King County

Wastewater Treatment Division

MWPAAC Rates and Finance Subcommittee

Preliminary Capacity Charge Study Results

November 6, 2025

Agenda

1. Introductions
2. Quick review: Capacity Charge Approaches
3. Preliminary Results
4. Next steps

Goals of the capacity charge update study

- Develop a more transparent and predictable calculation that is consistent with common industry practices
- Based on the value of system assets (existing and future)
- Existing and future capacity will determine costs per Residential Customer Equivalent (RCE)
- Transition to a new methodology that accounts for current system investments and capacity, and future expanded capacity and investments

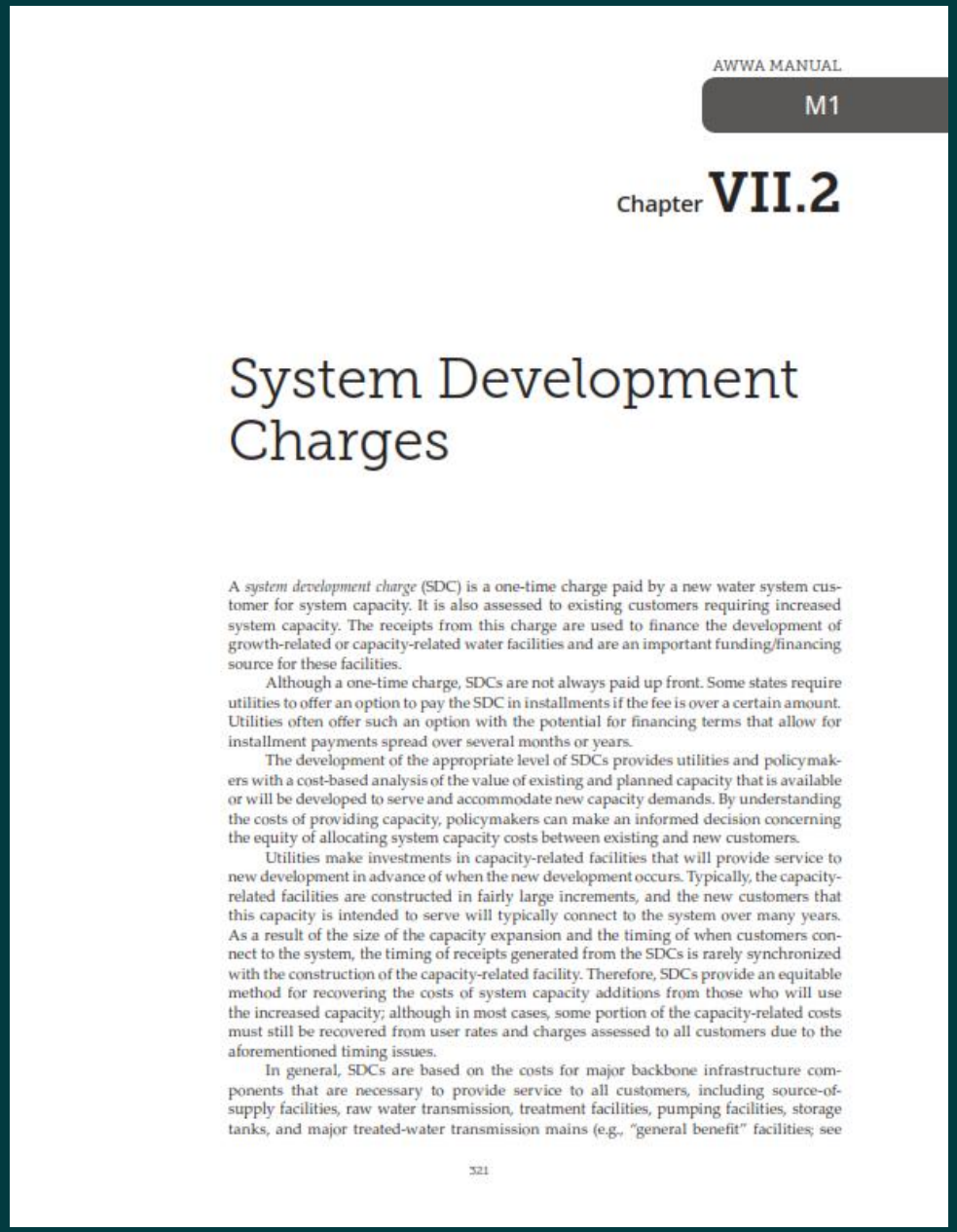
Capacity Charge Methodology

Methodologies endorsed by water sector associations AWWA & WEF

- Buy-In Approach
  - Focuses on existing facilities with available capacity to serve new customers
  - Analysis based on fixed asset records
- Incremental Cost Approach
  - Focuses on additional facilities required to meet anticipated growth
  - Analysis based on capital improvement plan
- Combined Approach

AWWA: American Water Works Association

WEF: Water Environment Association



AWWA MANUAL

M1

Chapter VII.2

System Development Charges

A *system development charge* (SDC) is a one-time charge paid by a new water system customer for system capacity. It is also assessed to existing customers requiring increased system capacity. The receipts from this charge are used to finance the development of growth-related or capacity-related water facilities and are an important funding/financing source for these facilities.

Although a one-time charge, SDCs are not always paid up front. Some states require utilities to offer an option to pay the SDC in installments if the fee is over a certain amount. Utilities often offer such an option with the potential for financing terms that allow for installment payments spread over several months or years.

The development of the appropriate level of SDCs provides utilities and policymakers with a cost-based analysis of the value of existing and planned capacity that is available or will be developed to serve and accommodate new capacity demands. By understanding the costs of providing capacity, policymakers can make an informed decision concerning the equity of allocating system capacity costs between existing and new customers.

Utilities make investments in capacity-related facilities that will provide service to new development in advance of when the new development occurs. Typically, the capacity-related facilities are constructed in fairly large increments, and the new customers that this capacity is intended to serve will typically connect to the system over many years. As a result of the size of the capacity expansion and the timing of when customers connect to the system, the timing of receipts generated from the SDCs is rarely synchronized with the construction of the capacity-related facility. Therefore, SDCs provide an equitable method for recovering the costs of system capacity additions from those who will use the increased capacity; although in most cases, some portion of the capacity-related costs must still be recovered from user rates and charges assessed to all customers due to the aforementioned timing issues.

In general, SDCs are based on the costs for major backbone infrastructure components that are necessary to provide service to all customers, including source-of-supply facilities, raw water transmission, treatment facilities, pumping facilities, storage tanks, and major treated-water transmission mains (e.g., "general benefit" facilities; see

