

# City of Davis

## 2021 Wastewater Rate and COS Study

### DRAFT RATE STRUCTURE RECOMMENDATIONS

UTILITIES COMMISSION MEETING

10/20/2021



BARTLE WELLS ASSOCIATES  
INDEPENDENT PUBLIC FINANCE ADVISORS

# Presentation Overview

**Last Meeting: Discussed Cost of Service & Rate Structure Design**

**This Meeting: Review Rate Structure Recommendations & Alternatives**

## **Rate Structure Components**

- Rate Revenue Requirement: 5% annual increases
- Fixed / Variable Rate Allocation: 3 Options

***What portion of wastewater rate revenue should be fixed vs variable?***

- Strength-Based Rate Allocation
- Customer Class Divisions

***Condense Multi Family, Commercial Categories***

***Add Dormitory-Style Multi Family Rate***

- Update Residential Volumetric Caps

## **Rate Design Considerations**

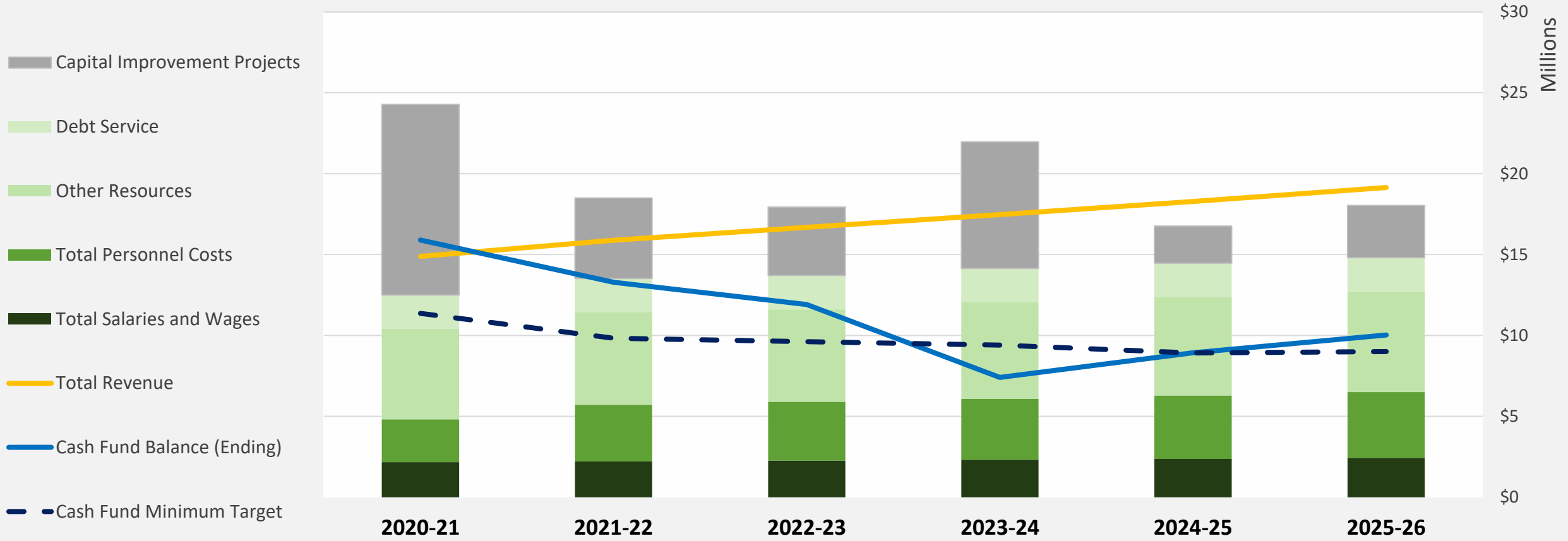
- Equitability between customers (prop 218)
- Impact on customer bills (commercial vs residential, high users vs low users)

***Phase in rates over time?***

- Feasibility of implementation (staff & administrative time, availability of data)

