates on the work program.

This matter was Deferred

Adjournment

The meeting was adjourned at 4:56 PM.

Approved this _____ day of _____

Clerk's Signature

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Meeting Minutes

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Committee Clerk: Blake Wells (206-263-1617)

3:00 PM **Wednesday, October 2, 2024** **Hybrid Meeting**

DRAFT MINUTES

1. Call to Order

Chair Balducci called the meeting to order at 3:07 PM.

2. Roll Call

Present: 8 - Balducci, Clarke, Lee, Mork, Moore, Rossman, Curtis and Hooshangi

Excused: 5 - Dunn, Upthegrove, Warren, Hollingsworth and Kettle

3. Approval of Minutes

This item was not addressed.

4. Chair's Report

Chair Balducci discussed the work accomplished during the in-person meeting of RWQC on September 4, 2024 and asked members whether they wanted to continue to meet during the King County Budget season. RWQC will continue to meet as scheduled for duration of the budget season.

5. MWPAAC Report

John McClellan, Chair, MWPAAC, provided updates on recent and upcoming MWPAAC meetings and discussed the list of proposed projects for 2025 that was produced by the Wastewater Treatment Division.

6. Wastewater Treatment Division (WTD) Report

Kamuron Gurol, Director, Wastewater Treatment Division, Department of Natural Resources and Parks, provided updates on pending hearings regarding nutrients, an overflow event on September 25, 2024 on the west side of the Duwamish Waterway, recent tours of Wastewater Treatment Division facilities, and the Wastewater Treatment Division's Power Quality Improvement Project.

Briefings

7. **Briefing No. 2024-B0085**

Regional Wastewater Services Plan

Kamuron Gurol, Director, Wastewater Treatment Division, Department of Natural Resources and Parks, Darren Greve, Government Relations Administrator, Wastewater Treatment Division, Department of Natural Resources and Parks, and Janice Johnson, RWSP Update Program Manager, Wastewater Treatment Division, Department of Natural Resources and Parks, briefed the committee and answered questions from the members.

This matter was deferred.

8. **Briefing No. 2024-B0067**

Contaminants of Emerging Concern: Update on Efforts to Reduce and Control PFAS and Contaminants of Emerging Concern as Requested by Motion 16434

Erika Kinno, Research and Policy Project Manager, Wastewater Treatment Division, Department of Natural Resources and Parks, and Megan Smith, Environment and Water Quality Policy Manager, King County Department of Natural Resources and Parks, briefed the committee via PowerPoint presentation and answered questions from the members.

This matter was deferred.

9. **Briefing No. 2024-B0114**

Executive's Proposed 2025 Wastewater Treatment Division Proposed Capital Improvement Program

The members asked questions of Department of Natural Resources and Parks staff.

This matter was deferred.

10. **Briefing No. 2024-B0115**

Stormwater Study Session: Part 1-Understanding the Stormwater Problem

John Taylor, Director, Department of Natural Resources and Parks, Megan Smith, Environment and Water Quality Policy Manager, King County Department of Natural Resources and Parks, and Angela Gallardo, Stormwater Services Section Manager, Water and Land Resources Division, Department of Natural Resources and Parks, briefed the committee via PowerPoint presentation and answered questions from the members.

This matter was presented.

11. **Briefing No. 2024-B0042**

2024 Regional Water Quality Committee (RWQC) Work Plan

Chair Balducci reviewed progress on the 2024 work program.

This matter was deferred.

Other Business

There was no other business to come before the committee.

Adjournment

The meeting was adjourned at 4:52 PM.

Approved this _____ day of _____

Clerk's Signature

November 6, 2024

Regional Wastewater Services Plan (RWSP) Collaboration Approach

Regional Water Quality Committee

RWSP Collaboration Approach

Goals

- Ensure coordination, engagement and collaboration across WTD, MWPAAC, and RWQC
- Develop and implement an effective process that allows policymakers to make informed decisions
- Help ensure the updated RWSP:
  - Reflects regional priorities and consensus
  - Serves as an enduring guide for the wastewater system

RWSP Working Group

Purpose/membership:

- MWPAAC, RWQC, and SCA member staff
- Serve as one channel for clear communication across key groups
- Collaborate with WTD project team throughout development and successful adoption of an updated RWSP
- Guide, influence and help shape RWSP work products
- Report out and receive feedback from MWPAAC and RWQC.

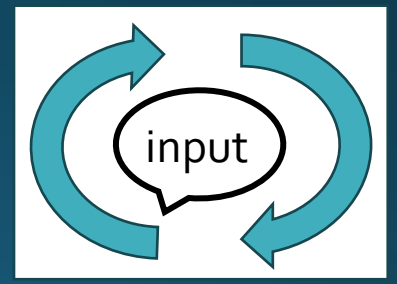
RWSP Process Charter

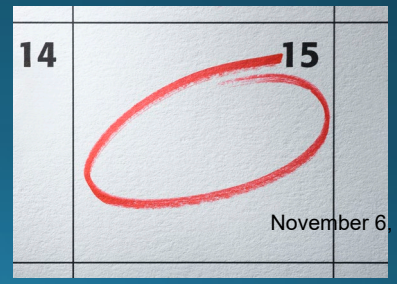
Framework for collaboration between WTD, MWPAAC, and RWQC for the RWSP update

- Shared values and guiding principles
- Roles and responsibilities
- High level summary of major work topics and policy areas to be addressed
- High level schedule and milestones
- Information/material flow and feedback loops, and
- Commitment from WTD Director and Chairs of RWQC and MWPAAC.

Information and Work Product Flow

1. Sequencing Steps
2. Appropriate Time for Review & Input
3. Built-in Feedback Loops
4. Maintaining Schedule





Near-term schedule and products

1. **Early code updates**
   - MWPAAC General Meeting: Oct. 23
   - MWPAAC Engineering and Planning (E&P) Subcommittee: Nov. 7
   - RWQC: January 2025

2. **Revised Scoping Document (with accompanying comments and responses)**
   - MWPAAC E&P Subcommittee: Nov. 7
   - RWQC: Dec. 5

3. **Charter**
   - RWSP Working Group: Oct. 9, Nov. 13, Dec. 2
   - MWPAAC General Meeting: Dec. 11
   - RWQC: January 2025

Questions?

King County
Department of
Natural Resources and Parks
Wastewater Treatment Division

King County

Metropolitan King County Council
Regional Water Quality Committee

STAFF REPORT

Agenda Item:	8	**Name:**	Jenny Giambattista
Proposed No.:	2024-B0123	**Date:**	November 6, 2024

SUBJECT

Briefing on the Executive's Proposed 2025 Budget for the Wastewater Treatment Division.

SUMMARY

This is a courtesy briefing for the Regional Water Quality Committee on the Executive's Proposed 2025 Budget for the Wastewater Treatment Division.

The King County Executive is proposing an annual one-year budget for 2025. King County will revert back to biennial budgets for 2026-2027 and beyond.[1] WTD expenditures are organized into three budgets, including the Wastewater Operating, Water Quality Construction, and Wastewater Debt Service budgets. This staff report discusses the Wastewater Operating and Capital (Water Quality Construction) budgets. The increased operating budget reflects inflationary operational costs and the addition of 78.0 FTEs and 8.0 TLTs, many of which are related to the expanding capital program. Similarly, capital expenditures are projected to increase in 2025 due to the expanding capital program.

The 2025 Budget was transmitted on September 23, 2024. The Wastewater Treatment Division's budget was discussed during the Budget and Fiscal Management Committee's meetings on October 8th and October 15th. The Council intends to adopt the 2025 Budget on November 19th or 26th.

Additional information on the Brightwater Reclaimed Water Storage Project was added to this staff report in blue font.

[1] King County has used biennial (two-year) budgets for the last decade, but in 2022 the County's voters approved a proposal to shift County elections from odd-numbered to even-numbered years to increase turnout. In order to properly align the budget cycle and election cycle, for 2025, the Executive has proposed a one-year budget and will revert to biennial budgets for 2026-2027 and beyond.

OPERATING BUDGET

Background. The operating budget includes both expenditures to operate the five wastewater treatment plants and 390 miles of conveyance pipeline, and rate revenues to support operating, capital, and, debt service needs. As such, revenues associated with the operating budget significantly exceed operating costs; the bulk of revenues have historically been transferred to the capital fund and debt service fund, and used for debt defeasance.

Primary revenue sources include the sewer rate, paid by all dischargers, and the capacity charge, assessed for new connections to the wastewater system. In June 2024 council approved a rate increase of 5.75% for 2025 and 7% is projected for 2026. Sales of processing residuals such as biomethane, recycled water, and biosolids, as well as interest on revenue accounts, are other revenue sources.

Increases in operating expenditures can have a larger impact on the rate than an equivalent increase in capital costs because operating expenditures must be funded by cash (rate revenue).

Table 1
Summary of Proposed WTD Operating Budget and Changes

	Expenditures	Revenues	FTEs	TLTs
2024 Revised Budget, Annualized	$195,121,514	$643,851,308	868	5
2025 Base Budget Adjust.	$8,573,431	$0	0	(5)
2025 Decision Packages	$20,150,746	$48,802,937	78	8
2025 Proposed Budget	**$223,846,000**	**$692,655,000**	**946**	**8**
% Change from prior biennium, annualized	14.7%			

Major Revenue Sources: Sewer rate and capacity charge revenue.

2025 Proposed Budget. As shown in Table 1, the 2025 proposed operating budget is 14.7% higher than the annualized 2024 revised budget. The increased budget reflects inflationary operational costs and the addition of 78 FTEs and 8.0 TLTs, many related to the expanding capital program. For the FTE requests related to capital, only the share of the FTE costs related to the operating budget is requested in this operating budget. The remaining costs are charged to capital projects. During the discussions of the 2025 sewer rate, WTD identified the increasing capital project portfolio, inflationary cost pressures, and expanding operational needs as primary drivers of the rate increase and reported operational costs were expected to increase in 2025. The anticipated increase in operational and capital FTEs was also discussed during the 2025 rate process.

Key decision packages are listed below.

- 45.0 FTE, 8.0 TLT, and $2.2 million to support project planning and delivery of an expanded capital portfolio of programs and projects. (An additional $8.4 million is included in the capital budget.)
- 12.0 FTE and $1.5 million for plant operations at West Point, Brightwater, and South Plant to reduce the growing overtime pressure of plant operations staff and meet the growing needs related to new regulations and new facilities.
- 10.0 FTE and $513,667 to add a capital program unit to the Operations and Maintenance section. (An additional $1.6 million is included in the capital budget.) This unit would coordinate capital work underway and planned at the three regional treatment plans, two community plants, and dozens of offsite facilities. WTD reports that due to the growing number of capital projects and increased complexity, the WTD operations team needs dedicated staffing to contribute to the design and engineering processes, support construction, commissioning, and facilitate a smooth transition of new assets to daily operations and service.
- 4.0 FTE and $521,000 for additional human resources staff to address the need for increased staffing of capital and operations work. (An additional $112,000 is included in the capital budget.) With a 35% increase in staff count over the last five years and projected adds, WTD reports this increases the need for corresponding HR support not only in recruitment but employee and labor relations, medical and leave issues, compensation, and other HR Service Delivery needs.
- $5 million for increased costs of chemicals used at treatment plants. WTD reports over the last five years the costs for chemicals have risen dramatically, particularly those chemicals used for disinfection and odor control, corrosion control, and solids thickening. The 2024 annualized base budget for chemicals was $13 million however, the actual expenditures are forecast to exceed $17 million.
- $2 million to add appropriation to the operating budget to cover necessary cost increases associated with natural gas, permit fees, parts, and materials.
- $1.5 million to increase the transfer to Water and Land Resources Division (WLRD) for environmental lab and other services to reflect the inflationary projected increase.
- $1.3 million for increased electricity costs at South Plant. Some of the increased electricity is needed to assist the facility in meeting the Puget Sound Nutrients General Permit requirements. WTD is also installing two new heat pumps that are expected to support heating the plant.
- $565,000 annually for a technical services contract to strengthen the Asset Management program and support WTD's Strategic Asset Management Plan. WTD anticipates funding this consultant contract through the end of 2027. Some of the key services under this contract include condition assessment, forecasting, technology evaluation, planning and spare parts inventory.

- $362,000 for an inflationary increase to the Waterworks Grant Program based on 1.5% of WTD operating budget.

Staff Increase. The proposed budget would add 78 FTEs to the existing 868 FTEs, for an increase of 9% in the size of the employee pool. This represents a large increase, at a time when there is significant competition for quality skilled technical and capital related labor. The size and timing of the increase may raise concerns about the depth of the recruitment pool; the balance between senior staff and new staff, with implications regarding the ability to allocate needed mentoring and training for new staff; the assignment of new staff to large, complex projects, with the associated opportunity for errors; and the onboarding process.

WTD reports hirings, as in recent years, will be staggered by quarter. WTD reports it has confidence in its ability to fill the requested positions as noted in the response below.

> "Our track record over the last 3 years has been strong, and we continue to apply lessons learned from our experience. WTD will continue to use a prioritized approach over the calendar year and focus on recruitment for the highest priority FTE needs in our capital delivery work groups to fill these positions. Strong collaboration between Capital Delivery and our HR staff will continue. Capital Delivery also continues strong participation in planned external recruitment efforts, including job fairs, internships, and outreach events at colleges and conferences. In addition, the capacity of WTD's recruitment team has been bolstered through temporary and special duty opportunities to help meet recruitment needs."

Staffing Has Grown in Recent Years/Current Vacancies. As shown in Table 2, WTD has significantly increased its staffing beginning in 2023. In June 2023, the Council adopted a supplemental appropriation[2] to the 2023-2024 Biennial Budget and authorized an additional 73 FTEs for WTD. Of those, 22 are currently vacant.[3] In the 2023-2024 Adopted Biennial Budget, WTD increased its FTE allocation by 96 FTE positions. Of those, 86 positions have been filled. WTD reports it currently has a vacancy rate of 13%. If the 25 positions authorized in June 2023 are excluded, WTD reports its vacancy rate is 10%, which it reports is the normal vacancy rate goal set by DNRP.

[2] Ordinance 19621

[3] WTD defines vacant FTEs as positions in which recruitment has not yet started due to the need to stagger recruitments for training, sequence the order of hires, holds that the hiring authority asked for, and to level out resourcing needs from HR.

