



Equivalent Dwelling Unit Calculation and Total Annual Charge Methodology



Current EDU Calculation Method

- One EDU is one single-family residence
 - It is the equivalent flow and pollutant loading of sewage and wastewater from a single-family dwelling unit
 - Commercial properties are multiple EDUs
- Member Agencies assign EDUs and report them to BBARWA on an annual basis



Current EDU Calculation Method

- The EDU count is used to calculate the sewer user charge

Agency	FY 2025 EDUs	EDU % by Agency
CBBL	11,813.70	46.10%
CSD	12,545.70	48.95%
CSA 53B	1,268.00	4.95%
Total	25,627.40	

Alternative EDU Calculation Methods for Member Agencies



- Sewer Meter
- Water Consumption Based Fee
- Square Footage
- Fixture Count
- Capacity Based Method
- Flow Quality and Quantity

Sewer Meter



- Installation of a sewer meter at each property
- Bill based on actual sewer usage
- May be a discrepancy between the actual sewer usage at the property billed by the Member Agency and the flow meter used by BBARWA to bill Member Agencies due to I&I



Water Consumption Based Fee

- Cost of wastewater service is determined by the amount of water a customer used
- May be difficult to implement since some of CSD's sewer customers receive water from DWP



Square Footage

- Determine the square footage that correlates with one EDU
- System wide survey needed
- May not accurately reflect sewer usage



Fixture Count

- Determine how many fixtures equals one EDU
- System wide survey needed
- May not accurately reflect sewer usage



Capacity Based Method

- Charges are based on the potential sewer system capacity needed by the property, considering factors like the number of bathrooms or potential occupancy
- This would involve a formula considering the number of fixtures, rooms, or estimated usage
- Requires detailed property information and can be challenging to update



Flow Quality and Quantity

- Costs of wastewater treatment and disposal based on sewage quantity (flow) and quality (indicated by suspended solids and biochemical oxygen demand or BOD)
- Install individual meters at each sewer connection
- Provide testing of the sewer strength
- Difficult method to calculate and implement
- May be a discrepancy between the actual sewer usage at the property billed by the Member Agency and the flow meter used by BBARWA to bill Member Agencies due to I&I



Current Total Annual Charge Method

- Includes a fixed rate and a variable rate
 - Fixed portion of capital expenditures is calculated by taking total capital expenditures (minus any offsets such as grants) multiplied by the percentage of total operating costs used for the fixed operating cost calculation
 - Variable cost rate is the remaining percentage of total operating costs and capital expenditures

Agency	FY 2025 Total Annual Charge	% of Total Annual Charge
CBBL	\$4,343,580.81	47.51%
CSD	4,369,986.19	47.79%
CSA 53B	430,033.05	4.70%
Total	\$9,143,600.05	

Alternative Total Annual Charge Calculation Methods



- Flow-Based Rate
- Straight Rate (No Variable Rate)
- 70/30 Rate (70% Fixed Rate, 30% Variable Rate)



Flow-Based Rate

- A flow-based rate would be determined by multiplying each Member Agency's 3-year average flow percentage by the Total Annual Charge

Agency	FY 2025 3-Yr Avg Flow	% of Avg Flow
CBBL	365,721,360	52.40%
CSD	307,639,894	44.08%
CSA 53B	24,558,806	3.52%
Total	697,920,060	



Flow-Based Rate

Agency	FY 2025 Total Annual Charge	Flow Based Total Annual Charge	Difference
CBBL	\$4,343,580.81	\$4,791,393.21	\$447,812.40
CSD	4,369,986.19	4,030,454.33	-339,531.86
CSA 53B	430,033.05	321,752.51	-108,280.54
Total	\$9,143,600.05	\$9,143,600.05	

The revised sewer user charge, including Replenish Big Bear, per EDU would have been:

Agency	FY 2025 EDU	Flow Based EDU	Difference
CBBL	\$367.67	\$405.58	\$37.91
CSD	348.33	321.26	-27.06
CSA 53B	339.14	253.75	-85.39



Straight Rate (No Variable Rate)

- A straight rate would be calculated by multiplying the Total Annual Charge by the percentage of EDUs reported by each Member Agency



Straight Rate (no variable rate)

Agency	FY 2025 Total Annual Charge	Straight Rate Total Annual Charge	Difference
CBBL	\$4,343,580.81	\$4,215,010.02	-\$128,570.79
CSD	4,369,986.19	4,476,180.30	106,194.11
CSA 53B	430,033.05	452,409.72	22,376.67
Total	\$9,143,600.05	\$9,143,600.05	

The revised sewer user charge, including Replenish Big Bear, per EDU would have been:

Agency	FY 2025 EDU	Straight Rate EDU	Difference
CBBL	\$367.67	\$356.79	-\$10.88
CSD	348.33	356.79	8.46
CSA 53B	339.14	356.79	17.65

70/30 Rate (70% Fixed Rate, 30% Variable Rate)



- The 70/30 rate would set the fixed and variable portions of the sewer user charge at 70% and 30%, respectively

70/30 Rate



Agency	FY 2025 Total Annual Charge	70/30 Total Annual Charge	Difference
CBBL	\$4,343,580.81	\$4,400,468.47	\$56,887.66
CSD	4,369,986.19	4,322,999.35	-49,986.83
CSA 53B	430,033.05	420,132.22	-9,900.82
Total	\$9,143,600.05	\$9,143,600.05	

The revised sewer user charge, including Replenish Big Bear, per EDU would have been:

Agency	FY 2025 EDU	70/30 EDU	Difference
CBBL	\$367.67	\$372.49	\$4.82
CSD	348.33	344.58	-3.75
CSA 53B	339.14	331.33	-7.81

Summary



- Member Agency EDU Calculation
 - Sewer Meter
 - Water Consumption Based Fee
 - Square Footage
 - Fixture Count
 - Capacity Based Method
 - Flow Quality and Quantity
- BBARWA Total Annual Charge
 - Flow- Based Rate
 - Straight Rate
 - 70/30 Rate

Questions