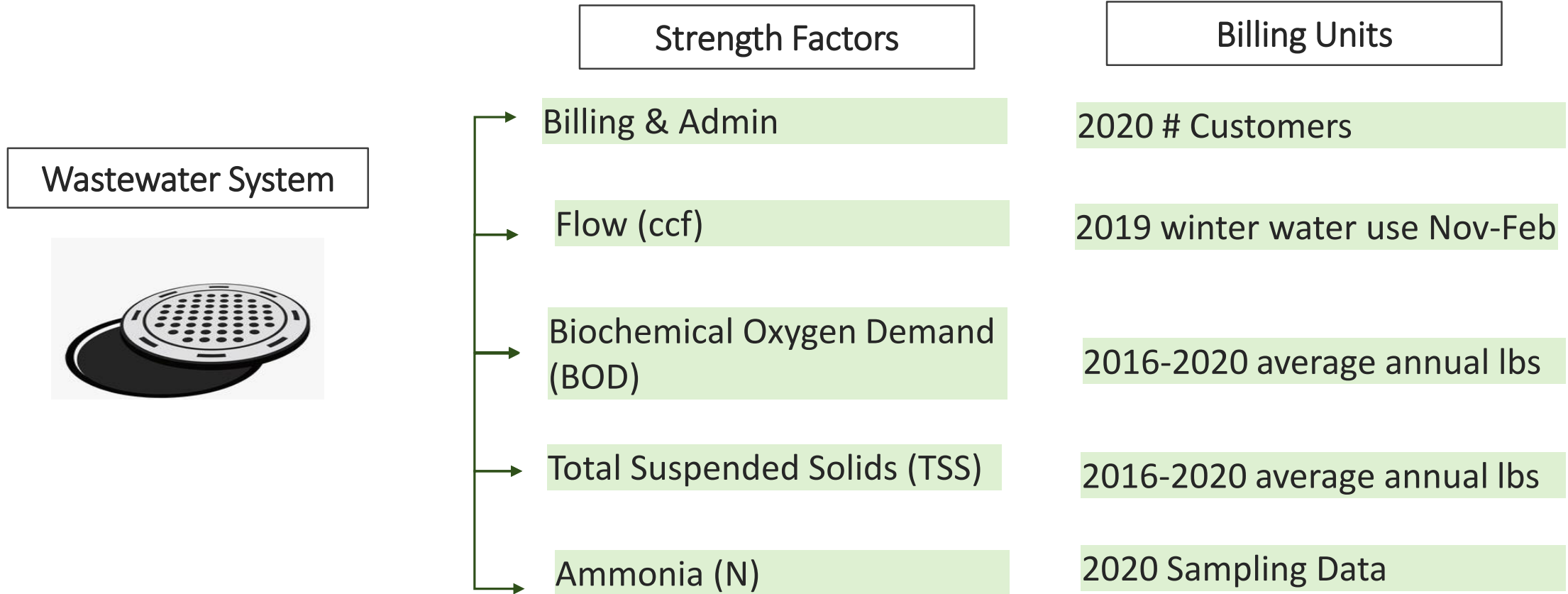
# Draft 5-Year Cash Flow Projection

Fiscal Year	2021-22	2022-23	2023-24	2024-25	2025-26
Effective Date	5/1/2022	5/1/2023	5/1/2024	5/1/2025	5/1/2026
Rate Revenue Increase	5.0%	5.0%	5.0%	5.0%	5.0%