Table 2
WTD FTE Growth 2013-2025

FTE Adds	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Director's Office		2	2	-	1	-	(0)	-	0	-	5	-	5	15
Environmental & Community Svcs		1	1	-	4	-	2	-	6	-	20	17	1	51
Finance & Administration		1	-	-	4	-	-	-	1	-	6	-	1	13
Operations		(2)	2	-	-	-	15	5	-	-	15	4	25	64
Resource Recovery		(1)	1	-	2	1	-	-	4	-	9	5	-	20
Project Planning & Delivery		(1)	8	2	7	-	7	-	4	31	42	47	46	193
Total New FTEs		-	14	2	18	1	24	5	14	31	96	73	78	356

Total Adopted FTEs	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Change
Director's Office	22	24	26	26	27	27	27	27	27	27	32	32	37	15
Environmental & Community Svcs	50	51	52	52	56	56	58	58	64	64	83	100	101	51
Finance & Administration	27	28	28	28	32	32	32	32	33	33	39	39	40	13
Operations	304	302	304	304	304	304	319	324	324	324	339	343	368	64
Resource Recovery	16	15	16	16	18	19	19	19	23	23	31	36	36	20
Project Planning & Delivery	171	170	178	180	187	187	194	194	198	229	271	318	364	193
Total Adopted FTEs	590	590	604	606	624	625	649	654	668	699	795	868	946	356

Adopted FTE % Change	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total %
Director's Office		9%	8%	0%	4%	0%	-1%	0%	1%	0%	19%	0%	16%	68%
Environmental & Community Svcs		2%	2%	0%	8%	0%	4%	0%	9%	0%	31%	20%	1%	102%
Finance & Administration		4%	0%	0%	14%	0%	0%	0%	3%	0%	18%	0%	3%	48%
Operations		**-1%**	**1%**	**0%**	**0%**	**0%**	**5%**	**2%**	**0%**	**0%**	**5%**	**1%**	**7%**	**21%**
Resource Recovery		-6%	7%	0%	13%	6%	0%	0%	18%	0%	38%	16%	0%	125%
Project Planning & Delivery		-1%	5%	1%	4%	0%	4%	0%	2%	16%	18%	17%	14%	113%
Total		**0%**	**2%**	**0%**	**3%**	**0%**	**4%**	**1%**	**2%**	**5%**	**14%**	**9%**	**9%**	**60%**

*2025 is Executive Proposed

FTEs for Capital Program. In addition to the 55 FTEs requested in 2025, WTD estimates it will need an additional 50 FTEs annually thru 2029 to support its capital program.

In response to Council questions about how WTD determined the additional positions that would be needed for its CIP portfolio and the ability to hire all positions in 2025, WTD provided additional information that can be found in Attachment 1. In summary, WTD analyzed data from 2012 to 2021, comparing the number of WTD FTEs allocated to delivering and supporting the capital program to the amount spent annually on capital delivery. WTD reports this provided a baseline to understand how staffing levels influence the ability to deliver projects. Other factors considered were onboarding times, as WTD reports new staff typically require about two years to manage workloads similar to seasoned staff, and the ratio of in-house versus consultant labor which changes for large projects such the CSO Projects. (WTD assumes that to deliver the large-scale CSO projects, they will rely primarily on consultant staff labor and are unconstrained by internal staff resources.)

WTD also reports that that the division maintains over a decade of labor cost data in its PRISM system which provides valuable insights for estimating future labor demand based on historical trends. These data-driven models inform their FTE requests and help forecast labor needs for future projects based on high-level assumptions.

Future Staffing Forecasts. Lastly, WTD reports it anticipates substantial changes to the 2026 sewer rate forecast related to a longer time period (20-year forecast from 10) and final CSO schedule, etc. WTD reports that they have four years of hiring with this resource constrained approach so that they are planning to revise this approach along with other changes for the 2026 rate and budget forecast. WTD reports they will ensure a clear explanation as they prepare to update the approach and assumptions in 2026.

WTD reports, "Looking ahead, there are several potential approaches to further refine our staffing forecasts, including leveraging PRISM's capabilities, developing alternative Excel-based models, or exploring other analytical tools. These options will be considered and evaluated in preparation for future sewer rate and budget submittals including the 2026 submittals, as we work to refine our staffing needs."

Given the anticipated need for significant additional FTEs for the capital program and the existing labor cost data, WTD may wish to consider developing future capital FTE budget requests using a project-based approach in which capital staffing requests are based on the labor needs of specific projects. Such estimates could be based on the type of project and the labor hours applied to those types of project in the past. This approach could be used in addition to the existing modeling as way to further validate the staffing requests.

CAPITAL BUDGET

WTD's capital budget was briefly discussed at the October 2, 2024 RWQC meeting. The PowerPoint presentation from October 2 is included as Attachment 2 to this staff report. Information requested on the Brightwater Reclaimed Storage Project and the Mouth of Duwamish Facility Plan for CSO Outfalls can be found at the end of this section. Additionally, a map of all the 2025 proposed capital projects is included as Attachment 3.

Background. The Water Quality Construction capital budget finances construction, maintenance, upgrade, and expansion of the wastewater system physical plant, including treatment facilities and the conveyance system. Over recent biennia, the regional system has been focused on constructing the Combined Sewer Overflow (CSO) projects required by a consent decree between King County and the federal Environmental Protection Agency and Department of Justice, and the Washington State Department of Ecology. Additionally, the agency is continuing its work on the Conveyance System Improvement and Treatment Planning programs, to assure the capacity of the conveyance and treatment system to meet the demands of regional growth, and facility maintenance. However, as the system continues to age, the two larger regional plants (West Point and South Plant) and hundreds of miles of interceptor pipeline that were completed in the 1960s and expanded in the 1970s and 1990s, and the Brightwater regional plant that was completed in the 2010s, the need for maintenance, repair and upgrade of facilities is becoming more urgent. WTD is

accelerating its Asset Management program in response, focusing on both treatment plant and interceptor pipeline evaluation, repair, upgrade, and replacement. Meanwhile, the Washington Department of Ecology has taken a regulatory action requiring wastewater generators of nitrogen, which is the chemical element that can accelerate the growth of algae in the marine environment, to limit discharges according to the terms of a state-issued permit.

The 2025 proposed budget includes 53 capital projects and an appropriation request of $359.2 million. (See Attachment 4 for a brief description of 2025 capital appropriation requests.) The requested projects reflect a mix of new and continuing projects with most projects not seeking full appropriation.

The Water Quality Construction budget is categorized according to major "portfolios" to delineate the primary functions that the budget addresses. The largest expenditures are for Asset Management (repair and upgrade of mechanical systems requiring rehabilitation) and Regulatory (responding to state and federal regulatory mandates or consent decrees) investments; others include Capacity Improvements (expanding pipelines and treatment facilities in anticipation of growing capacity needs), Resiliency (strengthening structures to withstand flooding, seismic events or other natural disasters), and Resource Recovery (capturing resources generated by wastewater processing such as biogas or recyclable water for productive use or sale).

2025 Proposed WTD CIP Appropriations. Listed below are the 2025 proposed appropriations for selected CIP projects in each of the major WTD capital portfolios:

Asset Management ($214.4) million Selected Projects

- West Point Electrical Improvements: $56.8 million
- West Point Critical Gate Refurbishment: $75.9 million
- Ovation Evergreen Control Systems Lifecycle Management Program: $16 million
- West Point EPS Isolation Gate Rehabilitation: $17 million
- Research Vessel Replacement: $1.1 million

Regulatory ($49.6 million) Selected Projects

- Elliott West CSO Control Planning and Alternatives: $18.3 million
- Mouth of Duwamish Facility Plan: $15.5 million
- CSO Control and Improvement: $4.1 million

Capacity Improvement ($24.8 million) Selected Projects

- Black Diamond Trunk Capacity Upgrade: $14.6 million
- Soos Creek Cascade Relief interceptor Upgrade: $6.1 million
- West Point Digestion Capacity Expansion $2.9 million

Operational Enhancements ($2.7 million) Selected Projects

- Technology Assessment and Innovation Project: $2.7 million

Resiliency ($22.1 million)

- Climate Adaptation Planning Program: $4.2 million
- West Point Primary Sedimentation Area Roof Structure: $8.4 million
- West Point Passive Weir for Emergency Bypass: $9.6 million

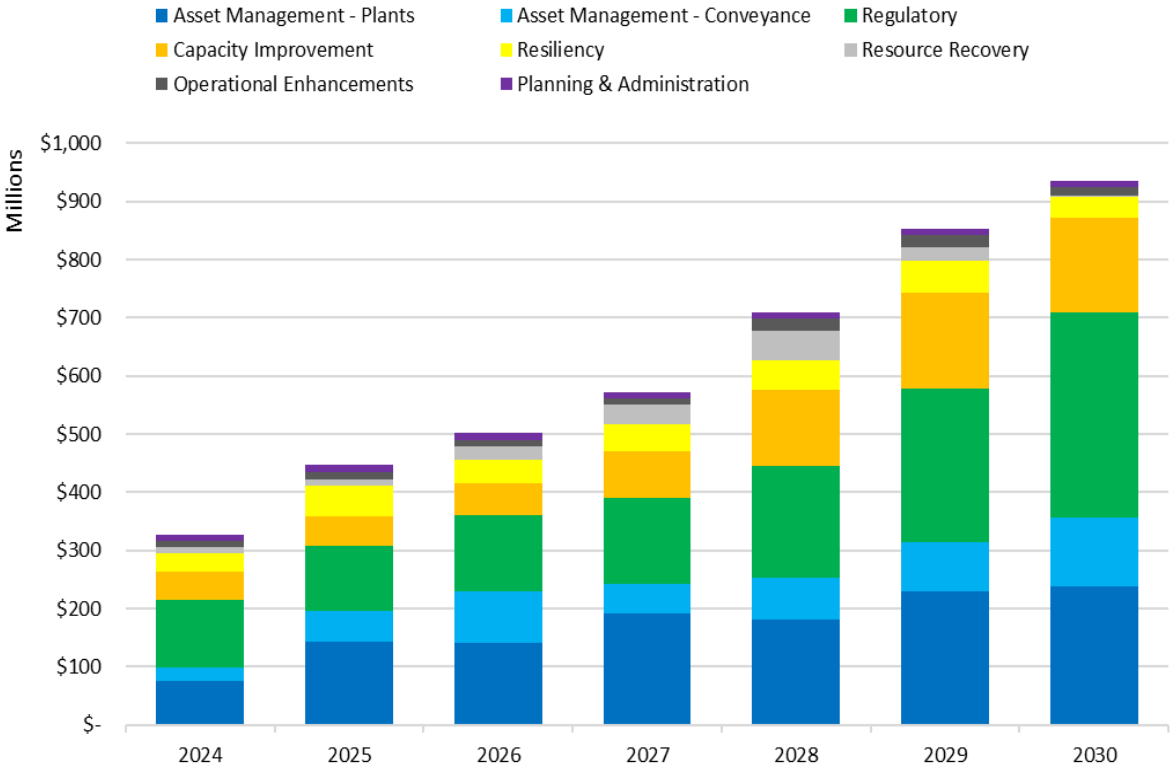
Resource Recovery ($43.2 millions) Selected Projects

- Brightwater Reclaimed Water Storage: $35.9 million
- West Point Biogas Utilization Project: $5.5 million

Large Increase in Expected CIP Expenditures. As shown in Figure 1 below, planned expenditures over the six-year CIP Spending forecast are increasing significantly. According to WTD, the 2024 estimated total capital expenditure will be $327.3 million; projected expenditures for 2025 are expected to be around $448 million an increase of 37% for the coming year. WTD reports it will update its expenditure forecasts once 2024 expenditures are analyzed and project forecasts are updated.

WTD's annual capital expenditures are expected to quadruple from 2018 to 2030 going from $231 million in 2018 to about $925 million by 2030. The CIP expenditure forecast can directly impact rate setting. If WTD projects expenditures higher than can be achieved, there is a risk of seeking revenues (rates) at a level beyond what is needed in a given year. WTD has never experienced such growth and is working to accurately model expenditures and the required number of FTEs necessary to implement such an ambitious expansion in their CIP portfolio. There are many variables which can impact the delivery of such a large capital portfolio, including construction and labor market conditions.

Figure 1
Proposed 2025 Budget 6-Year Spending CIP



Capital Governance Structure. WTD has several processes in place to provide portfolio, program, and project oversight for CIP investments through a tiered internal governance structure. (See Attachment 5 for WTD's description of its internal CIP governance structure.)

Future Briefings. Given the unprecedented growth expected for WTD's staffing and capital expenditures, the RWQC may wish to request future briefings on progress in project delivery. For example, the Committee may wish to request WTD brief RWQC twice a year on selected, significant projects underway and any issues that may impact the delivery of the project. Such briefings may provide an opportunity to highlight issues or challenges in capital project delivery. Additionally, the Committee may wish to get briefings on the status of planned hirings.

Follow-up from October 2, 2024, RWQC meetings. During the October 2, 2024, RWQC meeting, members asked for additional information on the proposed appropriation for the Reclaimed Water Project at Brightwater and the Mouth of Duwamish Planning Project. Please see Attachment 3 for the requested map of 2025 proposed capital projects.

Brightwater Reclaimed Water Storage. The Brightwater Treatment Plant uses a membrane bioreactor treatment technology making the treated wastewater suitable for water reuse with additional disinfection. The reclaimed water at Brightwater was constructed during the same time period as the rest system of the rest of the Brightwater Treatment Plant and Conveyance System.

NEW: As part of permitting for the construction of Brightwater, an outfall easement was granted by the Washington Department of Natural Resources. Section 3.3 of the easement states, "Grantee acknowledges that it is State's goal to reduce the reliance on the receiving waters of Washington State for the disposal of waste effluent, stormwater and other discharges, and to promote water re-use. Any renewal of this easement shall be dependent upon the Grantee's satisfactory progress towards implementation of reasonably practical disposal alternatives that abate the effect of the pollution constituents on state-owned aquatic lands and their associated biological communities."

Essentially, the easement requires WTD to make progress in several areas, including reduction of inflow and infiltration, promoting groundwater recharge, and increasing the beneficial reuse of reclaimed water. Doing so helps to decrease the chemical, biological, and physical impacts from our discharges to state-owned aquatic lands and their associated biological communities.

King County started distributing reclaimed water to the Sammamish Valley from the Brightwater Treatment facility in 2013. The Brightwater reclaimed water system is designed and permitted to produce 12 million gallons per day.

Reliability issues with the reclaimed water have become more apparent as customers were added and after needed changes in operation of the Brightwater Influent Pump Station. The current reclaimed water system has experienced frequent outages, which has been a challenge to meeting obligations to WTD's current reclaimed water customers. These outages are primarily due to permit non-compliance related to chlorine residuals in the reclaimed water and stops in production of the reclaimed water due to interruptions in wastewater supply during daily maintenance activities at the Brightwater Influent Pump Station.

