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Presentation Overview

Last Meeting: Review Rate Structure Recommendations & Alternatives
This Meeting: Bill Impacts, Q&A, UC Recommendations

Rate Structure Decisions:

- What portion of residential wastewater rate revenue should be fixed vs variable?*
- 60 Fixed /40 Variable?*
- 50 Fixed / 50 Variable?*
- Phase in rates to 60/40 over 5 years?*

Other Updates:

- Condense Multi Family, Commercial Categories?*
- Add Dormitory-Style Multi Family Rate for future developments?*

Please hold questions until the end of the presentation

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Option 1 Proposed 5-Year Rate Schedule (60/40)

		60 / 40		5/1/2022	5/1/2023	5/1/2024	5/1/2025	5/1/2026
Overall Rate Revenue Increase	Current	Restructure		5%	5%	5%	5%	5%
Base Rate (\$/account)	\$3.94	\$4.05		\$4.25	\$4.47	\$4.69	\$4.93	\$5.17
Monthly Per Unit Rate (\$/dwelling unit)								
Single Family	\$18.26	\$26.46		\$27.78	\$29.17	\$30.63	\$32.16	\$33.77
Multi Family	\$12.46-\$12.85	\$18.90		\$19.85	\$20.84	\$21.88	\$22.98	\$24.12
Dormitory-Style Housing (per bed)	N/A	\$8.82		\$9.26	\$9.72	\$10.21	\$10.72	\$11.26
Volumetric Rate (\$/ccf)								
Residential	\$3.13	\$1.98		\$2.08	\$2.19	\$2.30	\$2.41	\$2.53
Commercial								
Low Strength	\$4.53	\$4.49		\$4.72	\$4.95	\$5.20	\$5.46	\$5.74
Standard Strength	\$4.69	\$4.84		\$5.08	\$5.34	\$5.61	\$5.89	\$6.18
Medium Strength	\$4.96	\$5.03		\$5.28	\$5.55	\$5.82	\$6.11	\$6.42
High Strength	\$8.12	\$8.01		\$8.41	\$8.83	\$9.27	\$9.73	\$10.22

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Option 2 5-Year Rate Schedule (50/50)

		50 / 50		5/1/2022	5/1/2023	5/1/2024	5/1/2025	5/1/2026
Adoption Date	Current	Restructure		5%	5%	5%	5%	5%
Overall Rate Revenue Increase								
Base Rate (\$/account)	\$3.94	\$4.05		\$4.25	\$4.47	\$4.69	\$4.93	\$5.17
Monthly Per Unit Rate (\$/dwelling unit)								
Single Family	\$18.26	\$21.59		\$22.67	\$23.80	\$24.99	\$26.24	\$27.55
Multi Family	\$12.46-\$12.85	\$15.42		\$16.20	\$17.01	\$17.86	\$18.75	\$19.69
Dormitory-Style Housing (per bed)	N/A	\$7.20		\$7.56	\$7.93	\$8.33	\$8.75	\$9.18
Volumetric Rate (\$/ccf)								
Residential	\$3.13	\$2.67		\$2.81	\$2.95	\$3.10	\$3.25	\$3.41
Commercial								
Low Strength	\$4.53	\$4.49		\$4.72	\$4.95	\$5.20	\$5.46	\$5.74
Standard Strength	\$4.69	\$4.84		\$5.08	\$5.34	\$5.60	\$5.88	\$6.18
Medium Strength	\$4.96	\$5.03		\$5.28	\$5.55	\$5.82	\$6.11	\$6.42
High Strength	\$8.12	\$8.01		\$8.41	\$8.83	\$9.27	\$9.73	\$10.22

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Option 3 Phased In to 60% Fixed

Adoption Date		5/1/2022	5/1/2023	5/1/2024	5/1/2025	5/1/2026
Overall Rate Revenue Increase	Current	5%	5%	5%	5%	5%
Fixed Rates						
Single Family	\$18.26	\$27.78	\$29.17	\$30.63	\$32.16	\$33.77
PHASED IN		\$22.47	\$25.29	\$28.12	\$30.94	\$33.77
Multi Family	\$12.46-\$12.85	\$19.85	\$20.84	\$21.88	\$22.98	\$24.12
PHASED IN		\$16.05	\$18.07	\$20.09	\$22.11	\$24.12
Dormitory-Style Housing (per bed)	N/A	\$9.26	\$9.72	\$10.21	\$10.72	\$11.26
PHASED IN		\$7.49	\$8.43	\$9.37	\$10.32	\$11.26
Residential Volumetric Rate	\$3.13	\$2.08	\$2.19	\$2.30	\$2.41	\$2.53
PHASED IN		\$2.65	\$2.62	\$2.59	\$2.56	\$2.53

UC Decision: What ratio of fixed and variable rate revenues should the City collect?