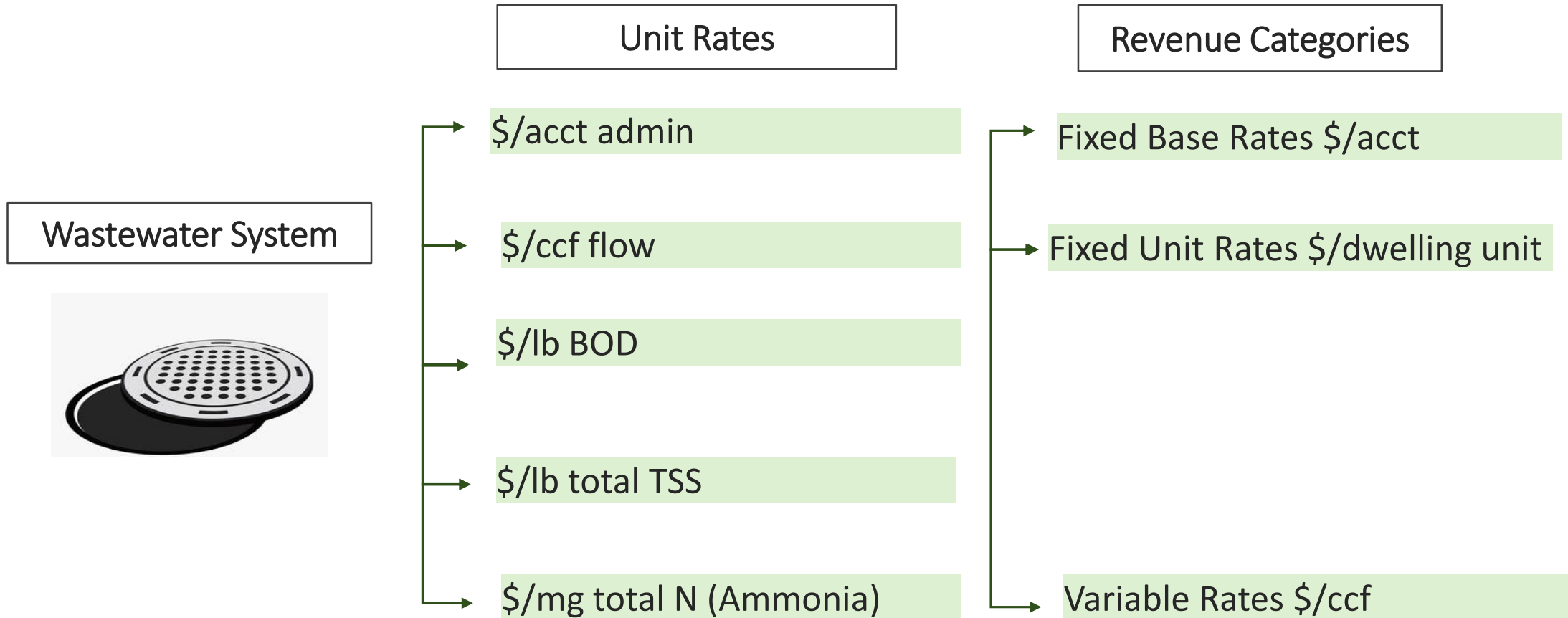
# Wastewater Cost of Service:

*Defines how costs are incurred and how revenues should be recovered*



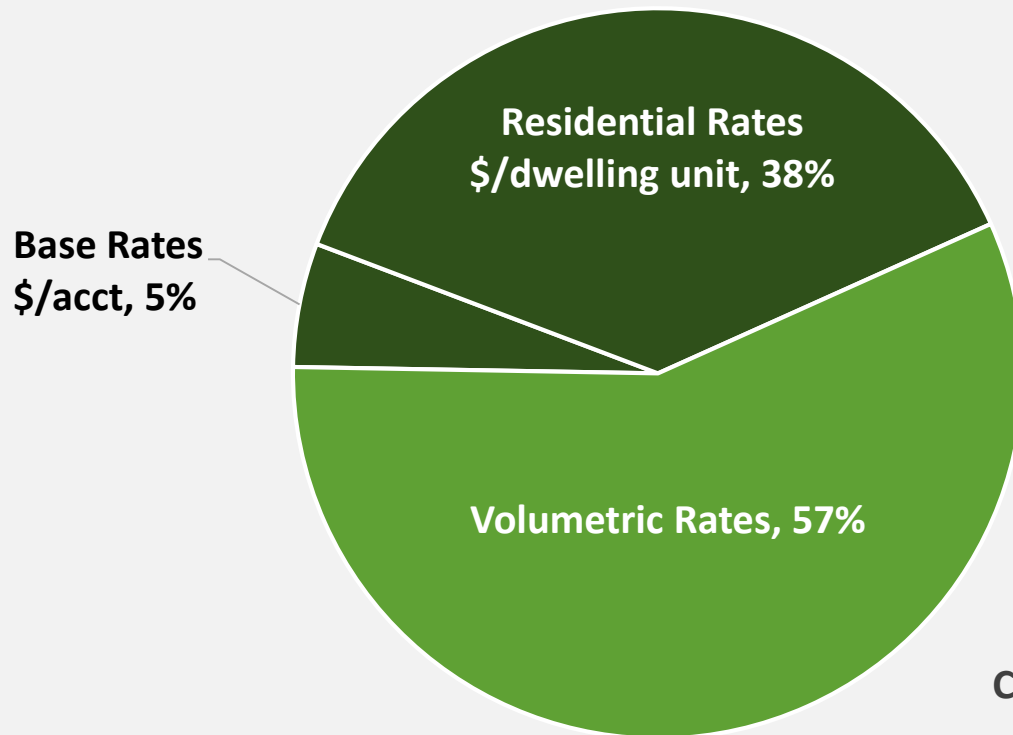
# Wastewater Cost of Service:

*Defines how costs are incurred and how revenues should be recovered*



# Current Rate Revenue

2019-20 Wastewater Rate Revenue: \$13.6 million



Most wastewater system costs are fixed  
*Personnel, equipment, debt service payments*