WTD currently sells recycled water to three customers in the Sammamish Valley, and truck fill customers occasionally. The water is primarily used for irrigation. The current customers are:

- Willows Run Golf Course
- Lake Washington Youth Soccer Association (60 Acres Park)
- Buttonwood Tree Farm

WTD reports this project is consistent with the following Water reuse policies (WRP), in The Regional Wastewater Services Plan (K.C.C. 28.86.100):

> WRP-1: King County shall actively pursue the use of reclaimed water while protecting the public health and safety and the environment. The county shall facilitate the development of a water reuse program to help meet the goals of the county to preserve water supplies within the region and to ensure that any reclaimed water reintroduced into the environment will protect the water quality of the receiving water body and the aquatic environment.
>
> WRP-3: Recycling and reusing reclaimed water shall be investigated as a possible future significant new source of water to enhance or maintain fish runs, supply additional water for the region's nonpotable uses, preserve environmental and aesthetic values and defer the need to develop new potable water supply projects.
>
> WRP-12: King County shall retain the flexibility to produce and distribute reclaimed water at all treatment plants including retaining options to add additional levels of treatment.
>
> WRP-13: King County shall continue to evaluate potential funding of pilot-scale and water reuse projects, in whole or in part, from the wastewater utility rate base.

Council staffed have asked for additional information on the consistency of this project with WRP-5.

> WRP-5: King County shall implement nonpotable projects on a case-by-case basis. To evaluate nonpotable projects, King County shall develop criteria which will include, but are not limited to: capital, operation and maintenance costs; cost recovery; potential and proposed uses; rate and capacity charge impacts; environmental benefits; fisheries habitat maintenance and enhancement potential; community and social benefits and impacts; public education opportunities; risk and liability; demonstration of new technologies; and enhancing economic development. A detailed financial analysis of the overall costs and benefits of a water reuse project shall include cost estimates for the capital and operations associated with a project, the anticipated or existing contracts for purchases of reused water, including agricultural and other potential uses, anticipated costs for potable water when the project becomes operational; and estimates regarding recovery of capital costs from new reused water customers versus costs to be assumed by existing ratepayers and new customers paying the capacity charge. Water reuse projects that require major capital funding shall be reviewed by RWQC and approved by the council.

NEW: WTD provided the following response:

> "The introductory material to the Water reuse policies (WRP) says in part, "…The county will implement pilot and demonstration projects. Additional projects shall be implemented subject to economic and financial feasibility assessments, including assessing environmental benefits and costs. The water reuse policies, as in the treatment plant policies, intend that the county continue producing reclaimed water at its treatment plants…" (King County Code 28.86.100). The primary objective of the Brightwater Reclaimed Water project is to address the reliability issues of the existing system and meet current customer needs.
>
> During the Alternatives Analysis phase for capital projects, WTD conducts an evaluation of major capital investments to assess the benefits of project alternatives. This process ensures that the recommended alternative not only meets the technical requirements but also delivers the intended value to our customers, public health, and the environment. As part of this project's Alternatives Analysis, many of the criteria outlined in WRP-5 were reviewed, including a life cycle cost analysis covering capital, operation, maintenance costs, and revenue generated by current customers."

Project Overview. The primary goal of this project is to install a reclaimed water storage tank along with necessary disinfection improvements at the Brightwater Treatment Plant. This project will improve reliability of the existing permitted capacity of the Brightwater reclaimed water system. After this project is complete, WTD anticipates it will be able to deliver reclaimed water to customers at levels that were originally planned when the system was designed. By adding the storage capacity, chemical addition, and enhancing system controls, WTD reports it can better manage the chlorine levels, ensuring more reliable service and fewer interruptions. The project does not include distribution line extensions.

Community engagement activities are being planned as part of the SEPA and permitting processes and is anticipated to start in early 2025.

If this project is not done, WTD reports King County will be unable to meet the ongoing needs of the existing reclaimed water customers, require continued payment by King County for supplemental potable water to a reclaimed water customer, hinder Strategic Climate Action Plan efforts to reduce Sammamish River withdrawals affecting salmon in the Sammamish River, and reduce diversion of nutrients from Puget Sound that could be used beneficially for irrigation to grow plants instead.

WTD reports the following work has been on the project thus far: The project completed selection of a recommended alternative in 2022. This selected alternative includes two construction packages. Package 1 involves replacing reclaimed water diversion valves

and chemical dosing pumps. These replacements are intended to address reliability issues related to these specific pieces of existing equipment. Package 1 is currently in construction. Package 2 includes the storage tank and disinfection system components. The team is nearing completion of the preliminary design of the second package. The team has also completed initial virus removal testing of the existing membrane bioreactor equipment at the plant to determine how much more they can contribute to the disinfection of the reclaimed water and reduce the amount of other disinfection methods used.

WTD reports the following major milestones for 2025: Preliminary design of Package 2 is anticipated to be completed in 2024, and the project is scheduled for its baseline presentation with division leadership in October. If the baseline scope and schedule are approved, the 2025 milestones include construction completion of Package 1, 60% design completion of Package 2, land use permit application for Package 2, and additional testing of the membrane bioreactors.

The project is funded like other WTD capital projects under the Water Quality Construction fund and paid for by all ratepayers, including any that are reclaimed water customers. The project has received a $1 million preconstruction loan from state Public Works Board (PWB) and is listed on WTD's federal Water Infrastructure Finance and Innovation Act (WIFIA) Master Agreement for $32 million loan.

Table 3
Brightwater Reclaimed Water Storage Project
Budget Appropriation

Capital Phase	ITD Budget thru 06/2024	FY25	FY26	FY27	FY28	FY29	FY30	Total Budget
1 Planning 12/11/18 - 06/18/19	$74,888	$88,720	$0	$0	$0	$0	$0	$163,608
2 Preliminary Design 06/18/19 - 08/06/24	$1,613,497	$5,191,023	$0	$0	$0	$0	$0	$6,804,520
3 Final Design 08/06/24 - 02/29/28	$2,278,518	$3,073,653	$0	$0	$0	$0	$0	$5,352,171
4 Implementation 10/01/24 - 07/18/30	$5,358,782	$27,230,720	$0	$0	$0	$0	$0	$32,589,502
5 Closeout 01/31/25 - 07/08/31	$1,929	$350,873	$0	$0	$0	$0	$0	$352,802
Total Budget	**$9,327,614**	**$35,934,989**	**$0**	**$0**	**$0**	**$0**	**$0**	**$45,262,603**

Mouth of the Duwamish Facility Plan for CSO Outfalls. ($15.5 million for 2025; total project estimate for the Plan is $40 million.) This request would fund the Facility Plan to achieve the greatest reasonable reduction for the King County CSO outfalls, Chelan, Hanford #2, Lander, Kingdom, King Street, and Seattle Public Utilities (SPU) outfall basins 99, 107, and 111, at the Mouth of Duwamish River. The facility plan will form the basis for regulatory approval of the recommended alternative and enable WTD to proceed to final design and ultimately construct the CSO control facilities in accordance with the Modified Consent Decree. Per the Modified Consent Decree, the CSO project must be operational by 2034.

This project funds the facility plan only. The actual project cost is expected to exceed $1 billion. The estimate will be refined based on the Facility Plan.

WTD Reports there is no substantial change in the cost for the Facility Plan since the previous budget request. The budget request by capital phase is shown in Table 4.

Table 4
Budget Appropriation
Mouth of Duwamish Facility Plan Project

Capital Phase	ITD Budget thru 06/2024	FY25	FY26	FY27	FY28	FY29	FY30	Total Budget
1 Planning	$152,658	$0	$0	$0	$0	$0	$0	$152,658
2 Preliminary Design	$2,190,926	$821,218	$0	$0	$0	$0	$0	$3,012,144
3 Final Design	$9,257,522	$10,403,743	$0	$0	$0	$0	$0	$19,661,265
4 Implementation	$800,000	$4,309,018	$0	$0	$0	$0	$0	$5,109,018
5 Closeout	$120,894	$0	$0	$0	$0	$0	$0	$120,894
Total Budget	**$12,522,000**	**$15,533,979**	**$0**	**$0**	**$0**	**$0**	**$0**	**$28,055,979**

INVITED

- Kamuron Gurol, Director, WTD
- Courtney Black, Finance Manager, WTD
- Crystal Fleet, Capital Portfolio Planning and Analysis Unit Manager, WTD

ATTACHMENTS

1. Questions and Answers on WTD's 2025 capital FTE position request
2. WTD Capital Improvement Program PowerPoint October 2, 2024
3. Map of 2025 WTD Proposed CIP Projects
4. 2025 Capital Project Summary for the Water Quality Construction Fund
5. WTD Capital Oversight Q&A

Additional Information from WTD on Required FTEs for Capital Projects

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Capital Expenditure Delivery Capacity Analysis

In 2022, the Wastewater Treatment Division (WTD) conducted an initial analysis to understand the relationship between capital expenditures and staffing levels as part of the sewer rate development process. This analysis helps estimate how many Full-Time Equivalents (FTEs) will be required to meet planned capital spending, targeting alignment of resources with strategic priorities.

Historical Analysis

We analyzed data from 2012 to 2021, comparing the number of WTD FTEs allocated to delivering and supporting the capital program to the amount spent annually on capital delivery. This provided a baseline to understand how staffing levels influence our ability to deliver projects. While this historical relationship isn't perfectly predictive, it offers a reasonable and simple metric to forecast how much of the capital program priorities can be delivered in any given year of the forecast, as WTD scales up its capital delivery in the next ten years.

Capital FTE Allocation

Adopted FTE/TLT

FTE

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2021 Revised*	2022	2022 Revised*
WTD Total	585.70	589.70	589.70	603.70	605.70	623.70	623.70	647.70	650.70	657.00	668.00	657.00	699.00

TLT

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2021 Revised*	2022	2022 Revised*
WTD Total	8.75	18.57	11.92	7.83	3.08	17.00	17.00	16.41	8.50	5.00	5.00	3.42	3.42

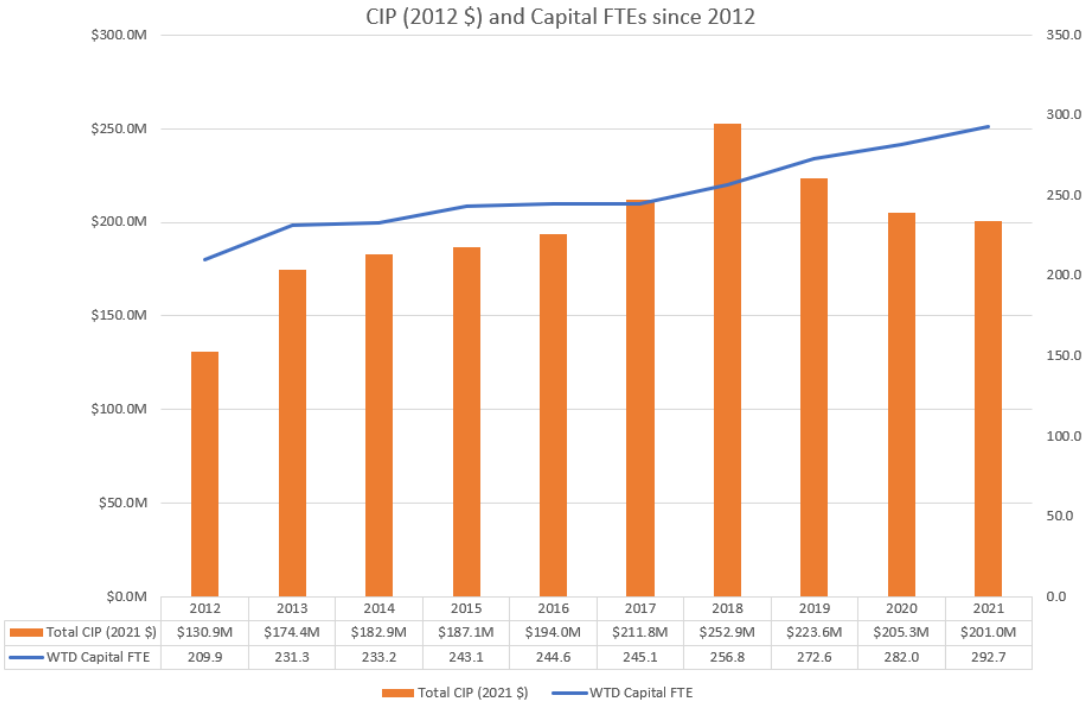
FTE/TLT Combined

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2021 Revised*	2022	2022 Revised*
WTD Total	594.45	608.27	601.62	611.53	608.78	640.70	640.70	664.11	659.20	662.00	673.00	660.42	702.42
WTD Capital	209.88	231.27	233.19	243.13	244.56	245.08	256.79	272.64	282.03	287.87	292.66	290.58	309.06
WTD Operating	384.57	377.00	368.43	368.40	364.22	395.62	383.91	391.47	377.17	374.13	380.34	369.84	393.36

Actual Op/Cap split of WTD labor (division-wide)

	Op%	Cap%	
2012	64.7%	35.3%	
2013	62.0%	38.0%	
2014	61.2%	38.8%	
2015	60.2%	39.8%	
2016	59.8%	40.2%	
2017	61.7%	38.3%	
2018	59.9%	40.1%	
2019	58.9%	41.1%	
2020	57.2%	42.8%	
2021	56.5%	43.5%	
2022	56.0%	44.0%	unofficial projection

We then graphed the capital FTEs against the historical actual capital expenditures to see if there was a relationship between staffing and capital expenditures that could be useful for forecasting purposes.



	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total CIP (2021 $)	$130.9M	$174.4M	$182.9M	$187.1M	$194.0M	$211.8M	$252.9M	$223.6M	$205.3M	$201.0M
WTD Capital FTE	209.9	231.3	233.2	243.1	244.6	245.1	256.8	272.6	282.0	292.7

There was a rough correlation between the two, when adjusting for the exception of the West Point flood event and pandemic related slowdown in capital delivery. We used this correlation to develop an expected capital expenditure per capital FTE incorporating the following assumptions:

Onboarding Time:

New staff typically require approximately two years to manage workloads similar to seasoned staff. This requires recognizing new capital FTEs when they are productive in line with the historical delivery relationship so as not to overstate forecasted delivery capacity.

In-House vs. Consultant Labor:

Historically, for every $1 spent on in-house staff, $1.30 is spent on consultant support. We expect this ratio to continue for future capital projects. This assumption is based on WTD's historical approach to delivery and does not incorporate recent delivery strategies such as collaborative delivery.

Forecasting Future Needs

This historical data and assumptions were first used in 2022 in calculations to inform the 2023 Sewer Rate setting. The forecast assumed that each capital FTE contributed to roughly $944,140 in capital expenditures annually (adjusted to 2023 dollars). This model estimates the capital FTE resource demand for a portfolio of WTD projects based on averages since 2012 and the assumptions above. We applied this model to estimate how much capital delivery capacity is available to respond to WTD non-Combined Sewer Overflow consent decree capital investment priorities in any given year.