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UC Decision: Should the City condense the current multi family fixed rate categories?

	Current 43% Fixed	COS Rate Restructure	
		60% F / 40% V	50% F / 50% V
Monthly Fixed Per Unit Rate (\$/dwelling unit, residential only)			
Single Family	\$18.26	\$26.46	\$21.59
Multi Family (Blended Rate)		\$18.90	\$15.42
Condominium	\$12.46	\$18.05	\$14.73
Duplex	\$14.22	\$20.60	\$16.81
3 Units	\$15.02	\$21.76	\$17.76
4 Units	\$15.32	\$22.20	\$18.11
5+ Units	\$12.88	\$18.66	\$15.23
Mobile Home	\$12.85	\$18.62	\$15.19
Volumetric Rate(\$/ccf, Nov-Feb prior year average use)			
Residential Volumetric Rate	\$3.13	\$1.98	\$2.67

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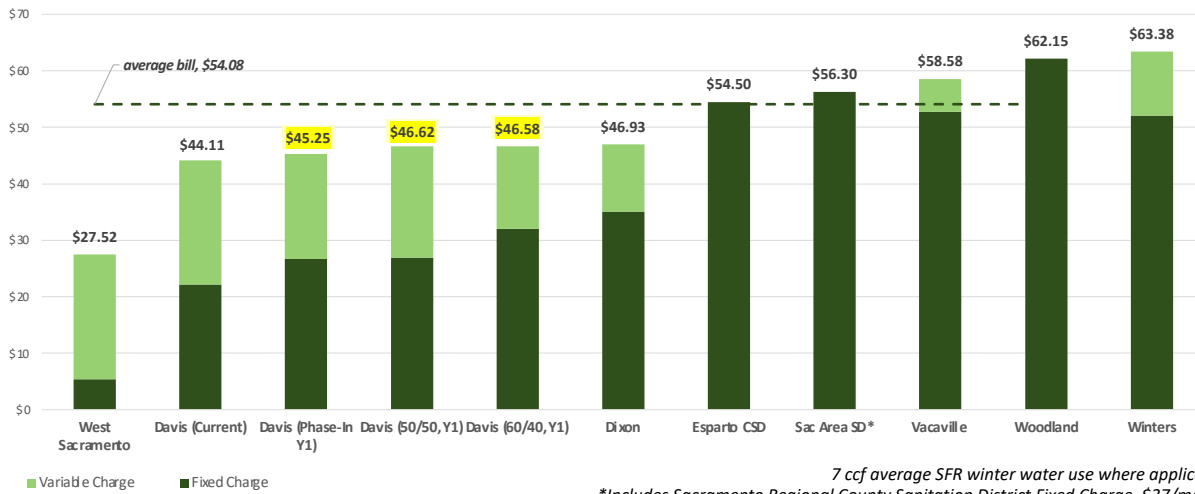
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5-Year Residential Bill Impact

	Current	5/1/2022 5%	5/1/2023 5%	5/1/2024 5%	5/1/2025 5%	5/1/2026 5%
Single Family Residential	\$44.11					
60 Fixed / 40 Variable		\$46.62	\$48.95	\$51.40	\$53.96	\$56.66
50 Fixed / 50 Variable		\$46.58	\$48.91	\$51.36	\$53.93	\$56.62
Phased In to 60%		\$45.25	\$48.08	\$50.93	\$53.79	\$56.66
<i>assumes 7 ccf average winter water use</i>						
Multi Family Blended (per unit)	Varies					
60 Fixed / 40 Variable		\$34.52	\$36.24	\$38.06	\$39.96	\$41.96
50 Fixed / 50 Variable		\$34.49	\$36.22	\$38.03	\$39.93	\$41.93
Phased In to 60%		\$33.54	\$35.63	\$37.73	\$39.84	\$41.96
<i>assumes 7 ccf average winter water use</i>						

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Single Family Wastewater Monthly Bill Survey FY 2021



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Residential Customer Class Options

Dormitory-Style Multi Family Housing

Dormitory-Style Housing Developments	# Apt Units	# Beds	Beds / Unit
Chiles Rd	57	549	9.63
Lincoln 40 (Completed)	79	708	8.96

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

Dormitory-Style Housing Developments	Current Rates \$12.88/Unit (5+ Units)	60 Fixed /40 Variable \$8.82 per bed	50 Fixed /50 Variable \$7.20 Bed
Chiles Rd, 549 beds	\$734	\$4,841	\$3,951
Lincoln 40 (708 beds)	\$1,018	\$6,244	\$5,095
Projected Monthly Revenue	\$1,752	\$11,085	\$9,046

*Negligible Overall Revenue impact (less than 1%)
More closely reflects wastewater strength generated by high-density residential use
Defined as 5 or more beds per unit*

Q&A: Fixed Dormitory Style Housing Rates

Are other cities using the by-the-bed calculation for charging for wastewater rates?