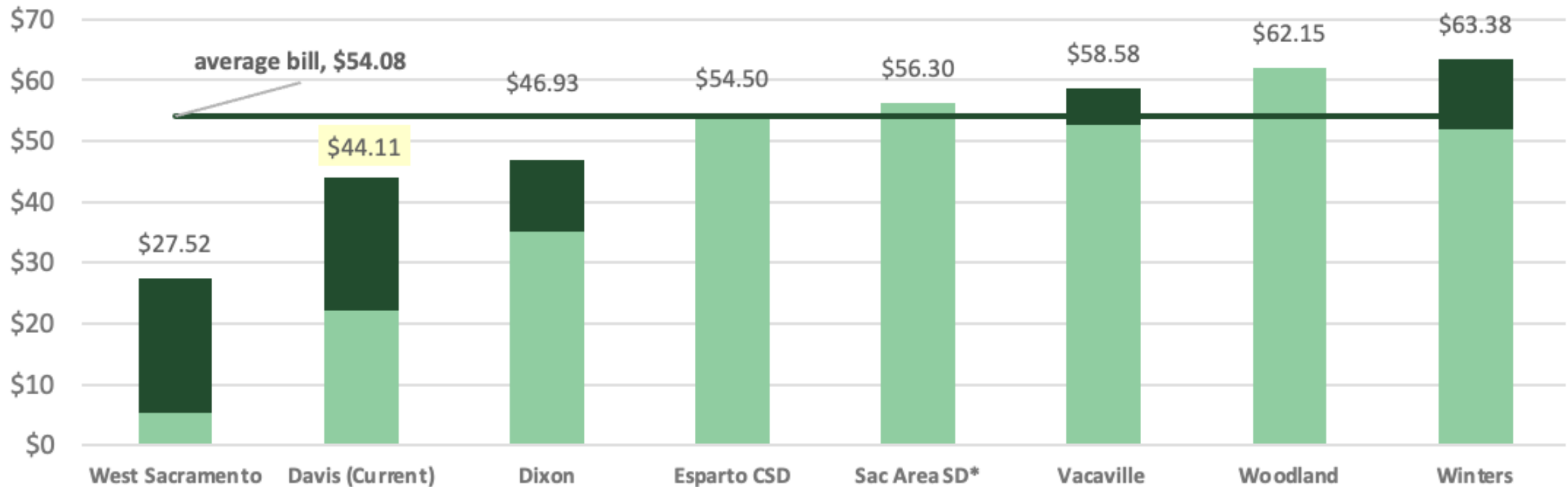
Current Fixed Revenues, 43%

Few system costs are completely tied to volumetric use  
*Treatment, chemicals, electricity, some CIP*

Current Volumetric Revenues, 57%



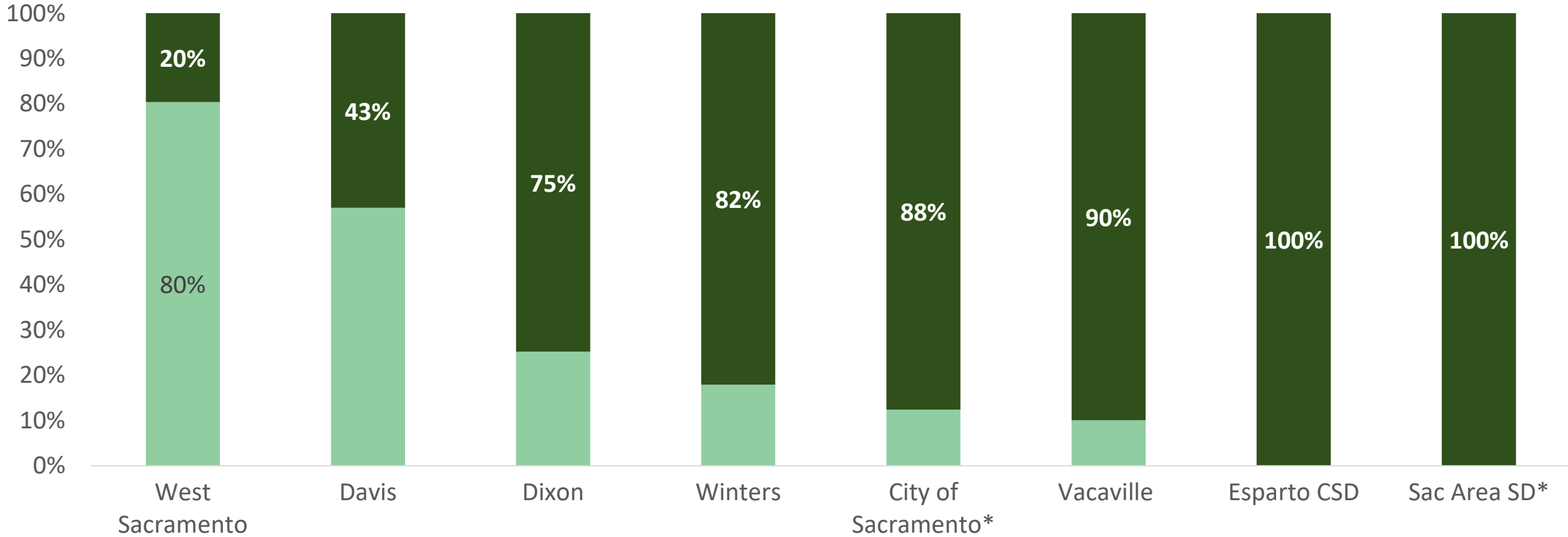
# Single Family Wastewater Monthly Bill Survey FY 2021