Special Case: CSO Projects

Large-scale projects required for Combined Sewer Overflow (CSO) consent decree compliance need a different staffing model. For these large-scale projects, we anticipate a much higher reliance on consultants, similar to past large-scale efforts such as the Brightwater Treatment Plant. Brightwater utilized on average around $5.40 in consultant contracts for every $1 in in-house staff labor. The larger a project grows, the ratio of non-construction costs like design engineering also goes down compared to the construction cost. So, large-scale projects also require proportionally less staff labor when compared to their size overall.

In 2022, using the Brightwater staff delivery to consultant expenditures metric, we modeled expenditures for large-scale CSO projects recognizing the portion of capital expenditures delivered by consultants outside of the capital FTE metric described above. For purposes of the Sewer Rate calculations, we assume that large-scale CSO projects are unconstrained by internal staff resources. Now that the Mouth of the Duwamish program has started and the consent decree is finalized, we will continue to refine our assumptions about how the large-scale CSO Consent Decree projects will be resourced as the timeline and delivery strategy evolve.

Bringing it All Together

To project the total anticipated capital FTEs, we assume that the non-CSO projects are constrained by internal staff labor and that the staffing need is driven by these projects. We assume that to deliver the large-scale CSO projects, we will rely primarily on consultant staff labor and are unconstrained by internal staff resources. Large-scale CSO project FTE requirements are not included in this high-level calculation.

To meet key program goals—including asset management, population growth demand, climate action, and regulatory compliance—WTD must increase its capital delivery capacity. As part of the 2025 Sewer Rate process, WTD estimated capital investment needs to be over $1 billion annually by the end of the decade (before application of the 85% accomplishment rate). In the 2025 Sewer Rate capital expenditure projection, 2032 was the peak year of expenditures, so we can use it as a way to demonstrate the total capital FTEs needed.

In 2032, the total projected capital expenditure was estimated to be $1.2 billion (2032$). Of that, roughly $700M would be for non-CSO projects, and $500M would be for large-scale CSO projects. Using all the assumptions noted above, and dollars escalated to the year of resource calculation (i.e. expenditures per capital FTE are escalated to $1.2M in 2032$), the graphic below shows the steps to calculate the capital FTE resources needed to deliver the 2032 projected CIP expenditures.

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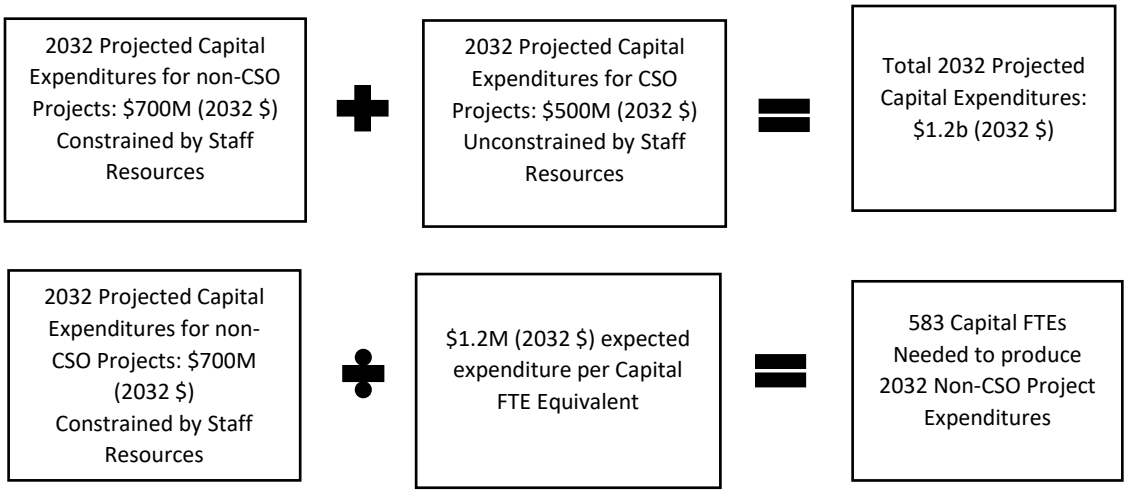


Capacity-Adjusted Forecast

In 2022, WTD had about 309 Capital FTEs. Hiring and onboarding around 300 new staff to arrive at the total above would take multiple years. The estimate of 50 additional Capital FTEs annually was developed as a high-level assumption, serving as a practical recruiting limit. The phase-in forecast anticipates completing FTE additions by 2029, with WTD fully resourced to meet projected expenditures in 2032. This resource model was developed to achieve this specific goal of forecasting reasonable and conservative capital delivery resource constraints in a ten-year context for purposes of sewer rate setting. It serves as a starting place for the FTE budget request rather than prescriptive to any given year.

Since this 2022 calculation, WTD has increased the amount of Capital FTEs. In 2023, the number of Capital FTEs was 371, the projected number for 2024 is 466. We will continue to refine the assumptions and estimates of FTEs required to deliver the capital program as we get more information and understand how new delivery strategies such as the use of collaborative delivery impact staffing assumptions.

Calculating FTE Requests for Budget

The high-level analysis outlined above was developed to support sewer rate projections and capital program FTE needs. However, translating this into FTE requests for budget purposes requires additional detail.

The Capital FTE reflects all labor charged directly or indirectly to capital projects. This includes Project Planning and Delivery (PPD) staff like project managers and engineers, Environmental Compliance and Sustainability (ECSS) staff such as real property agents and environmental

planners, and Operations & Maintenance (O&M) staff who provide critical input into project design. It also includes support staff from Finance and other administrative roles who contribute to capital project oversight. Staff charge a percentage of their time to capital work, ranging from as little as 5% (e.g., O&M staff reviewing design specs) to over 95% (e.g., capital project managers). This variance complicates FTE budgeting since not all roles are primarily capital focused. Therefore, the assumed limit of 50 Capital FTEs hired annually can be considered a starting point for the total FTEs requested in a year.

During the budget process, this model is refined at the section level. Instead of focusing solely on overall capital FTEs, we assess the specific staffing needs for PPD, ECSS, O&M, Finance, and other supporting sections. For each section, we project staffing needs based on anticipated project timelines and workloads. Decision Packages (DP) are proposed from each section for new FTEs, including the unit (i.e. Planning, Engineering, Project Management, Portfolio Planning and Analysis, Construction Management, Project Control, etc.) and the classification of the FTE (i.e. Water Quality Planner, Wastewater Capital Project Manager, Project Control Engineer, etc.)

When all sections have submitted their proposed DPs, division leadership then meets to authorize submission to the Department and Executive's Office based on criteria and alignment to division strategies and commitments.

Council Staff Question: Ongoing Process for Justifying FTEs: What are WTD's thoughts on how to document/justify additional FTEs moving forward? What is WTD's feedback on the method of using a project management type software to develop a resource loaded (FTE) list of planned capital project expenditures for the budget year that lists the FTE equivalent needed for each project in the proposed budget.

WTD Response: **Leveraging Project Information System (PRISM) Data for the Future Staffing Forecasts**

WTD uses PRISM to manage capital project forecasts. With over a decade of labor cost data, PRISM provides valuable insights for estimating future labor demand based on historical trends. These data-driven models inform our FTE requests and help forecast labor needs for future projects based on high-level assumptions.

Looking ahead, there are several potential approaches to further refine our staffing forecasts, including leveraging PRISM's capabilities, developing alternative Excel-based models, or exploring other analytical tools. These options will be considered and evaluated in preparation for future sewer rate and budget submittals including the 2026 submittals, as we work to refine our staffing needs.

Balancing Models with Qualitative Approach

While forecasting models are valuable tools, WTD utilizes a qualitative process that includes model outputs, judgement and experience. Given the uncertainty inherent in capital projects — where scope, timeline, and delivery methods can change — FTE requests must be refined through expert evaluation and experience. Each project has unique resource demands, making it essential to balance model outputs with informed decision-making.

WTD Capital Improvement Program

Presented to the Regional Water Quality Committee

October 2, 2024

King County
Department of
Natural Resources and Parks
Wastewater Treatment Division

WTD Capital Improvement Program (CIP) Overview

- **Estimated $10.5 billion in wastewater investments over 10 years to:**
  - Deliver projects and programs in response to permit requirements, regulations, and consent decree deadlines
  - Maintain level of service through the rehabilitation or replacement of critical assets, nearly all of which are necessary to ensure reliable functions, protect water quality, preserve critical assets, and keep staff safe
  - Increase capacity in WTD facilities to accommodate future growth and comply with contract obligations

Sammamish Plateau Diversion Project (Phase 1)

- **Adding capacity to manage flows from East Lake Sammamish area**
  - New conveyance line will divert up to 9.14 million gallons per day (mgd) from Southwest Lake Sammamish to Brightwater Treatment Plant
  - 18,400 feet of pipeline to be constructed and a 7.8 mgd intermediate pump station
  - Will alleviate capacity issues at several conveyance facilities between Issaquah and South Treatment Plant
- **Budget**
  - Change in appropriation for 2025: Slight increase due to revised schedule assumptions
  - Appropriation request funds preliminary design activities
  - Estimate at completion: ~ $106 million

Elliott West Wet Weather Treatment Station Project

- **Upgrade to combined sewer overflow (CSO) treatment facility to meet permit requirements**
  - Improving the facility through an upgraded screening facility, pump modifications, and adding high-rate clarification technology used at a Georgetown WWTS for solids removal.
  - Replacing the existing onsite chlorine disinfection system with a new ultraviolet light (UV) disinfection system.
  - Engineering report submitted to Ecology and is currently under review
  - Ecology NPDES permit requires completion by 2031
- **Budget**
  - Change in appropriation for 2025: Increase due to expedited timeline for completion under recent NPDES permit
  - Appropriation request funds final design phase in 2025
  - Estimate at completion: ~ $493 million

Mouth of the Duwamish CSO Project: Facility Plan

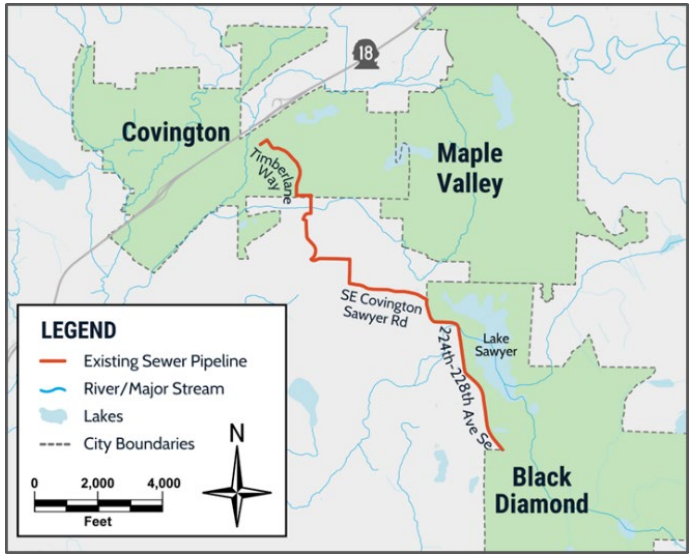
- **Facility Plan for constructing a project to control 5 CSO outfalls**
  - King County's federal CSO consent decree requires control of Chelan, Hanford #2, Lander, Kingdome, and King Street outfalls
  - Project will also control Seattle Public Utilities (SPU) outfall basins 99, 107 and 111, at the Mouth of Duwamish River, requiring a cost-share agreement.
  - Facility plan necessary for regulatory approval of recommended alternative(s), allowing the County to move into final design
  - System operational by 2034 per the Consent Decree
- **Budget:**
  - Change in appropriation for 2025: No substantial change in cost for Facility Plan
  - Appropriation request supports completion of alternatives evaluation and submittal of Facility Plan to Washington state Department of Ecology
  - Estimate at completion: ~ $40 million

West Point Treatment Plant: Digestion Capacity Expansion Project

- **Increase solids capacity to serve growth in the region**
  - Design and construct a solids processing system to increase capacity at West Point Treatment Plant
  - Treatment Plant Flows and Loads study shows additional capacity is needed to meet NPDES permit requirements
- **Budget**
  - Change in appropriation for 2025: Cost increased with completion of options analysis that further refined the project scope
  - Appropriation request funds to support planning and preliminary design in 2025
  - Estimate at completion: ~ $330 million

Black Diamond Trunk Capacity Upgrade

- **Determine best alternative to add new capacity**
  - Black Diamond Interceptor (wastewater pipe), built in 1992, has reached the end of its useful life and is not sufficiently sized to accommodate future flows
  - Upgrade need for approximately 6 miles of conveyance pipe to serve population growth
- **Budget:**
  - Change in appropriation for 2025: Cost increased with expanded project scope to serve substantial rise in population growth
  - Appropriation request funds design and Pre-Construction services
  - Estimate at completion: ~ $167 million



Ongoing Efforts related to WTD's Capital Program

- Pursue options to reduce utility costs for low-income households and new federal funding for wastewater infrastructure
- Consider community input and how the project can advance equity and social justice
- Engage in public outreach to make sure affected community members know about our capital projects
- Incorporate greenhouse gas reduction measures into its capital projects and operations
- Prepare for change by upgrading infrastructure, improving operating strategies and evaluating impacts at our facilities

For more information:

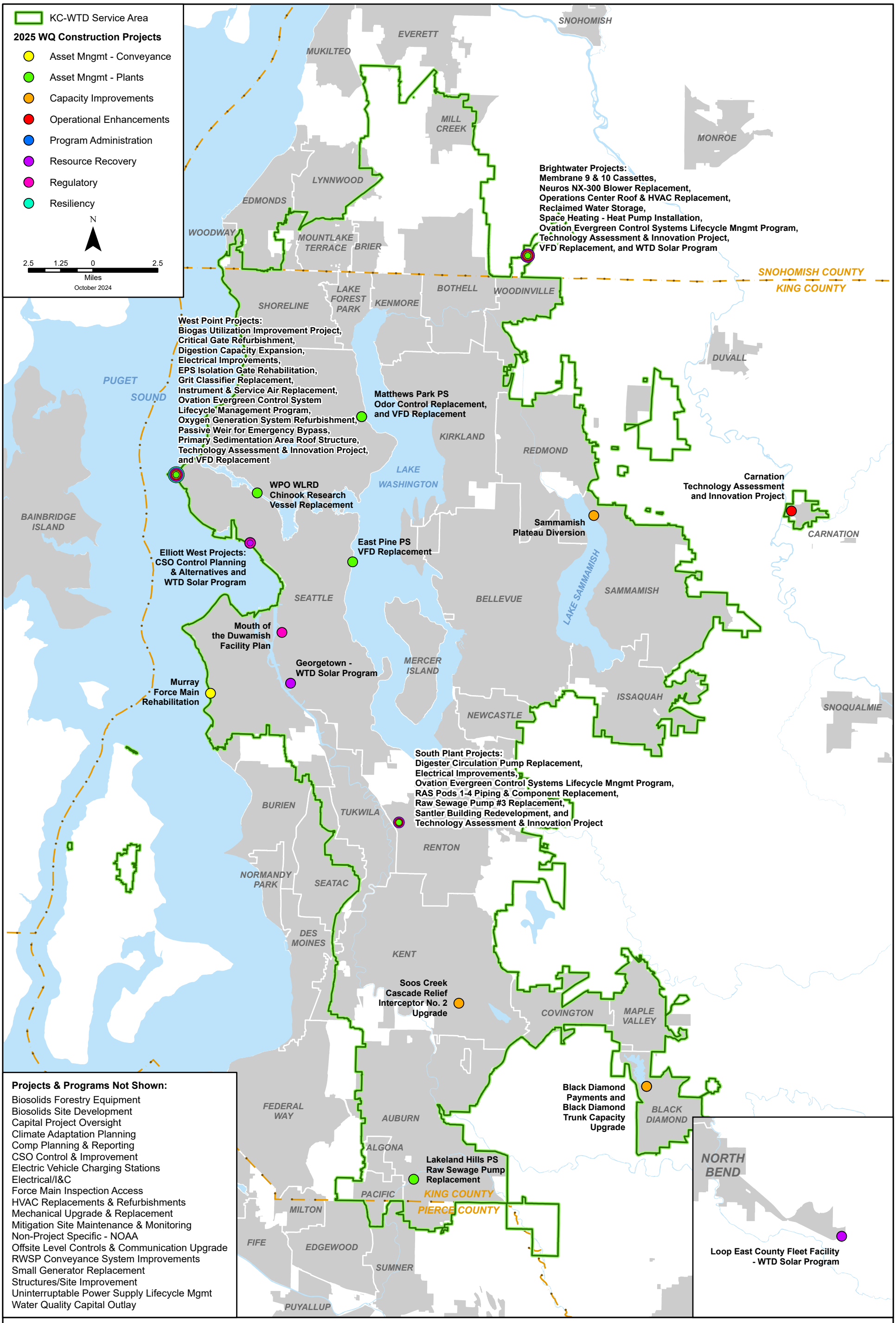
Crystal Fleet

WTD Capital Portfolio Planning and Analysis Unit Manager

Crystal.Fleet@kingcounty.gov

King County

Department of
Natural Resources and Parks
Wastewater Treatment Division



Projects & Programs Not Shown:

- Biosolids Forestry Equipment
- Biosolids Site Development
- Capital Project Oversight
- Climate Adaptation Planning
- Comp Planning & Reporting
- CSO Control & Improvement
- Electric Vehicle Charging Stations
- Electrical/I&C
- Force Main Inspection Access
- HVAC Replacements & Refurbishments
- Mechanical Upgrade & Replacement
- Mitigation Site Maintenance & Monitoring
- Non-Project Specific - NOAA
- Offsite Level Controls & Communication Upgrade
- RWSP Conveyance System Improvements
- Small Generator Replacement
- Structures/Site Improvement
- Uninterruptable Power Supply Lifecycle Mgmt
- Water Quality Capital Outlay

King County
Department of
Natural Resources and Parks
Wastewater Treatment Division

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2025 Water Quality Construction Projects

CAP Summary by Fund

Budget: 2025 Annual Budget, Scenario: Executive Proposed, Agency: All, Fund: 3611 WATER QUALITY CONSTRUCTION, Cap Status: Approved, Is IT Proj? Both Yes and No

2025 Annual Budget - Executive Proposed

3611 WATER QUALITY CONSTRUCTION - Wastewater Treatment

Project Number	Project Name Class Code	Tech Adj	FY25	Narratives
1037498	**Structures / Site Improvement** PROGRAMMATIC		$5,862,000	**Scope:** The Structures and Site Improvements Program includes projects that are focused on implementing modifications, improvements, or upgrades to the structures, buildings, and property owned by the Wastewater Treatment Division (WTD) necessary to meet operational needs. Other improvements may be required to bring the structures up to current code, increase safety, or minimize vandalism. The Roll-Up Project funds a number of subprojects that vary in value but are typically less than $5,000,000 total project cost. The number of subprojects fluctuates as projects are completed and new subprojects are added through the New Project Request process. As a result, subprojects contained within this Roll-Up Project are in various phases from planning, design and through construction. In addition, the Roll-Up project is sometimes used to initiate upgrade or replacement projects throughout the year that may later develop into stand-alone projects. **Description of Budget Request:** This is an ongoing program that funds multiple subprojects in all phases of project delivery. The total request is based on a combination of current existing subprojects, pending expected subprojects, and an analysis of historical program spending. The requested budget will fund structural and safety improvements to WTD structures for operational needs including replacing roofing over equipment and fence upgrades to improve facility security. Expenditures will include fully burdened staff labor, consultant contract, vendor contract, and construction contract expenditures. The Estimate at Completion has increased as additional years have been incorporated into the forecast.
1037549	**Capital Project Oversight** STANDALONE		$232,524	**Scope:** This project funds project oversight activities for the Wastewater Treatment Division Capital Improvement Program by the King County Auditor's Office. The project also supports Proviso P1, Section 110, Budget Ordinance 17941 (2014) related to improvements in WTD's planning and conceptual estimating processes, including communicating costs to upper management, a trend analysis program, and basis of estimate assumptions. **Description of Budget Request:** The budget requested will support the County Council Auditors office body of work and recommendations. The Estimate at Completion has increased as additional years have been incorporated into the forecast.
1037765	**Water Quality Capital Outlay** STANDALONE		$167,000	**Scope:** This project provides funding for the replacement or acquisition of capital equipment or rolling stock for plant, operations, and engineering personnel. These are discrete purchases not included in a capital project budget and are not suitable for classification as a minor asset management (MAM) project. **Description of Budget Request:** The budget requested is based on planned capital outlays and equipment replacement cost estimates and will include expenditures for vendor contracts. The Estimate at Completion has increased as additional years have been incorporated into the forecast.

CAP Summary by Fund

Budget: 2025 Annual Budget, Scenario: Executive Proposed, Agency: All, Fund: 3611 WATER QUALITY CONSTRUCTION, Cap Status: Approved, Is IT Proj? Both Yes and No

2025 Annual Budget - Executive Proposed

1037767	**Biosolids Site Development** STANDALONE		$312,000	**Scope:** Work under this project provides planning, engineering, and geographic information systems services in support of the WTD biosolids forestry application program. It also provides funds for improvements to forestry sites to allow biosolids application, including the construction and reconstruction of trails/roads used by the application equipment. **Description of Budget Request:** Projected spending includes fully burdened staff time, planning, engineering, and geographic information systems services in support of the WTD biosolids forestry application program. It also provides funds for improvements to forestry sites to allow biosolids application, including the construction and reconstruction of trails/roads used by the application equipment. The Estimate at Completion has increased as additional years have been incorporated into the forecast.
1037789	**RWSP Conveyance System Improvements** PROGRAMMATIC		$3,858,000	**Scope:** Conveyance system improvement planning is driven by the Regional Wastewater Service Plan's (RWSP) adopted conveyance standard of being able to convey the 20-year peak flow. For purposes of constructing facilities to meet future demand, the design standard used for planning new conveyance facilities is to accommodate the 20-year peak flow as projected in 2070. The year 2070 is based on 50 year planning horizon. A 50 year planning horizon is considered as a reasonable timeframe for modeling future wastewater flows. The program is a roll-up of sub-projects covering everything from staff labor to future capital projects and other expenses incurred to perform conveyance planning for the region. The Conveyance System Improvement (CSI) project provides an opportunity for the County and local agencies to jointly address common conveyance issues, leverage available resources, and minimize customer disruption. The County values and encourages local sewer agency involvement as planning in the wastewater service area moves forward. Project schedule dates reflect the activities of multiple sub-projects. **Description of Budget Request:** This is an ongoing program that funds multiple subprojects. In 2025, this program is planning to continue progress on the next Conveyance System Improvements (CSI) Program Update as called for by the Regional Wastewater Service Plan (RWSP) Conveyance Policies to ensure the program remains current (KCC 28.86.060 B.). The requested budget will fund activities to inform and conduct comprehensive planning activities to meet RWSP requirements for the separated sewer system. These include the collection and analysis of flow data, GIS mapping and analysis, planning studies, and the problem definition for future CSI capital projects. Expenditures will include fully burdened staff labor, consultant contracting, and vendor contract expenditures. The Estimate at Completion has increased as additional years have been incorporated into the forecast.

CAP Summary by Fund

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2025 Annual Budget - Executive Proposed

1038098	**CSO Control & Improvement** PROGRAMMATIC		$4,083,000	**Scope:** The aim of this programmatic initiative is to offer modeling and technical support for the Combined Sewer Overflow (CSO) program, which will inform future capital projects within the CSO Long-Term Control Plan (LTCP). This plan is being executed to comply with the stipulations of the County's 2013 federal Consent Decree. **Description of Budget Request:** This is an ongoing program that funds multiple subprojects. The requested budget will fund planning activities for future CSO projects that include developing and updating models of the combined sewer system, developing CSO-related GIS data, and performing conveyance inspection and flow monitoring that will support CSO projects. Expenditures will include fully burdened staff labor, consultant contracting and vendor contracting expenditures. The Estimate at Completion has increased as additional years have been incorporated into the forecast.
1038099	**Mitigation Site Maintenance and Monitoring** STANDALONE		$3,066,000	**Scope:** Major capital projects in the Wastewater Treatment Division sometimes impact critical areas (e.g. streams, wetlands, steep slopes and their buffers) leading to permit conditions that require long-term monitoring and maintenance of mitigation sites. The Mitigation and Monitoring Program (Program) ensures performance standards outlined in permits are met. The Mitigation Site Maintenance and Monitoring Program is ongoing. Each year there is a potential for additional mitigation sites to be added if a Wastewater Treatment Division project will occur within critical areas or their buffers. **Description of Budget Request:** The appropriation requested will be used to initiate work on four new mitigation/restoration sites and support routine and contingency actions on existing sites. Expenditures will include fully burdened staff labor, consultant contract, vendor contract, and construction contract expenditures. The Estimate at Completion has increased as additional years have been incorporated into the forecast.
1038294	**Non-Project Specific - NOAA** STANDALONE		$201,481	**Scope:** The Elliott Bay / Duwamish River Restoration Program (EBDRP) panel convened by the National Oceanic and Atmospheric Administration (NOAA) meets four times per year to discuss issues related to work, reimbursement from the panel, stewardship of restoration sites under King County ownership, and monitoring of sediment remediation conducted by the County. **Description of Budget Request:** The requested appropriation will fund the last year of sampling that is required to do every 5 years. Projected spending includes fully burdened staff time and miscellaneous materials.
1038295	**Biosolids Forestry Equipment** STANDALONE		$210,000	**Scope:** The Biosolids Forestry Equipment project provides funding for the refurbishment and purchase of equipment for biosolids application in forestry environments. Forestry equipment needs regular parts replacement from regular use in rugged settings. Properly maintained equipment provides for predictable, safe, and efficient operations. **Description of Budget Request:** This is an ongoing project without typical phases. The requested budget will be used to fund the planned purchase and major refurbishment of forestry biosolids application equipment such as applicators and excavators. The Estimate at Completion has increased as additional years have been incorporated into the forecast.

CAP Summary by Fund

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1038335	**Electrical / I&C** PROGRAMMATIC		$1,537,000	**Scope:** The Electrical and Instrumentation and Control (I&C) Program includes asset management projects that enhance the treatment process, overhaul or replacing failed electrical and I&C equipment or electrical I&C equipment that has reached the end of its useful life, improve safety, reliability, efficiency or increase redundancy of the electrical I&C systems and code required upgrades for electrical I&C equipment. This "Rollup Project" funds a number of electrical and I&C subprojects that vary in dollar value but are typically less than $5,000,000. The number of subprojects fluctuates as projects are completed and new subprojects are added through the project work request process. As a result, subprojects contained within this project number are in various states of design, from planning to construction. In addition, this project number is used to initiate electrical I&C subprojects throughout the year that develop into standalone projects. **Description of Budget Request:** This is an ongoing program that funds multiple subprojects in all phases of project delivery. The total request is based on a combination of current existing subprojects, pending expected subprojects, and an analysis of historical program spending. The requested budget will fund electrical and instrumentation and control improvements including uninterruptable power supplies and fire alarm system replacements. Expenditures will include fully burdened staff labor, consultant contract, vendor contract, and construction contract costs. The Estimate at Completion has increased as additional years have been incorporated into the forecast.
1113196	**Mechanical Upgrade & Replacement** PROGRAMMATIC		$10,060,000	**Scope:** The Mechanical Upgrade and Replacement Program includes asset management project that replace or upgrade mechanical systems at wastewater facilities that have served their useful life such as pumping systems, hydraulic systems, and heating and ventilation systems; improve efficiency, provide safety for operators and upgrades to meet current codes. This "Roll-Up Project" funds a number of mechanical upgrade and replacement subprojects that vary in dollar value, but are typically less than $5,000,000. The number of subprojects fluctuates as projects are completed and new subprojects are added through the New Project Request process. As a result, subprojects contained within this project number are in various phases from planning, design, and to construction. In addition, this Roll-Up project is used to initiate mechanical upgrade and replacement subprojects throughout the year that may later develop into stand alone projects. **Description of Budget Request:** This is an ongoing program that funds multiple subprojects in all phases of project delivery. The total request is based on a combination of current existing subprojects, pending expected subprojects, and an analysis of historical program spending. The requested budget will fund mechanical equipment improvements including a pump header replacement and a fire suppression system replacement. Expenditures will include fully burdened staff labor, consultant contract, vendor contract, and construction contract costs. The Estimate at Completion has increased as additional years have been incorporated into the forecast.