Wastewater rates are commonly charged by the bed when estimating fixed charges for service in institutions (nursing home, boarding school) with high-density residential occupancy.

Example: Donner Summit PUD

Dormitory lodges without laundry facilities based on 1/4 EDU per double or larger bed.

This is also common in Equivalent Dwelling Unit (EDU) valuations for charging capacity fees.

Example: City of Sacramento Capacity Fees

SEWER GENERATION RATES			
Facility Description	ESD	Unit	
Residential	Single Family Dwelling	1	Per residence
	Condo, Townhouse, Apartments, or Mobile Home	0.75	Per residence
	Duplex	0.75	Per unit
	College Dorm or Boarding House	0.3	Per bed or resident

Q&A: Fixed Dormitory Style Housing Rates

Are there other methods of calculating the unit equivalent for the by-the-bed charge?

Residential fixed wastewater rates aim to recover fixed costs based on an assumed average flow per resident. Methods include:

- Equivalent Dwelling Units (factor of 1 EDU = 1 single family home)
 - number of dwelling units (current basis)
 - number of bedrooms
 - number of beds (proposed basis)
 - number of people (difficult to quantify, e.g. Sonoma Water)

Water Meter Size (capacity factor based on 5/8" or 1" meter base)

Prior Year Flows

Proposed Commercial Volumetric Rates

UC Decision: Should the City condense the current commercial rate categories?

	Current 2020-21	COS Restructure	Adjustment %
% Volumetric Rate Revenue	57%	40% or 50%	
Commercial			
C-1 Office, Retail, Motels	\$4.53	\$4.49	-1%
C-2 Laundry, Dry Cleaning	\$4.69	\$4.68	0%
C-3 Churches, Schools, Medical/Dental, Manufacturing, Storage	\$4.69	\$4.70	0%
C-4 Convalescent Hospital	\$4.96	\$5.03	1%
C-5 Auto Repair / Auto Dealers / Car Wash	\$5.33	\$5.44	2%
C-6 Restaurants / Fast Food	\$8.12	\$8.01	-1%
Commercial - Alternative Option (4 strength categories)			
Low Strength	\$4.53	\$4.49	-1%
Standard Strength	\$4.69	\$4.84	3%
Medium Strength	\$4.96	\$5.03	1%
High Strength	\$8.12	\$8.01	-1%

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Q&A: Commercial Rates

Describe how strengths of different types of businesses are calculated

Strength Factors	Primary Data Source
Flow	2016-2020 average 2019 winter water use November – February (ccf)
Biochemical Oxygen Demand	2016-2020 average annual BOD (lbs)
Total Suspended Solids	2016-2020 average annual TSS (lbs)
Ammonia	2020 sampling data (N, total mg)



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Q&A: Commercial Rates

Describe how strengths of different types of businesses are calculated (i.e. industry data, etc.)

- Effluent Sampling Data
- State Revenue Program Guidelines
- City Staff Input
- Literature Search
- Survey of strengths used by other agencies
- BWA Experience

Example Schedule of Commercial User Categories

Low Strength	Domestic Strength	(Residential – All)
Banks & Financial Institutions		Appliance Repair
Barber Shops		Auto Dealers - without Service Facilities
Hair Salon (hair cutting only)		Beauty Shops (hair cutting w/additional treatments)
(C-2) Dry Cleaners		Nail Salons
(C-2) Laundromats		Pet Groomers
(C-1) Offices - Business and Professional		Bars & Taverns
Offices - Medical/Dental (without surgery)		Campground or RV Park
Post Offices		(C-2) Churches, Halls & Lodges
(C-1) Retail Stores		Fire Stations
Schools		Hospitals - General, Convalescent & Veterinarian
		Medical Offices - with Surgery
	(C-3)	Dental Offices
	(C-1)	Hotels, Motels, B&Bs, and Vacation Rentals (W/O restaurant)
		Libraries
		Rest Homes
		Warehouses
		Car Washes - Self Service
		Gym or Health Club