■ Variable Charge ■ Fixed Charge

*7 ccf average SFR winter water use where applicable*  
*\*Includes Sacramento Regional County Sanitation District Fixed Charge, \$37/month*

# Single Family Bill Survey, Fixed & Variable Charges

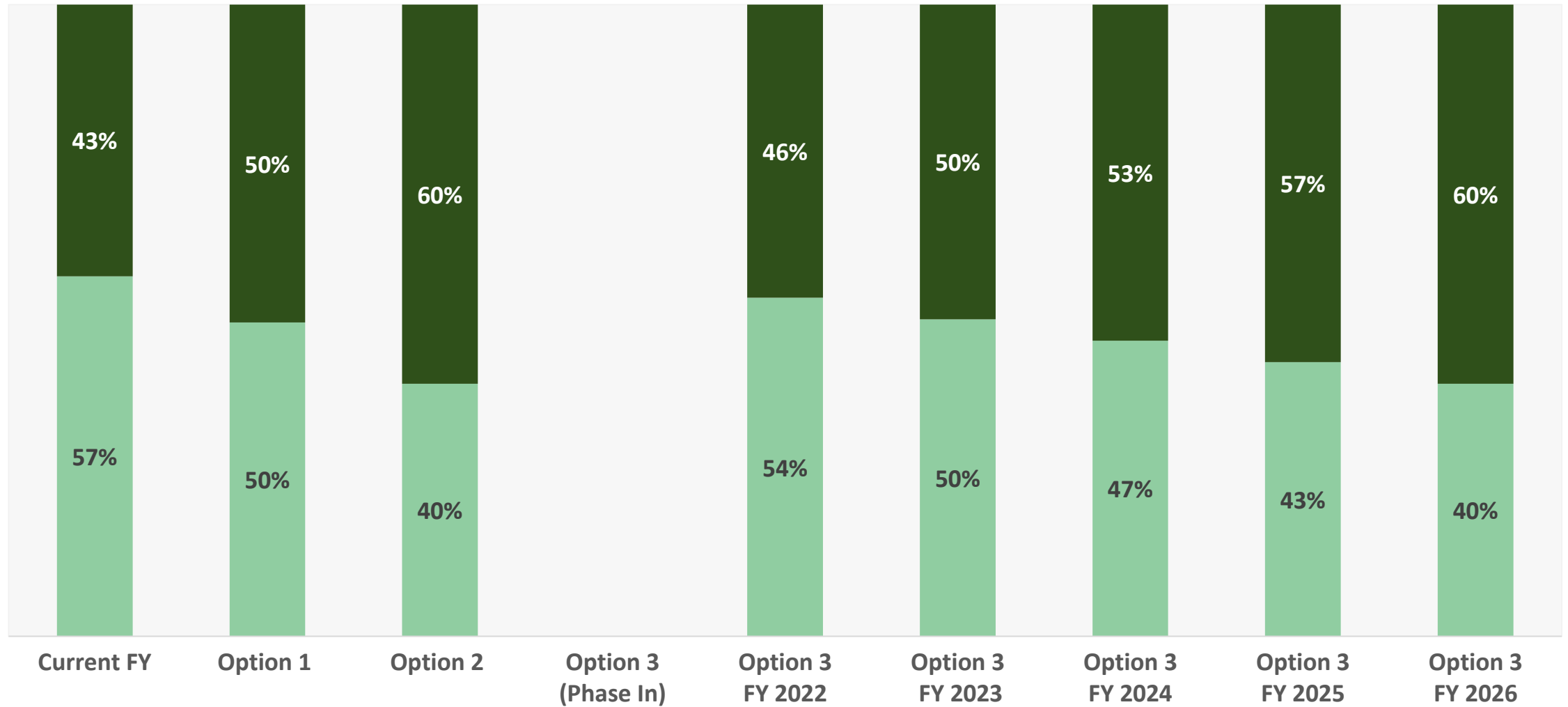


*7 ccf average SFR winter water use where applicable*

*\*Includes Sacramento Regional County Sanitation District Fixed Charge, \$37/month*



## Rate Structure Options – Fixed/Variable Rates



# Rate Structure Options – Other Considerations

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## Multi Family Customers

- ***Dormitory Style rate for new student housing developments?***
  - Currently these customers would pay rate for 5+ Unit Complexes
  - Bed count is higher than a typical MFR, closer to SFR strength factors
- ***Blended rate for all other multi family users?***
  - Simplifies fixed rate structure

## Commercial Customers

- ***Condense commercial classes by strength factor?***
  - Allows for more flexibility between commercial use types
  - Simplifies volumetric rate structure

# Dormitory-Style Multi Family Customers

The City has some multi family developments with as many as 8 beds per apartment. These customers have a higher wastewater demand per unit than typical multi family users.

Dormitory Style Multi Family Proposed Use Factor Calculation	
7	single family monthly average (ccf)
175	gallons per SFR per day
57	gallons per capita per day, indoor (CA EPA)
<b>3.06</b>	<b>assumed number of people (beds) per SFR</b>
<b>1 bed</b>	<b>= 1/3 Single Family Residence</b>