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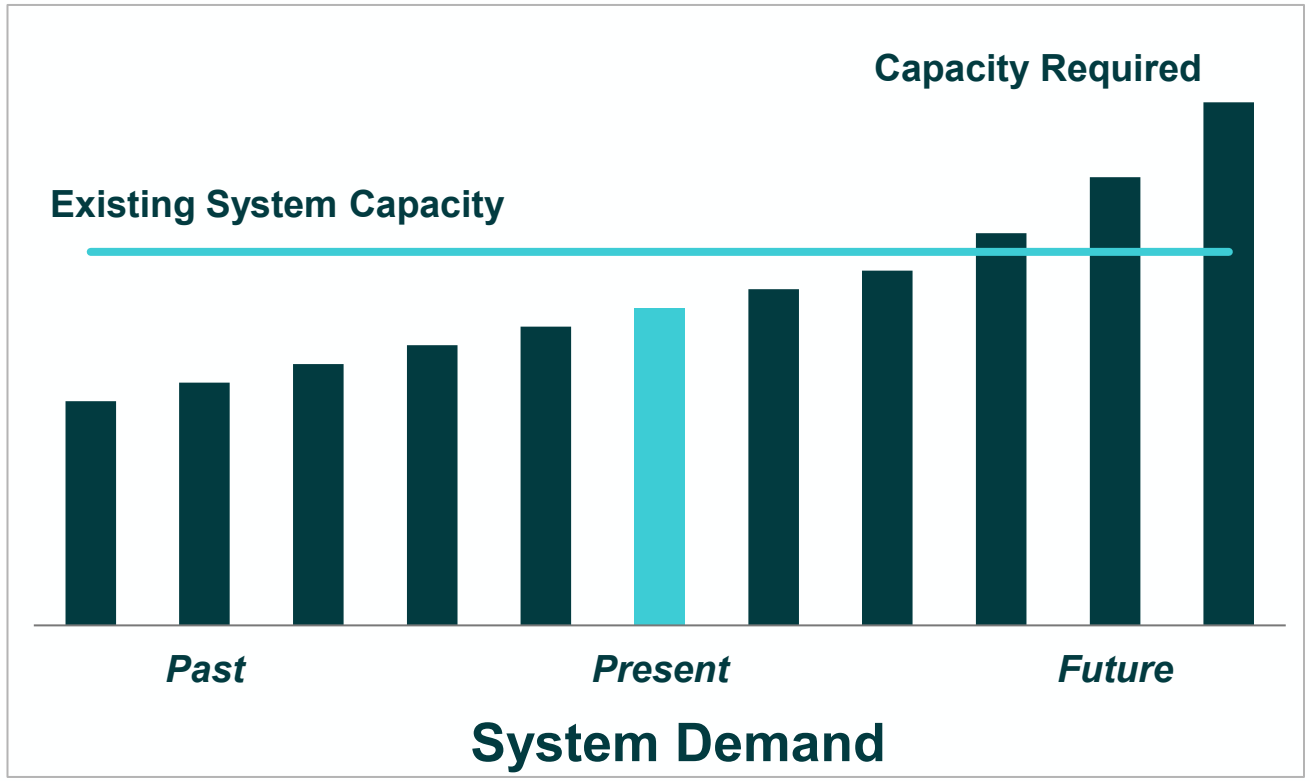
Washington Dept. of Commerce endorses the average cost approach

- “The average cost approach acknowledges that the utility invests … to benefit both existing and future customers equally.”
- “Commonly used … because it results in generally moderate and stable SDC [System Development Charge] over time and provides a straightforward and equitable allocation of system costs between existing and new customers.”
- Equivalent to the combined approach

(Existing system cost + future system cost – adjustment for asset retirement*) ÷ (total capacity units the system can serve) = SDC per unit

The recommended approach is the Combined Methodology *(average cost approach)*

- System Buy-in + Incremental Cost
- Existing assets have capacity to serve new customers
- Recognizes additional growth-related facilities in capital improvement plan
- Reflects the infrastructure and customers served currently and through 2060



Combined Approach Calculations

WTD has invested $6.8 billion in sewer system infrastructure used to provide service today

Existing Facilities Purchase Costs (Millions $)	Treatment Plants	Conveyance	CSO/ Regulatory	General Plant
Interceptors and Lines	$980	$1,035	$320	$289
Buildings	1,504	265	325	27
Land	191	21	23	13
Machinery/Equipment	857	238	106	151
Building Improvements	55	24	25	61
Other Misc.	29	5	10	32
Total	**$3,619**	**$1,591**	**$810**	**$819**
Grand Total				**$ 6,839**

The asset investment is adjusted as part of the System Buy-in calculation

- Exclude ineligible items:
  - Vashon Island and Carnation treatment facilities
  - Grant-funded or contributed assets
  - Small equipment and vehicles
  - Capitalized interest
- Add allowable carrying costs per RCW 35.58.570

(Millions $)	All Assets
Total Assets	$ 6,839
Capitalized Interest, Small Equipment, and Vehicles	(335)
Vashon and Carnation Treatment Plants	(52)
Grant-funded Assets	(431)
Debt Credit	(1,924)
Plus Carrying Cost	2,939
Grand Total	**$7,037**

The CIP and preliminary long-range capital project needs reflect $6.9 billion in growth-related incremental costs through 2060

- Capital project sources:
  - 2019 Treatment Plant Flows & Loadings Study
  - 2017 Collection System Improvement Plan
- Projects designed to meet service requirements through 2060
- Project costs will ultimately be updated with the Regional Wastewater Services Plan (RWSP)

2025 Dollars *($ Millions)*	**Estimated Project Costs**	**Growth Share of Cost**
South WWTP	$ 4,860	$ 2,793
West WWTP	1,719	1,244
Brightwater WWTP	616	616
Conveyance System	3,675	2,235
TOTAL	**$ 10,870**	**$ 6,887**

Capital projects can address both renewal/replacement and capacity improvement. Engineering and planning identified the portion of each project that will serve future growth.