CAP Summary by Fund

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1113334	**Comp Planning & Reporting** PROGRAMMATIC		$879,000	**Scope:** This programmatic project resources the Wastewater Treatment Division's (WTD) comprehensive planning functions. The planning functions include on-going planning and reporting for combined sewer overflow control. This project also supports planning for potential changes to water quality regulatory requirements, and policy development and planning level coordination for WTD. The program supports coordination efforts with Seattle Public Utilities (SPU) including short- and long-term planning and regulatory coordination. Any new initiatives or capital planning requirements fall under this program. **Description of Budget Request:** This is an ongoing program that funds multiple planning subprojects. The requested appropriation will fund subprojects that will deliver a series of planning support materials for combined sewer overflow (CSO) program implementation components, CSO long-term control plan, water quality analysis planning efforts, climate change planning efforts, and implementation of the Rainwise program. Expenditures will include fully burdened staff labor, consultant and vendor contracting costs. The Estimate at Completion has increased as additional years have been incorporated into the forecast.
1127489	**West Point Primary Sedimentation Area Roof Structure** STANDALONE		$8,393,341	**Scope:** West Point Primary Sedimentation Area Roof Structure - The scope of the Primary Sedimentation Area Roof Structure project includes two main parts. The first part involves seismically retrofitting and removing the east and west primary sedimentation roof structures, while accommodating the existing electrical conduits and piping. This phase also includes the replacement of odor control ducting, removal of concrete framing elements (z-beams, girders, and columns), and installation of a partial roof canopy over the influent ends of the East and West Primary Sedimentation basins. The second part, the Primary Tank Coating, involves applying a protective coating to the annular space of the sedimentation tanks to enhance their durability and extend their operational life. **Description of Budget Request:** The requested funds will cover the completion of the construction project, including fully burdened staff labor and construction contract expenses. Since the last budget, the project's Estimate at Completion has increased. Material price increases and supply chain disruptions for roofing and odor control ductwork have led to increased construction costs and schedule delays. Additionally, coating work has been postponed to align with other critical projects at the West Point Treatment Plant, further contributing to cost escalations due to the delays.

CAP Summary by Fund

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1129528	**Small Generator Replacement at Various Offsite Stations** PROGRAMMATIC		$669,000	**Scope:** The program will replace small standby generators at 15 regulator stations (RS) and outfalls in Seattle. It currently has three subprojects, which groups installation sites to streamline design, permitting, and construction processes. The sites include Ballard Regulator Station, Lake City Tunnel Regulator Station, Montlake Boulevard Regulator Station, Norfolk Street Regulator Station, 8th Avenue South Regulator Station, Brandon Street Outfall Station, Chelan Regulator Station, Connecticut Street Regulator Station, Dexter Avenue Regulator Station, Hanford Street Outfall Station, Hanford Street Regulator Station, Harbor Avenue Regulator Station, King Street Regulator Station, South Michigan Street Outfall Station, and South Michigan Street Regulator Station. **Description of Budget Request:** This request for appropriation is to support the preliminary and final design and implementation of subprojects in 2025. Projected spending includes fully burdened staff time. The appropriation request is based on analysis of the project schedule, spending, contingency, budget carryover amount, and implementation contracting. The Estimate at Completion has increased since the last budget due to estimate updates as program scope has been developed and anticipated cost increases driven by ongoing price escalation for electrical generating equipment.
1129534	**Sammamish Plateau Diversion** STANDALONE		$417,000	**Scope:** This project will design and build a conveyance line capable of diverting up to 9.14 mgd of flow from the Southwest Lake Sammamish area north to the Brightwater Treatment plant using the following elements: Reach 1: 24-inch diameter, 8,600-foot gravity pipeline running north to a newly constructed 7.8 mgd intermediate pump station. Reach 2: 8 and 16-inch diameter, 1,600-foot parallel force mains and discharge structure. Reach 3: 27-inch diameter, 8,200-foot gravity pipeline and connection structure. **Description of Budget Request:** The appropriation request will fund preliminary design activities. Expenditures will include fully burdened staff labor and consultant contract costs. The project Estimate at Completion has increased slightly since the last budget, primarily due to shifting the timing of expenditures based on revised schedule assumptions, which include additional escalation. The next construction cost estimate update is anticipated at Gate 2 in 2025 and will include updates to the assumed scope of the project based on the recommended alternative.

CAP Summary by Fund

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2025 Annual Budget - Executive Proposed

1129538	**Technology Assessment and Innovation Project** STANDALONE		$2,744,000	**Scope:** The Technology Assessment and Innovation Program (TAIP) is involved in numerous concurrent testing and technology assessment activities, including evaluation of technologies and process changes that can improve the performance or reduce the operating costs of wastewater treatment. Recent TAIP examples include the areas of energy/resource recovery, biosolids management, wastewater systems optimization, and nutrient management. **Description of Budget Request:** The budget requested will allow the Technology Assessment and Innovation Program to support the Wastewater Treatment Division by evaluating nitrogen removal technologies, supporting treatment plant operations staff in troubleshooting and optimizing existing treatment processes, and testing new technologies of particular interest. During 2025, the budget will pay for technology assessment staff labor and procurement of instrumentation and operation of pilot processes, including upgrades to the pilot test facility located at West Point Treatment Plant and testing of secondary process alternatives to address requirements outlined in the Puget Sound Nutrient General Permit (PSNGP) as it applies to King County treatment plants. Expenditures will include fully burdened staff labor, consultant contract, construction contract, and vendor contract costs. The Estimate at Completion has increased as additional years have been incorporated into the forecast.
1134072	**WPTP Passive Weir for Emergency Bypass** STANDALONE		$9,552,410	**Scope:** WPTP Passive Weir for Emergency Bypass - This project will plan, design, and construct a passive bypass weir on the Emergency Bypass Channel to protect the West Point Treatment Plant (WPTP) from flooding in the event of a failure of the Emergency Bypass gate (EB) and all other gates in the Influent Control Structure (ICS). The project will also route the drainage pipeline of the Multi-Use Facility area into the Influent Control Structure for treatment. **Description of Budget Request:** The requested appropriation will support construction and closeout. The project cost has increased substantially since the original cost estimate was completed in 2022 and 100% design construction costs were updated in March 2024. Drivers for the cost increase are labor costs, material prices, and working within confined space in the channel. Expenditures will include fully burdened staff labor and construction contract costs.
1134073	**VFD Replacement** STANDALONE		$1,218,837	**Scope:** This program will proactively replace low voltage (less than 480 volt) variable frequency drives (VFDs) through the King County Wastewater Treatment Division's (WTD) system that have reached the end of their expected life. **Description of Budget Request:** The program is a division wide asset lifecycle management program that is in implementation phase. The requested appropriation is to complete planned asset replacements as they approach their end of life.

CAP Summary by Fund

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1134074	**BW Reclaimed Water Storage** STANDALONE		$35,934,989	**Scope:** The purpose of this project is to install storage and associated pumping and/or disinfection (if needed) for the Brightwater reclaimed water distribution system to increase reliable delivery of reclaimed water to customers in the Sammamish Valley. **Description of Budget Request:** The 2025 budget request will fund final design and construction. Expenditures include fully burdened staff labor, consultant contract, and construction costs. The Estimate at Completion has not significantly changed since the last budget request.
1136151	**Black Diamond Payments** STANDALONE		$267,000	**Scope:** This project commits funds for the payment of Soos Creek Water & Sewer District (District) for the use, design, construction, operation, maintenance, and depreciation of the District Conveyance Facilities and to provide reimbursement of appropriate capital costs incurred by the District for the County's use of such facilities. The Parties agree that the County will only pay that portion of the District's capital costs related to improvements which are necessary to convey the County's regional wastewater flows from Black Diamond. The Parties understand and expect that the District's customer base will increase during the time of this Agreement and the District will be solely responsible for the cost of construction of the District's Conveyance Facilities necessary to meet the capacity needs of the District's increased customer base. **Description of Budget Request:** The appropriation request is based on historical reimbursement to the Soos Creek Water District for the capital and operating costs per a Council-approved interlocal agreement between the County and the District.
1139043	**Elliott West CSO Control Planning and Alternatives** STANDALONE		$18,830,000	**Scope:** The Elliott West Wet Weather Treatment Station (EWWTS) Project consists of new and upgraded treatment facilities to treat combined sewer overflows (CSOs) prior to discharge through the existing outfall in Elliott Bay in Seattle. The Project will replace and upgrade the screening facility, complete pump modifications, add ballasted sedimentation technology for solids removal, replace the existing onsite chlorine disinfection system with a new ultraviolet light (UV) disinfection system, complete electrical upgrades, and complete modifications to the operation of the Mercer Street Tunnel for additional equalization. **Description of Budget Request:** This project is seeking appropriation to support the final design phase in 2025. The expenditures will cover fully burdened staff labor and consultant contract costs. The Estimated Cost at Completion (EAC) has increased since the previous budget request due to a scope change. Initially, the project aimed to deliver a facility plan as mandated by the Department of Ecology, with the expectation that work would stop upon completion and resume later under a separate project. However, since the last budget, the issuance of the new West Point National Pollutant Discharge Elimination System (NPDES) permit has expedited the project's timeline. The scope now includes the final design and construction of the new facility, and the EAC has been adjusted to reflect the expanded scope necessary to achieve the project's objectives.

CAP Summary by Fund

Budget: 2025 Annual Budget, Scenario: Executive Proposed, Agency: All, Fund: 3611 WATER QUALITY CONSTRUCTION, Cap Status: Approved, Is IT Proj? Both Yes and No

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1139051	**West Point EPS Isolation Gate Rehabilitation** STANDALONE		$16,968,575	**Scope:** This project will plan, design, and implement necessary refurbishments to restore full functionality to the Effluent Pump Station (EPS) isolation gates at West Point Treatment Plant in Seattle. A permanent dewatering pump will also be installed for future use for dewatering the wet wells. These gates are used to isolate the EPS pumps so that pumps can be taken offline for maintenance. **Description of Budget Request:** This project seeks appropriation to support its design and construction phases. The expenditures will encompass all-inclusive staff labor and contractual costs. The Estimate at Completion has risen compared to the previous budget proposal, due to additional scope identified during the preliminary design that is essential for achieving the project objectives. This includes the use of a cofferdam to isolate the work area, the installation of a permanent dewatering pump for subsequent operations, and the creation of new wet well openings to improve access for future maintenance.
1139052	**WPTP Instrument & Service Air Replacement** STANDALONE		$3,793,000	**Scope:** This project will plan, design, and implement all work necessary to replace or refurbish the existing instrument and service air (IA/SA) system equipment at West Point Treatment Plant. This equipment includes compressors, air dryers, and associated mechanical, electrical, and piping. **Description of Budget Request:** This project is requesting appropriation to support final design in the 2025. Expenditures will include fully burdened staff labor and consultant contract costs. Further appropriation may be requested in future budget cycles for implementation and close-out phases. The Estimate at Completion has increased since the last budget, this is driven by additional scope necessary to address conflicts with other critical work at West Point Treatment Plant.
1139054	**HVAC Replacements and Refurbishments** PROGRAMMATIC		$1,530,000	**Scope:** The primary scope of this programmatic project is to strategically replace failing critical infrastructure within the Wastewater Treatment Division's (WTD)'s heating, ventilation, and air conditioning (HVAC) systems. This programmatic project or "roll-up" will be ongoing in order to keep HVAC systems operating as designed. **Description of Budget Request:** This project is requesting appropriation to support planning and preliminary design in 2025. Expenditures will include fully burdened staff labor and consultant contract costs. Further appropriation may be requested in future budget cycles for final design, implementation, and close-out phases. The initial Estimate at Completion (EAC) is a rough order of magnitude estimate and will be refined as the project scope is further developed during project design.
1139063	**Matthews Park PS Odor Control Replacement** STANDALONE		$454,000	**Scope:** The objective of this project is to extend the useful life or replace the odor control system at the Matthews Park Pump Station (PS) in the Sand Point neighborhood of Seattle. **Description of Budget Request:** This project is requesting appropriation to support planning and preliminary design in 2025. Expenditures will include fully burdened staff labor and consultant contract costs. Further appropriation may be requested in future budget cycles for final design, implementation, and close-out phases. The initial Estimate at Completion (EAC) is a rough order of magnitude estimate and will be refined as the project scope is further developed during project design.

CAP Summary by Fund

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1139064	**South Plant Raw Sewage Pump #3 Replacement** STANDALONE		$1,833,000	**Scope:** The primary objective of this project is to replace raw sewage pump (RSP) #3 and associated equipment at South Treatment Plant (STP) in order to continue to provide safe, reliable, and energy-efficient wastewater treatment. **Description of Budget Request:** This project is requesting appropriation to support planning and preliminary design in 2025. Further appropriation may be requested in future budget cycles for an alternatives analysis, final design, and implementation. The initial Estimate at Completion (EAC) is a rough order of magnitude estimate and will be refined as the project scope is further developed during project design.
1139098	**Offsite Level Controls and Communication Upgrade** PROGRAMMATIC		$2,805,000	**Scope:** The scope of this program is to bring all offsite facility wet well level controls and communications equipment into conformance with WTD Design Standards to improve safety, reliability, and operability. This program will replace obsolete level controls and communications equipment at Pump Stations (PS), Regulator Stations (RS), and Combined Sewer Overflow (CSO) facilities located throughout the service area. This programmatic project will group upgrades at multiple facilities into subprojects. **Description of Budget Request:** This project is requesting appropriation to support preliminary design in 2025. Expenditures will include fully burdened staff labor and consultant contract costs. Further appropriation may be requested in future budget cycles for final design and implementation. The project Estimate at Completion has increased slightly since the last budget, primarily due to shifting the timing of expenditures based on revised schedule assumptions, which include additional escalation.
1139101	**Lakeland Hills PS Facility Replacement** STANDALONE		$1,186,000	**Scope:** The objective of this project is to replace the existing Lakeland Hills Pump Station in Auburn, WA. The pump station's assets are at the end of their lives, obsolete, and not being supported by the original equipment manufacturers. The new project will also include an evaluation of the existing force main and an investigation and evaluation for relocation of the pump station as part of the alternative analysis phase. The project will also evaluate the feasibility of moving the pump station outside of the current park property. This project has been identified as one of the best opportunities at WTD for advancing King County's Equity and Social Justice and sustainability goals. **Description of Budget Request:** This project is requesting appropriation to support preliminary design in 2025. Expenditures will include fully burdened staff labor and consultant contract costs. Further appropriation may be requested in future budget cycles for final design and implementation. The project Estimate at Completion has increased slightly since the last budget, including shifting the timing of expenditures based on revised schedule assumptions, which include additional escalation.