**Proposed Fixed per Dwelling Unit Factor: 1/3**

# Dormitory-Style Multi Family Customers

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	2020-21	2020-21	2020-21
	60/40	50/50	Phased
Single Family	\$26.46	\$21.59	\$19.64
<i>Proposed Factor</i>		1/3	
<b>Dormitory-style Multi Family</b>	\$8.82	\$7.20	\$6.55

***UC Decision: Should the City adopt a separate fixed rate per bed for dormitory style multi family customers?***

# Dormitory-Style Multi Family Customers

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<b>Future Housing Developments</b>	<b># Apartment Units</b>	<b># Beds</b>
Chiles Rd	57	549
Lincoln 40	79	708
Nishi Student Housing	700	2,200
1037 Olive Drive	47	61

# Dormitory-Style Multi Family Customers

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Future Housing Development	Current Rates \$/Unit (5+ Units)	60/40 \$/Bed Charge	50/50 \$/Bed Charge
Chiles Rd	\$734	\$4,841	\$3,951
Lincoln 40	\$1,018	\$6,244	\$5,095
Nishi Student Housing	\$9,016	\$19,401	\$15,832
1037 Olive Drive	\$605	\$538	\$439
<b>Total Estimated Revenue</b>	<b>\$11,373</b>	<b>\$31,024</b>	<b>\$25,317</b>

# UC Decisions: Commercial Customer Classes

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The current commercial customer classes can be condensed into four strength categories:

Commercial		Current Rate	Strength Category
C-1	Office, Retail, Motels	\$4.53	Low
C-2	Laundry, Dry Cleaning	\$4.69	Low
C-3	Churches, Schools, Medical/Dental, Manufacturing, Storage	\$4.69	Standard/Domestic
C-4	Convalescent Hospital	\$4.96	Medium
C-5	Auto Repair / Auto Dealers / Car Wash	\$5.33	Medium
C-6	Restaurants / Fast Food	\$8.12	High