The Combined Approach uses the total costs to serve current and future system RCEs[1]

- Current system investment and future capital projects are included in capacity fee calculations, like the average cost approach[2]
- The $7.0 billion of investment in the existing system can serve approx. 910,000 RCEs
- The $6.9 billion of growth-related CIP will support service approx. 415,000 new RCEs by 2060

1. *The capacity charge RCE is based on a medium-sized, single-family home of 2.88 persons per household and an average loading per person of 0.15 lbs BOD per month*
2. *Methodology recommended by the State Dept. of Commerce in "Residential Proportional Impact Fees and System Development Guidebook."*

Combined Approach Calculation

		Total Investments		
		Current System Investment	Growth-Related CIP Investment	Total Costs to Recover
System Investment				
Treatment Plants		$ 3,993,805,986	$ 4,652,965,944	$ 8,646,771,930
Conveyance		2,055,722,056	2,234,600,825	4,290,322,881
CSO/Regulatory		987,155,920	-	987,155,920
Total	(a)	**$ 7,036,683,961**	**$ 6,887,566,770**	**$ 13,924,250,731**
Total Available System RCEs (2060)	(b)			**1,325,051**
Total Fee Per RCE	**(a/b)**			**$ 10,508.46**
Total Monthly Charge	**(1)**			**$ 83.10**
Currently Approved & In Use Capacity Charges:				
2025 Capacity Charge, per RCE				**$ 9,684.29**
2025 Monthly Capacity Charge, per RCE				**$ 76.09**
% Difference from Current				9.21%
$ Difference from Current				$7.01

(1) Per State law, the capacity charge is assessed monthly over 15 years. The monthly charge is calculated using the current 5.05% early payoff discount rate.

What comes next?

- Proposed ordinance to amend King County Code to reflect the new methodology.
  - Q1 2026

- Updated charge to be calculated and adopted as part of the 2027 sewer rate process.
  - Q2 2026

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Thank you!

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RCW Definitions

- **Carrying costs**: “The equitable share may include interest charges applied from the date of construction of the sewage facilities until the connection, or for a period not to exceed ten years, at a rate commensurate with the rate of interest applicable to the metropolitan municipal corporation at the time of construction or major rehabilitation of the sewage facilities, or at the time of installation of the sewer lines to which the property owner is seeking to connect but not to exceed ten percent per year: PROVIDED, That the aggregate amount of interest shall not exceed the equitable share of the cost of the sewage facilities allocated to such property owners.
- Per RCW: 35.58.570

System Buy-In Approach

- Existing assets have capacity to serve new customers
  - New customers “Buy-In” to existing capacity
  - Establishes a cost per RCE of capacity in existing system
- Investment in assets based on original costs plus carrying costs
  - Per RCW 35.58.570
- Exclude outstanding debt to prevent “double-charging”
- Exclusion of grant-funded assets

Sample Fee Calculation
Original Cost of Eligible Assets + Carrying Costs
Less: - Grant Funded / Donated - Outstanding Debt Principal
= Net System Assets ($)
÷ Existing System Capacity (RCE)
= Capacity Charge ($/RCE)

Incremental Cost Approach

- Assigns cost of future capacity expansion to new customers
- CIP projects evaluated for portion that supports growth
  - Utilizing current adopted CIP
  - Project-specific allocations of upsizing share by project
  - RWSP will inform updates
- Based on future RCE's added to system

Sample Fee Calculation
Total Capital Improvements Projects
Identify Growth Capacity Share of Projects
= Incremental Capacity Cost ($)
÷ Capacity Provided by New Assets (RCE)
= Capacity Charge ($/RCE)