CAP Summary by Fund

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1139106	**Brightwater Neuros NX-300 Blower Replacement** STANDALONE		$680,001	**Scope:** This project will replace seven first generation Neuros NX300 blowers with modern turbo blowers that are easier and less expensive to maintain at the Brightwater Treatment Plant in Woodinville, WA. **Description of Budget Request:** This project is requesting appropriation to support planning and preliminary design in 2025. Expenditures will include fully burdened staff labor and consultant contract costs. Further appropriation may be requested in future budget cycles for final design, implementation, and close-out phases. The initial Estimate at Completion (EAC) is a rough order of magnitude estimate and will be refined as the project scope is further developed during project design.
1141134	**West Point Electrical Improvements** STANDALONE		$56,795,000	**Scope:** This project will replace approximately 300 electrical assets, relocate nine electrical assets, and coordinate these efforts with other electrical and asset replacement projects at West Point Treatment Plant (WPTP) in Seattle. **Description of Budget Request:** This project is seeking appropriation to support final design and construction activities in 2025. The projected expenditures encompass fully burdened staff hours and costs for consultant and construction contracts. The estimated total cost of the project at completion has risen since the previous budget proposal. The earlier budget was predicated on a conceptual scope devised in late 2019. Following the recent completion of the alternatives analysis, significant changes have been made, including the addition of equipment that has aged beyond its engineered lifespan and a revision of material costs. A substantial portion of the materials for this project are electrical, which have experienced inflationary costs from 2020 to the present, exceeding the historical 3% annual escalation projections.
1141884	**WPTP Grit Classifier Replacement** STANDALONE		$2,085,138	**Scope:** WPTP Grit Classifier Replacement - This project will plan, design, and implement all work necessary to replace or refurbish failing grit classifiers, cyclones, and grit hopper gates at West Point. This project will also implement modifications to associated structural, mechanical, electrical, and process equipment related to the grit classifier, piping, and equipment. The grit classifier equipment removes heavy inorganic materials, such as sand, gravel, and minerals from the wastewater flow during preliminary treatment. **Description of Budget Request:** This project is requesting appropriation to support final design and implementation in 2025. Projected spending includes fully burdened staff time and construction materials. The Estimate at Completion for the project has increased since the last budget due to additional design scope, higher equipment costs, and anticipated labor cost escalations stemming from market fluctuations in materials and labor.

CAP Summary by Fund

Budget: 2025 Annual Budget, Scenario: Executive Proposed, Agency: All, Fund: 3611 WATER QUALITY CONSTRUCTION, Cap Status: Approved, Is IT Proj? Both Yes and No

2025 Annual Budget - Executive Proposed

1143830	**WPTP Critical Gate Refurbishment** STANDALONE		$75,918,001	**Scope:** The objective of this project is to restore full functionality to critical treatment plant wastewater flow control gates and their support systems at the West Point Treatment Plant in Seattle. Support systems include operators, hydraulics, and controls. **Description of Budget Request:** This project is requesting appropriation to support design and construction. The project needs the appropriation to cover the construction contract to issue a notice to proceed (NTP). Expenditures will include fully burdened staff labor and contract costs. The Estimate at Completion has been updated from the previous budget request due to a scope revision following the Formulation phase in 2022. The updated scope now accounts for the temporary diversion and containment of flows during construction, risk item allowances such as controls replacements if necessary, and the contractor's general conditions and overhead not previously included. Additionally, the formulation estimate has factored in material price increases exceeding the historical annual 3% escalation observed from 2019, when the initial estimate was made, to 2022, when the formulation estimate was completed.
1143831	**SP RAS Pods 1-4 Piping and Component Replacement** STANDALONE		$2,419,000	**Scope:** This project will replace the Return Activated Sludge (RAS) piping and related components from each RAS pump to the RAS headbox. This includes valves and flow meters on 32 RAS pumps at the South Treatment Plant. **Description of Budget Request:** This project is requesting appropriation to support preliminary design in the 2025. Expenditures will include fully burdened staff labor and consultant contract costs. Further appropriation may be requested in future budget cycles for final design and implementation. The project Estimate at Completion has increased slightly since the last budget, primarily due to shifting the timing of expenditures based on revised schedule assumptions, which include additional escalation.
1143832	**WPTP Oxygen Generation System Refurbishment** STANDALONE		$5,937,000	**Scope:** This project will refurbish or replace oxygen generation components at the West Point Treatment Plant. Components include the feed air blower system, the adsorber system, the vacuum pump system, the liquid oxygen (LOX) system, the instrument air system, and the heating, ventilating, and air conditioning (HVAC) system components. The project will mitigate future equipment failures that could reduce plant capacity and impact control of sewage flows into the treatment plant. **Description of Budget Request:** This project is requesting appropriation to support preliminary and final design in the 2025. Expenditures will include fully burdened staff labor and consultant contract costs. Further appropriation may be requested in future budget cycles for implementation and close-out phases.
1143833	**Ovation Evergreen Control Systems Lifecycle Management Program** PROGRAMMATIC		$16,000,000	**Scope:** The objective of this program is to systematically replace critical hardware components and obsolete software in the Ovation control systems at the West Point Treatment Plant (Seattle), South Treatment Plant (Renton), and Brightwater Treatment Plant (Woodinville). **Description of Budget Request:** This program is requesting appropriation for staff labor and issuance of construction notice to proceed in the 2023-2024 biennium. The total requested amount is based on a list of pending expected subprojects that will proactively maintain control systems across Wastewater Treatment Division's three regional treatment plants.

CAP Summary by Fund

Budget: 2025 Annual Budget, Scenario: Executive Proposed, Agency: All, Fund: 3611 WATER QUALITY CONSTRUCTION, Cap Status: Approved, Is IT Proj? Both Yes and No

2025 Annual Budget - Executive Proposed

1143834	**West Point Digestion Capacity Expansion** PROGRAMMATIC		$2,859,000	**Scope:** The objective of this project is to design and construct a solids processing system to increase digestion capacity at West Point Treatment Plant (West Point). The Treatment Plant Flows and Loads study concluded that West Point digestion capacity is currently approaching its solids loading limit. The recommended alternative is Thermophilic Phased Anerobic Digestion (TPAD) with Batch Tanks to provide long term digestion capacity and Class A biosolids. **Description of Budget Request:** This project is requesting appropriation to support planning and preliminary design in the 2025. Expenditures will include fully burdened staff labor and consultant contract costs. Further appropriation may be requested in future budget cycles for final design and implementation. The project's Estimate at Completion has increased since the last budget. The original EAC was a rough order of magnitude estimate completed prior to the planning level options analysis. Since that time, WTD has completed the options analysis, which has defined some high-level scope assumptions. The current estimate is based on the concept defined during the options analysis.
1143860	**Mouth of the Duwamish Facility Plan** STANDALONE		$15,533,979	**Scope:** This project will develop a Facility Plan (Engineering Report) per WAC 173-240-060 to achieve the greatest reasonable reduction for the King County CSO outfalls, Chelan, Hanford #2, Lander, Kingdome, King Street, and Seattle Public Utilities (SPU) outfall basins 99, 107 and 111, at the Mouth of Duwamish River. The Facility Plan(s) will form the basis for regulatory approval of the recommended alternative(s) and enable King County Wastewater Treatment Division (WTD) to proceed to final design and ultimately construct CSO control facilities in accordance with the Consent Decree. **Description of Budget Request:** The requested appropriation will support to complete alternatives evaluation and submit the Facility Plan to the Department of Ecology. Project expenditures include fully burdened staff labor and consultant contract costs. The Estimate at Completion has not substantially changed from the previous budget request.
1143862	**Division-Wide UPS Replacement Program** PROGRAMMATIC		$1,450,000	**Scope:** The scope of this program is to track and monitor all uninterruptible power supplies (UPSs) as they approach their end of life and proactively replace them. **Description of Budget Request:** This project is requesting appropriation to support preliminary design in the 2025. Projected spending includes fully burdened staff time. Further appropriation may be requested in future budget cycles for final design, and implementation. The project Estimate at Completion (EAC) has increased since the last budget. The EAC at the time of the last budget was an initial rough order of magnitude. Since the budget was submitted, this program completed capital project formulation, which developed conceptual scope assumptions upon which the current estimate is based.

CAP Summary by Fund

Budget: 2025 Annual Budget, Scenario: Executive Proposed, Agency: All, Fund: 3611 WATER QUALITY CONSTRUCTION, Cap Status: Approved, Is IT Proj? Both Yes and No

2025 Annual Budget - Executive Proposed

1143865	**Black Diamond Trunk Capacity Upgrade** STANDALONE		$14,597,001	**Scope:** The Black Diamond Interceptor, built in 1992, has reached the end of its useful life and is not sufficiently sized to accommodate the projected sewer flows. This project will determine the best available alternative to upgrade the capacity of approximately six miles of 10-16 inch conveyance pipe to provide the needed conveyance capacity for the contributing area, taking into account future population growth. **Description of Budget Request:** This project is requesting appropriation to support design and General Contractor/Construction Manager (GC/CM) Pre-Construction service in 2025. Expenditures will include fully burdened staff labor and contract costs. The project's Estimate at Completion has risen compared to the previous budget proposal. The initial estimate has been adjusted due to a substantial rise in the projected population growth, which has expanded the project's scope.
1143866	**WP Biogas Utilization Improvement Project** STANDALONE		$5,531,000	**Scope:** The scope of this project is to design, install, and test a demonstration-scale microturbine system and replace the existing Cogen chillers to increase the beneficial use of biogas at the West Point Treatment Plant (WP) while improving the operational stability across the system as these efforts are designed and implemented. **Description of Budget Request:** This project is requesting appropriation to support design and construction. The requested appropriation will cover the construction contract to issue a notice to proceed (NTP). Expenditures will include fully burdened staff labor and contract costs.
1144008	**WTD Electric Vehicle Charging Stations** STANDALONE		$378,000	**Scope:** This project will install Electric Vehicle (EV) charging infrastructure at WTD managed facilities to support the transition of WTD light duty vehicles to electric. **Description of Budget Request:** The budget requested will be used for project planning and implementation. Expenses will include fully burdened staff labor and construction contracting.
1144157	**Murray Forcemain Rehabilitation** STANDALONE		$3,158,623	**Scope:** Project will structurally rehabilitate approximately 1,150 linear feet of the existing 27-inch diameter east force main for the Murray Pump Station in Seattle. **Description of Budget Request:** The requested appropriation in the 2025 will support construction and close out of this project. The expenditures will include fully burdened staff labor and construction contract costs. The Estimate at Completion (EAC) of this project has increased since the last budget. The increased cost is mainly driven by higher-than-expected design complexity which increased the scope and the level of design effort. This added complexity has also resulted in the project to be delivered in two phases, extending the schedule and adding escalation.
1145965	**Soos Creek Cascade Relief Interceptor No. 2 Upgrade** STANDALONE		$6,101,001	**Scope:** Per an interlocal agreement this project will provide funding for and review of the Soos Creek Water and Sewer District design and construction effort of the Cascade Relief Interceptor No. 2 upgrade in Kent. The conceptual scope includes a parallel wastewater conveyance pipe constructed to increase flow capacity to accommodate population growth in the Black Diamond area. **Description of Budget Request:** The requested appropriation will fund design and construction. Expenditures will include fully burdened staff labor and payments to Soos Creek Water & Sewer District (SCWSD) per the interlocal agreement.

CAP Summary by Fund

Budget: 2025 Annual Budget, Scenario: Executive Proposed, Agency: All, Fund: 3611 WATER QUALITY CONSTRUCTION, Cap Status: Approved, Is IT Proj? Both Yes and No

2025 Annual Budget - Executive Proposed

1148136	**Force Main Inspection Access** STANDALONE		$2,030,000	**Scope:** This project will improve and/or install inspection access to 26 force main structures throughout King and Snohomish counties. Inspection access is critical to planning and implementing needed force main repairs and replacements. **Description of Budget Request:** This project is requesting appropriation to support planning and preliminary design in 2025. Expenditures will include fully burdened staff labor and consultant contract costs. Further appropriation may be requested in future budget cycles for final design and implementation. The initial Estimate at Completion (EAC) is a rough order of magnitude estimate and will be refined as the project scope is further developed during project design.
1148138	**Brightwater Operations Center Roof & HVAC Replacement** STANDALONE		$1,112,000	**Scope:** This project will replace the roof and associated heating, ventilation, and air conditioning (HVAC) equipment on top of the Brightwater Treatment Plant Operations Center (BOC). The project will also remove a number of decommissioned equipment that are no longer operational. **Description of Budget Request:** This project is requesting appropriation to support planning and preliminary design in 2025. Expenditures will include fully burdened staff labor and consultant contract costs. Further appropriation may be requested in future budget cycles for final design, implementation, and close-out phases. The initial Estimate at Completion (EAC) is a rough order of magnitude estimate and will be refined as the project scope is further developed during project design.
1148140	**South Plant Electrical Improvements Program** STANDALONE		$1,398,000	**Scope:** The project scope entails the replacement of several electrical assets that are beyond their useful life at South Treatment Plant (STP) in Renton, WA. Due to the scale and complexity, this work will require extensive planning and coordination with plant operations and other capital projects proposed at STP. **Description of Budget Request:** This project is requesting appropriation to support planning and preliminary design in 2025. Further appropriation may be requested in future budget cycles for an alternatives analysis, final design, and implementation. The initial Estimate at Completion (EAC) is a rough order of magnitude estimate and will be refined as the project scope is further developed during project design.
1148141	**South Plant Santler Building Redevelopment** STANDALONE		$997,000	**Scope:** This project will construct a new building of permanent office and workspace at the South Treatment Plant for numerous working groups, including the East Offsite operations team, South Plant operations team, the South Satellite construction management team, the South Plant Facility Program and the Weld Shop work group. **Description of Budget Request:** This project is requesting appropriation to support planning and preliminary design in 2025. Expenditures will include fully burdened staff labor and consultant contract costs. Further appropriation may be requested in future budget cycles for final design, implementation, and close-out phases. The initial Estimate at Completion (EAC) is a rough order of magnitude estimate and will be refined as the project scope is further developed during project design.