# Example Schedule of Commercial User Categories

Low Strength	<ul style="list-style-type: none"> <li>Banks &amp; Financial Institutions</li> <li>Barber Shops</li> <li>Hair Salon (hair cutting only)</li> <li>Dry Cleaners</li> <li>Laundromats</li> <li>Offices - Business and Professional</li> <li>Offices - Medical/Dental (without surgery)</li> <li>Post Offices</li> <li>Retail Stores</li> <li>Schools</li> </ul>	Medium Strength	<ul style="list-style-type: none"> <li>Auto Dealers - with Service Facilities</li> <li>Machine Shops</li> <li>Service Stations, Garages, Auto Repair Shops</li> <li>Restaurants - W/O Dish Washer &amp; Garbage Disposal</li> <li>Coffee Shops - W/O Dish Washer &amp; Garbage Disposal</li> <li>Mini Marts - W/O Dish Washer &amp; Garbage Disposal</li> <li>Mini Mart with Gas Pumps - W/O Dish Washer &amp; Garbage Disposal</li> <li>Catering - W/O Dish Washer &amp; Garbage Disposal</li> <li>Hotel/Motel with Restaurant</li> <li>Ice Cream Shop</li> <li>Tasting Rooms</li> <li>Spa with Various Beauty Treatments</li> <li>Carpet Cleaners</li> <li>Funeral Homes/ Mortuary</li> </ul>
Domestic Strength	<ul style="list-style-type: none"> <li>Residential - All</li> <li>Appliance Repair</li> <li>Art Gallery</li> <li>Auto Dealers - without Service Facilities</li> <li>Beauty Shops ( hair cutting w/additional treatments)</li> <li>Nail Salons</li> <li>Pet Groomers</li> <li>Bars &amp; Taverns</li> <li>Camp Ground or RV Park</li> <li>Churches, Halls &amp; Lodges</li> <li>Fire Stations</li> <li>Hospitals - General, Convalescent &amp; Veterinarian</li> <li>Medical Offices - with Surgery</li> <li>Dental Offices</li> <li>Hotels, Motels, B&amp;Bs, and Vacation Rentals (W/O restaurant)</li> <li>Libraries</li> <li>Rest Homes</li> <li>Warehouses</li> <li>Car Washes - Self Service</li> <li>Gym or Health Club</li> </ul>	High Strength	<ul style="list-style-type: none"> <li>Restaurants - with Dish Washer or Garbage Disposal</li> <li>Coffee Shops - with Dish Washer or Garbage Disposal</li> <li>Catering - with Dish Washer or Garbage Disposal</li> <li>Bakeries</li> <li>Butcher Shops</li> <li>Fish Market/Shop</li> <li>Markets - with Dish Washer or Garbage Disposal</li> <li>Markets - with Bakeries or Butcher Shops</li> <li>Mini Marts - with Dish Washer or Garbage Disposal</li> <li>Wineries</li> <li>Cheese Makers</li> <li>Dairy Products (milk producers, yogurt, ice cream maker)</li> <li>Specialty Foods Manufacturing (e.g., olive oil maker)</li> </ul>



# Rate Design Options: Fixed Rate

	Current	Restructure	Restructure	Restructured
<b>% Fixed Rate Revenue</b>	<b>43%</b>	<b>60/40</b>	<b>50/50</b>	<b>43/57</b>
<b>Base Rate - Monthly \$/account, all users</b>				
<b>Base Rate</b>	<b>\$3.94</b>	<b>\$4.05</b>	<b>\$4.05</b>	<b>\$4.05</b>
<b>Monthly Per Unit Rate (\$/dwelling unit, residential only)</b>				
<b>Single Family</b>	<b>\$18.26</b>	<b>\$26.46</b>	<b>\$21.59</b>	<b>\$19.64</b>
<b>Multi Family (Blended Rate)</b>	<b>N/A</b>	<b>\$18.90</b>	<b>\$15.42</b>	<b>\$14.03</b>
Condominium	\$12.46	\$18.05	\$14.73	\$13.40
Duplex	\$14.22	\$20.60	\$16.81	\$15.30
3 Units	\$15.02	\$21.76	\$17.76	\$16.16
4 Units	\$15.32	\$22.20	\$18.11	\$16.48
5+ Units	\$12.88	\$18.66	\$15.23	\$13.85
Mobile Home	\$12.85	\$18.62	\$7.20	\$13.82
<b>Dormitory-Style Housing (per bed)</b>	<b>N/A</b>	<b>\$8.82</b>	<b>\$7.20</b>	<b>\$6.55</b>