Example Schedule of Commercial User Categories

Medium Strength	High Strength
(C-5) Auto Dealers - with Service Facilities Machine Shops Service Stations, Garages, Auto Repair Shops Restaurants - W/O Dish Washer & Garbage Disposal Coffee Shops - W/O Dish Washer & Garbage Disposal Mini Marts - W/O Dish Washer & Garbage Disposal Mini Mart with Gas Pumps - W/O Dish Washer & Garbage Disposal Catering - W/O Dish Washer & Garbage Disposal Hotel/Motel with Restaurant Ice Cream Shop Tasting Rooms Spa with Various Beauty Treatments Carpet Cleaners Funeral Homes/ Mortuary	Restaurants - with Dish Washer or Garbage Disposal Coffee Shops - with Dish Washer or Garbage Disposal Catering - with Dish Washer or Garbage Disposal Bakeries Butcher Shops (C-6) Restaurants - with Dish Washer or Garbage Disposal Markets - with Dish Washer or Garbage Disposal Markets - with Bakeries or Butcher Shops Mini Marts - with Dish Washer or Garbage Disposal Wineries Cheese Makers Dairy Products (milk producers, yogurt, ice cream maker) Specialty Foods Manufacturing (e.g., olive oil maker)

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Commercial Bill Impacts

	Current	5/1/2022	5/1/2023	5/1/2024	5/1/2025	5/1/2026
		5%	5%	5%	5%	5%
Commercial – Current Structure						
C-1	\$35.65	\$37.28	\$39.15	\$41.10	\$43.16	\$45.32
C-2	\$36.77	\$38.65	\$40.58	\$42.61	\$44.74	\$46.97
C-3	\$36.77	\$38.81	\$40.75	\$42.79	\$44.93	\$47.17
C-4	\$38.66	\$41.23	\$43.29	\$45.45	\$47.73	\$50.11
C-5	\$41.25	\$44.28	\$46.49	\$48.81	\$51.25	\$53.82
C-6	\$60.78	\$63.12	\$66.28	\$69.59	\$73.07	\$76.72
Commercial – Condensed						
Low Strength	\$35.65	\$37.28	\$39.15	\$41.10	\$43.16	\$45.32
Standard Strength	\$36.77	\$39.84	\$41.83	\$43.92	\$46.12	\$48.42
Medium Strength	\$38.66	\$41.23	\$43.29	\$45.45	\$47.73	\$50.11
High Strength	\$60.78	\$63.12	\$66.28	\$69.59	\$73.07	\$76.72

assumes 7 ccf average SFR winter water use

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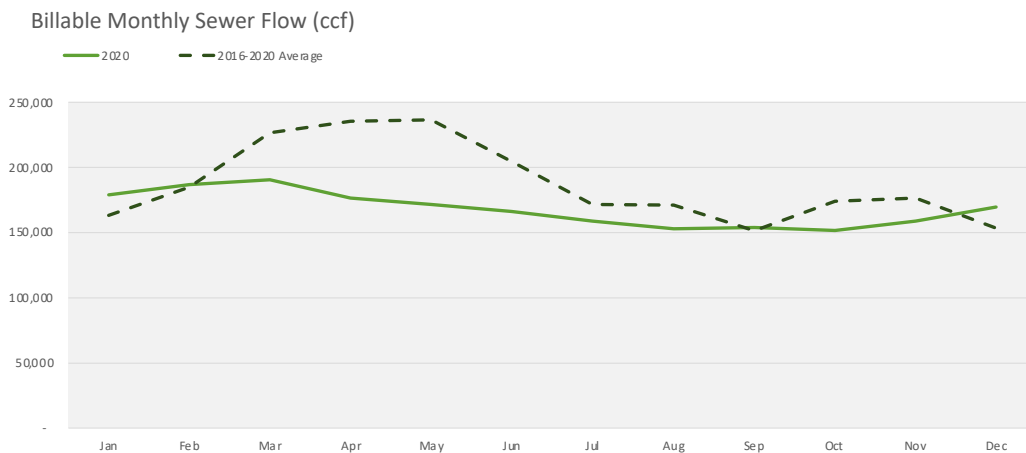
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Q&A: Wastewater Affordability

EPA Threshold: Total Annual Wastewater Bill % Household Income	< 1.5%
Proposed Single Family Monthly Bill*	\$46.58
Davis Proposed Average Annual Bill	\$557.16
Davis Average Household Income (2019 Census)	\$57,454
% of Davis Household Income	0.99%

**60 Fixed /40 Variable Rate Scenario, Year 1. Average SFR customer, 7 ccf billable use*

Q&A: 2020 COVID Impact on Sewer Demand



Summary of UC Decision Points & Staff Recommendations

What ratio of fixed and variable rate revenues should the City collect?

BWA & Staff Recommendation: 60% fixed, 50% volumetric rate scenario would provide more stable rate revenue

Should the City condense the current multi family fixed rate categories?

BWA & Staff Recommendation: Yes – we recommend simplifying the current rate structure

Should the City adopt a separate fixed rate per bed for future dormitory-style multi family customers?

BWA & Staff Recommendation: Yes – this recovers appropriate costs from high-density residential use (more use from showers, toilets, etc.)

Should the City condense the current commercial rate categories?

BWA & Staff Recommendation: Yes – we recommend simplifying the current rate structure