CAP Summary by Fund

Budget: 2025 Annual Budget, Scenario: Executive Proposed, Agency: All, Fund: 3611 WATER QUALITY CONSTRUCTION, Cap Status: Approved, Is IT Proj? Both Yes and No

2025 Annual Budget - Executive Proposed

1148142	**Brightwater Membrane 9 & 10 Cassettes** STANDALONE		$538,000	**Scope:** This project will install 20 membrane cassettes in tanks 9 and 10 to meet process capacity needs at the Brightwater Treatment Plant (BTP). **Description of Budget Request:** This project is requesting appropriation to support planning and preliminary design in 2025. Expenditures will include fully burdened staff labor and consultant contract costs. Further appropriation may be requested in future budget cycles for final design, implementation, and close-out phases. The initial Estimate at Completion (EAC) is a rough order of magnitude estimate and will be refined as the project scope is further developed during project design.
1148143	**Climate Adaptation Planning Program** STANDALONE		$4,158,000	**Scope:** This program will fund subprojects that will work to adequately address climate adaptation in the Wastewater Treatment Division (WTD) including preparedness and adaptation planning, technical capacity building, and community resiliency advancement. The program will enable a comprehensive, strategic, and integrated approach to climate adaptation for the wastewater system. **Description of Budget Request:** This project is requesting appropriation to support planning in 2025. Expenditures will include fully burdened staff labor and consultant contract costs. Further appropriation may be requested in future budget cycles for implementation. The initial Estimate at Completion (EAC) is a rough order of magnitude estimate and will be refined as the project scope is further developed in the program planning stage.
1148144	**Brightwater Space Heating - Heat Pump Installation** STANDALONE		$567,000	**Scope:** This project will isolate the space heating loop from the process loop and install heat pumps at Brightwater Treatment Plant to fulfill the plant's space heating loop needs. The project will also rehabilitate leaks in heat loop pipe between the plant and the Brightwater Operations Center building. **Description of Budget Request:** This project is requesting appropriation to support planning and preliminary design in 2025. Expenditures will include fully burdened staff labor and consultant contract costs. Further appropriation may be requested in future budget cycles for final design, implementation, and close-out phases. The initial Estimate at Completion (EAC) is a rough order of magnitude estimate and will be refined as the project scope is further developed during project design.
1148145	**South Plant Digester Circulation Pump Replacement** STANDALONE		$488,999	**Scope:** This project will replace the existing recessed impeller pumps used to circulate sludge in the digestion process with screw centrifugal pumps at the South Treatment Plant in Renton, WA. **Description of Budget Request:** This project is requesting appropriation to support planning and preliminary design in 2025. Further appropriation may be requested in future budget cycles for final design and implementation. The initial Estimate at Completion (EAC) is a rough order of magnitude estimate and will be refined as the project scope is further developed during project design.

CAP Summary by Fund

Budget: 2025 Annual Budget, Scenario: Executive Proposed, Agency: All, Fund: 3611 WATER QUALITY CONSTRUCTION, Cap Status: Approved, Is IT Proj? Both Yes and No

2025 Annual Budget - Executive Proposed

1148146	**WTD Solar Program** STANDALONE		$279,001	**Scope:** This program will assess and prioritize solar installation locations, determine solar system sizing, and design and install solar systems at Wastewater Treatment Division (WTD) locations. The program will also conduct annual condition assessments of new solar installations and existing solar installations to meet performance standards for up to six years. **Description of Budget Request:** This project is requesting appropriation to support planning and preliminary design in 2025. Expenditures will include fully burdened staff labor and consultant contract costs. Further appropriation may be requested in future budget cycles for final design, implementation, and close-out phases. The initial Estimate at Completion (EAC) is a rough order of magnitude estimate and will be refined as the project scope is further developed during project design.
1148147	**Chinook Research Vessel Replacement** STANDALONE		$1,133,000	**Scope:** Replace the obsolete R/V Chinook with a newer, modern boat capable of performing the Wastewater Treatment Divisions (WTD) increasing marine sampling workload required per NPDES permit. **Description of Budget Request:** This project is requesting appropriation to plan, design, and start construction in 2025. Expenditures will include fully burdened staff labor. The current EAC is based on discussions with boat builders.
3611 - WATER QUALITY CONSTRUCTION		**Total**	**$359,207,901**	
Grand Total			**$359,207,901**	

Questions and Answers on WTD's Capital Program

Council Staff QUESTION #1. Please explain the processes in place within WTD and within the Executive branch (this could include PSB monitoring) to successfully manage and deliver the capital program and the accountability and oversight mechanisms that are in place.

WTD Response: WTD Portfolio Management provides financial stewardship by performing coordinated, balanced, and transparent management of portfolios and portfolio categories of capital projects and programs to better achieve the organization's strategic objectives through prioritization, resource balancing, and continuous improvement. Portfolio, Program, and Project oversight is conducted through a tiered internal governance structure shown below.

Escalation Tier	WTD Portfolio Governance Roles	Primary Governance Objectives
Tier 3	Definition Board	1. Strategic Direction 2. Strategic Allocation 3. Escalated Changes
Tier 2	Delivery Board	1. Execution Management 2. Program and Project Priorities 3. Escalated Changes
Tier 1	Project Oversight Board	1. Phase Gate Control 2. Program and Project Quality Assurance 3. Escalated Changes
Tier 0	Project Managers and Project Teams	1. Day to Day Management 2. Program and Project Reporting

WTD Capital Portfolio Governance Objectives

- Clearly defined strategic direction for the capital portfolio comprised of programs and projects
- Demonstrate the value added to the public by the capital investments to the system
- Evaluation and prioritization of capital project requests, concepts, opportunities and existing programs and projects in development and delivery
- The transparent, balanced, and efficient management of limited resources
- Regular data-driven monitoring and reporting
- To establish and maintain strategic and rigorous parameters, weighted multi-attribute criteria, and well documented assumptions
- Develop and deliver the right projects and programs at the right time for the right reasons

The Definition Board (tier 3) makes decisions regarding the budget strategic direction in execution and delivery of capital projects to:

- Provide financial accountability.
- Promote governance that understands stakeholder needs and timelines.
- Seek to identify measures to manage risk.
- Provide direction for timely delivery of the organization's programs and projects that maximizes the value of the investments for stakeholders through the allocation of capital to portfolio categories.
- Provide strategic direction to the management and oversight actions of the capital portfolio.

The Delivery Board (tier 2) is organized and chartered to inform and make decisions and recommendations regarding the execution and delivery of capital projects to:

- Establish the capital portfolio prioritization.
- Manage adjustments to the planned capital portfolio, including adjustments to individual portfolio categories.
- Provide oversight and direction for timely delivery of the organization's programs and projects that maximizes the value of the investments for stakeholders by balancing the WTD capital portfolio through project prioritization, validation, and resource management.
- Adjust to changing conditions over time to deliver projects and programs that align with WTD strategic objectives.

The Project Oversight Board (POB) (tier 1) makes decisions regarding the execution and delivery of programs and projects to:

- Provide oversight and direction for timely delivery of the organization's programs and projects.
- Adjust to changing conditions over time to deliver projects and programs that align with WTD strategic objectives.

Additionally, PSB oversight mechanisms include quarterly baseline reporting, annual spending report, and financial monitoring.

Council Staff QUESTION #2. What metrics are used to manage the capital program, who are the metrics reported to, what happens when projects are "off-track", etc.

WTD Response. PRISM is WTD's Project Information System Management. All capital contracts, projects, programs and portfolios are organized to monitor and manage the entirety of the capital program. Metrics include:

- PRISM dashboards and PRISM Project Health use real time project information, schedule forecasts, status, and financials for monitoring performance.
- Real-time Quarterly reporting: daylights quarterly progress, quarterly key activities (current and upcoming quarter), closely monitored Issues and Key Risks, Contract Change, and variance on scope, cost, and schedule versus last approved plan

Typical WTD Capital Key Performance Indicators (KPIs) applied are:

- Annual spending Accomplishment Rate vs plan
- Engineers Estimate vs Bid Amount review
- Allied Cost Ratio review
- Variance form Cost Model review
- Milestones achieved by Quarter monitoring
- Contract statistics such as change orders, and contingency usage.
- Capital $ per FTE analysis

Council Staff QUESTION #3. What happens when projects are "off-track"?

WTD Response. See question 2 above on how oversight of projects and programs are governed via the Project Oversight Board, Delivery Board and Definition Board. Project Management supervisors and unit managers also work daily/weekly/monthly with Project Managers and project teams to mentor, coach and address "off track" issues expeditiously.

Council Staff QUESTION #4. Have there been consultant reports or other WTD initiated reports which discuss capital project management/delivery? If so, please provide links and whether WTD has adopted any of the recommendations in the reports.

WTD Response. WTD has been adhering to Project Management Institute (PMI) project management standards since 2006. WTD has had more than 100 certified Project Management Professionals (PMP) by PMI. Our comprehensive Project Management Manual aligns with PMI standards and our business needs, serving as a key resource for our team. WTD is an active member and a co-chair of the Capital Project Management Working Group (CPMWG) focused on standardizing project management processes across all departments. CPMWG engaged a consultant in 2020 to review all the project management manuals and process and that report can be found here.

Council Staff QUESTION #5. Does WTD maintain a listing of projects with significantly changed scope, schedules or budgets when comparing to the prior appropriation? I defer to you on how define "significant". For context, I have reviewed the CAP summary table and there are many projects descriptions which note the cost at completion has changed but in most cases, there's no way to know from reading the description how significant the change is.

WTD Response. Below are projects with significant scope and/or cost changes. We are defining as significant those projects with Estimate at Completion (EAC) changes that are both large in overall cost and percentage increases over EACs included in the last budget.

Name	2023-2024 Budget EAC and Classification	2025 Budget EAC and Classification	Driver
1139043 Elliott West Wet Weather Treatment Station	$12M Not applicable, no construction included	$492M AACEi Class 4*	Previous scope included only scope to complete the facility plan. Current scope and EAC includes final design and construction phases per the issued West Point NPDES permit which accelerated project completion.
1141134 West Point Electrical Improvements	$131M AACEi Class 10	$410M AACEi Class 4*	Added scope in preliminary design to include assets aging out of expected life during the 10-year program horizon. The cost estimate was also updated per recent electrical equipment prices and include allowances for additional cost uncertainty.
1143830 WPTP Critical Gate Refurbishment	$29M Rough order of magnitude based on similar historical projects	$154M AACEi Class 5*	Developed conceptual scope during project formulation.
1143834 West Point Digestion Capacity Expansion	$84M AACEi Class 10	$330M AACEi Class 5*	Updated program assumptions during problem definition, includes a longer program horizon and future phases of expansion not included in the estimate submitted in the last budget.
1143865 Black Diamond Trunk Capacity Upgrade	$57M AACEi Class 5	$167M AACEi Class 5*	2023-2024 Budget submittal included only first phase of capacity improvements. Updated population growth estimates and changed assumptions accelerated second phase of improvements into the project scope.

*For reference, the table below describes the cost estimate classifications, the level of typical scope definition, and the expected accuracy ranges for estimates based on the level of scope definition.

AACEi Cost Estimate Classification	WTD Cost Estimate Definition	% of Scope Definition	Expected Accuracy Range
Class 10	Long –Term System Planning	0% - 1%	-50% - +300%
Class 5	Concept Definition	0% - 2%	-50% - +100%
Class 4	Preliminary Design	1% - 15%	-30% - +50%
Class 3	Final Design	10% - 40%	-20% - +30%
Class 2	Bid for Construction	30% - 75%	-15% - +20%
Class 1	Construction Change Orders	65% - 100%	-10% - +15%

Council Staff QUESTION #6. How can I quickly identify projects which have had significant scope, schedule or budget changes and some level of detail on those changes?

WTD Response. Each quarter PSB transmits a budget management report to the clerk of the council. One element of this report is a listing of all baselined projects with current estimate scope, schedule, and cost information and a comparison to the baseline estimate as well as detailed updates on projects that have been designated for additional risk monitoring. Within the Project Information Center (PIC), comparisons can also be made between reporting cycles using the “Baseline Quarterly Comparison Report.” In addition, the description of budget request in the CAP form within PIC notes when the Estimate at Completion changes due to a change in scope, schedule or budget. WTD can provide this information upon request.

RWQC Monthly Work Program for 2024

Updated November 6, 2024

The suggested topics are based on the latest scheduling information available. The committee will adjust the schedule throughout the year to accommodate any necessary changes.

January–No meeting

February 7, 2024 (In-person)

- ✓ Election of Vice-Chair.
- ✓ Introduction to the Regional Water Quality Committee and the Regional Wastewater Treatment System.
- ✓ Status update on the long-term forecasting work requested by Motions 16410 and 16449.
- ✓ Regional Water Quality Committee 2024 Work Program development and priority setting.
- ✓ Rates: High level briefing on major policy issues and cost drivers likely to impact 2025 rates.

March 6, 2024

- ✓ Discussion of resolution expressing RWQC's interest in sewer rate and capacity charge and requesting MWPAAC continue performing a technical review of rates.
- ✓ Wastewater Treatment Division 2025 rate recommendation.
- ✓ Regional Wastewater Services Plan Update.
- □ Report from WTD as requested by Motion 16410 on recommended methodology for forecasting long term costs of its capital improvement needs. (Deferred until April)

April 3, 2024

- ✓ Regional Wastewater Services Plan Update.
- ✓ Report from WTD as requested by Motion 16410 on recommended methodology for forecasting long term costs of its capital improvement needs.
- ✓ Overview of the policies that determine how regional wastewater system costs are shared and the sewer and capacity charge are structured.
- ✓ Discussion of resolution expressing RWQC's interest in sewer rate and capacity charge and requesting MWPAAC continue performing a technical review of rates.

May 1, 2024– CANCELLED

June 5, 2024

- ✓ Briefing Regional Wastewater Services Plan Update.
    - Policy topics for discussion: Policy application K.C.C. 28.86.030 and Treatment Plant Policies K.C.C. 28.86.050
- ✓ Briefing on 2025 Proposed Sewer Rate and Capacity Charge.

- ✓ John Taylor, Director, Department of Natural Resources and Parks

~~July 3, 2024 –~~July 15, 9:30 a.m. SPECIAL MEETING

- ✓ Briefing Modified Combined Sewer Overflow Consent Decree.
- ✓ Briefing Regional Wastewater Services Plan Update.
  - Guiding principles for RWSP Update
  - Policy topics for review from prior meeting: Policy application K.C.C. 28.86.030 and Treatment Plant Policies K.C.C. 28.86.050
  - RWSP Scope
- ✓ Status briefing on the progress in developing a long-term financial and sewer rate forecast per Motion 16449. Written update.

August 7, 2024 CANCELLED DUE TO RECESS

September 4, 2024 (In-PERSON)

- ✓ Briefing Regional Wastewater Services Plan Update.
  - RWSP scope and input on policy issues to be addressed
  - Resolution on Guiding Principles for RWSP Update

October 2, 2024

- ✓ Regional Wastewater Services Plan Update: Status Report.
- ✓ Contaminants of Emerging Concern (CEC): Update on Efforts to Reduce and Control PFAS and CECs as Requested by Motion 16434.
- ✓ 2025 Proposed WTD Capital Improvement Program.
- ✓ Stormwater Study Session Part 1: Understanding the problem.
  - Threat to Puget Sound and relationship to wastewater.
  - Existing regulatory stormwater framework, including the role of King County and cities.
  - Existing funding framework.

November 6, 2024

- ☐ Regional Wastewater Services Plan
- ☐ Executive's 2025 WTD Operating and Capital Budget

December 4, 2024

- ☐ Regional Wastewater Services Plan Update.
  - Review of Proposed Scope for RWSP Update.
- ☐ Puget Sound Nutrients

RWQC staff will work throughout the year to coordinate with MWPAAC staff to align work programs of both committees.