# Rate Design Options: Variable Rates

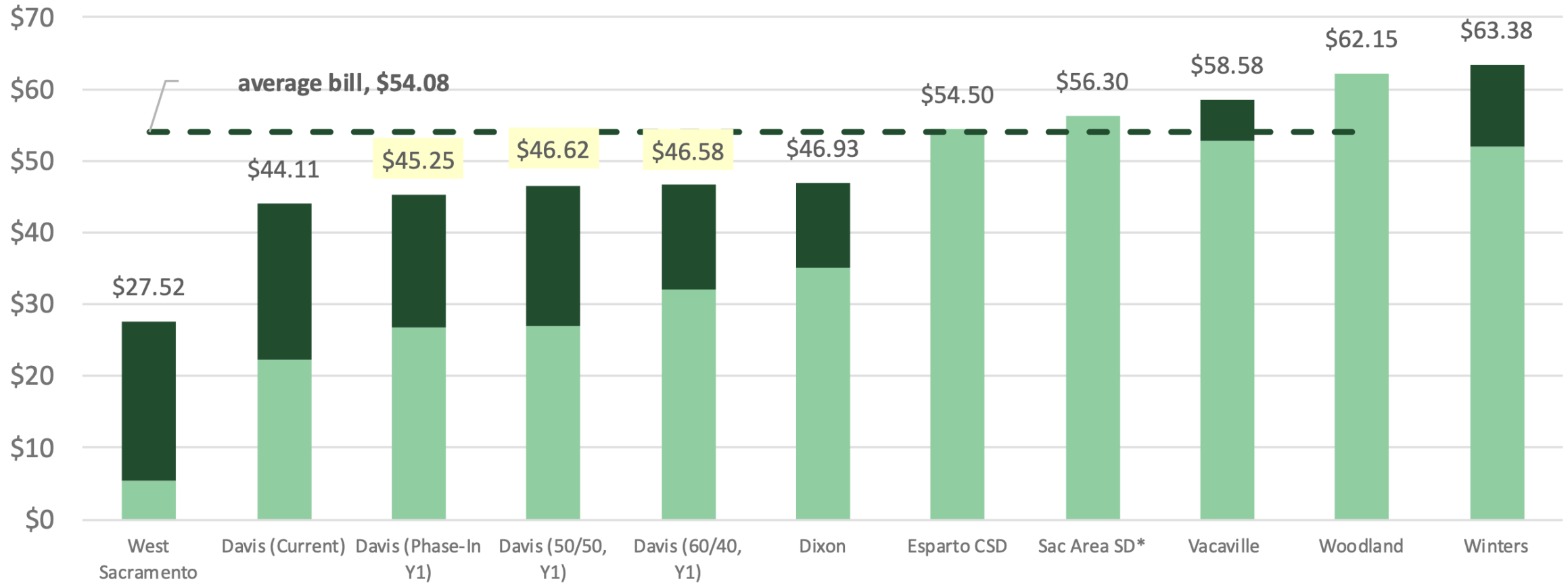
	Current 43%	Restructure 60/40	Restructure 50/50	Restructured 43/57
<b>% Fixed Rate Revenue</b>				
<b>Residential</b>	<b>\$3.13</b>	<b>\$1.98</b>	<b>\$2.67</b>	<b>\$2.92</b>
<b>Commercial</b>				
C-1 Office, Retail, Motels	\$4.53	\$4.49	\$4.49	\$4.68
C-2 Laundry, Dry Cleaning	\$4.69	\$4.68	\$4.68	\$4.70
C-3 Churches, Schools, Medical/Dental, Manufacturing, Storage	\$4.69	\$4.70	\$4.70	\$5.03
C-4 Convalescent Hospital	\$4.96	\$5.03	\$5.03	\$5.44
C-5 Auto Repair / Auto Dealers / Car Wash	\$5.33	\$5.44	\$5.44	\$8.01
C-6 Restaurants / Fast Food	\$8.12	\$8.01	\$8.01	
<b>Commercial - Alternative Option (4 strength categories)</b>				
Low Strength	\$4.53	\$4.49	\$4.49	\$4.49
Standard Strength	\$4.69	\$4.84	\$4.84	\$4.84
Medium Strength	\$4.96	\$5.03	\$5.03	\$5.03
High Strength	\$8.12	\$8.01	\$8.01	\$8.01

# BWA Proposal: Variable Charge Caps

Customer Class	Average Monthly Billable Use(ccf)	Current Cap (3.1 – 4.8x average)	Draft Proposal (2.5x average)
Single Family	7	24	18
Multi Family			
Condominium	4	19	10
Duplex	5	36	25
3 Units	6	56	45
4 Units	5	76	50
5+ Units	5	19 ccf/unit	12 ccf/unit
Mobile Home	33	19 ccf/unit	12 ccf/unit
Dormitory-Style			6 ccf/bed

(1 ccf = 748 gallons)

# Single Family Wastewater Monthly Bill Survey FY 2021



■ Variable Charge ■ Fixed Charge



*7 ccf average SFR winter water use where applicable*

*\*Includes Sacramento Regional County Sanitation District Fixed Charge, \$37/month*

# Receive Feedback Questions & Comments

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