

Water & Sewer Rate and Connection Fee Study



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Purpose of the District's Study

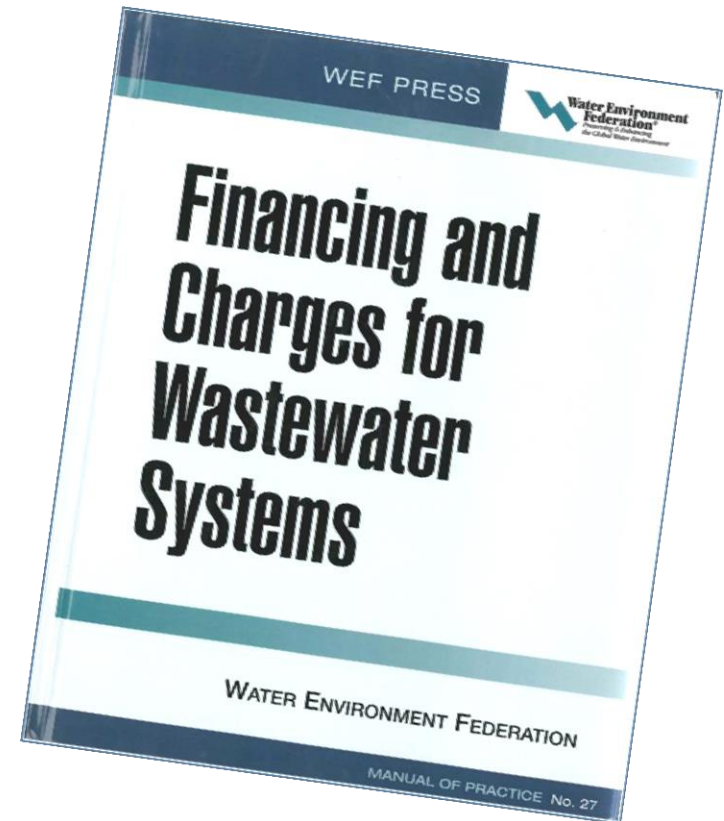
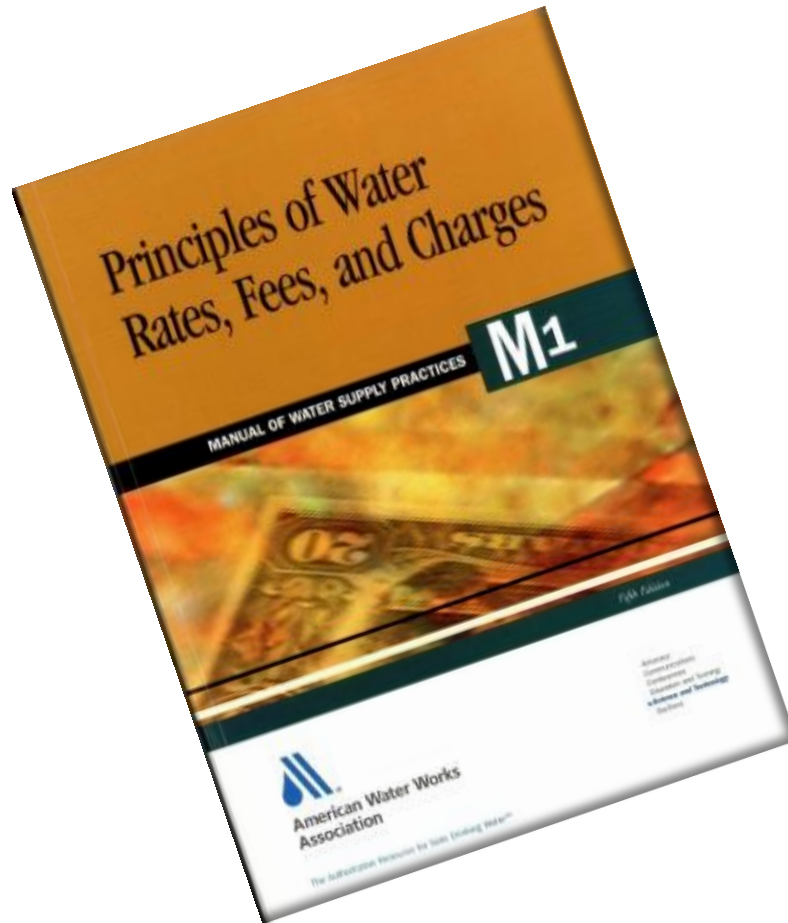
- Provide sufficient revenue to operate and maintain the water and sewer utilities
- Review rate structures based on industry standard approaches
- Develop equitable, cost-based, and legally defensible rates
- Review and develop equitable and cost-based connection fees

Overview of the Presentation

- Overview of rate and fee setting methodologies
- Review the preliminary results of the water & sewer
 - Revenue Requirements
 - Cost of service
 - Rate design
- Additional considerations
- Review the water and sewer connection fee preliminary results
- Next steps
- Questions and discussion



What is “Generally Accepted”?



Overview of the Rate Setting Process

Revenue Requirement

Compares the revenues of the utility to its expenses to determine the overall level of rate adjustment

Cost of Service

Equitably allocates the revenue requirements between the various customer classes of service

Rate Design

Design rates for each class of service to meet the revenue needs of the utility, along with any other rate design goals and objectives

Overview of the Revenue Requirement

Compares utility revenues to expenses

- Determines the level of rate adjustment necessary

Uses prudent financial planning criteria

- Adequate funding of renewal and replacements
- Maintaining sufficient ending fund balances

Reviews a specific time period

- Typically a five to ten year period

Utility is analyzed on a “stand-alone basis”

- No transfer of funds from other District funds
- Rates need to support operations

Utilizes the “cash basis” methodology

- Generally accepted method for municipal utilities

Details of the Cash Basis Methodology

(i + Term)

- + O&M Expenses
- + Taxes/Transfer Payments
- + Debt Service (P+I)
- + Capital Projects Funded from Rates
- = Revenue Requirements
- Miscellaneous Revenues
- = Balance Required from Rates

*=>Annual
Depr. Exp.*

- = Total Capital Improvement Projects
- Outside Funding Sources
 - ✓ Long-Term Debt
 - ✓ Connection Fees
 - ✓ Reserves
 - ✓ Grants
- = Capital Projects Funded from Rates

Overview of the Cost of Service

What is cost of service?

- Analysis to equitably allocate the revenue requirement to the various customer classes of service

Why cost of service

- Generally accepted as “fair and equitable”
- Avoids subsidies
- Revenues track costs
- Meet the intent of Proposition 218

Objectives of Cost of Service

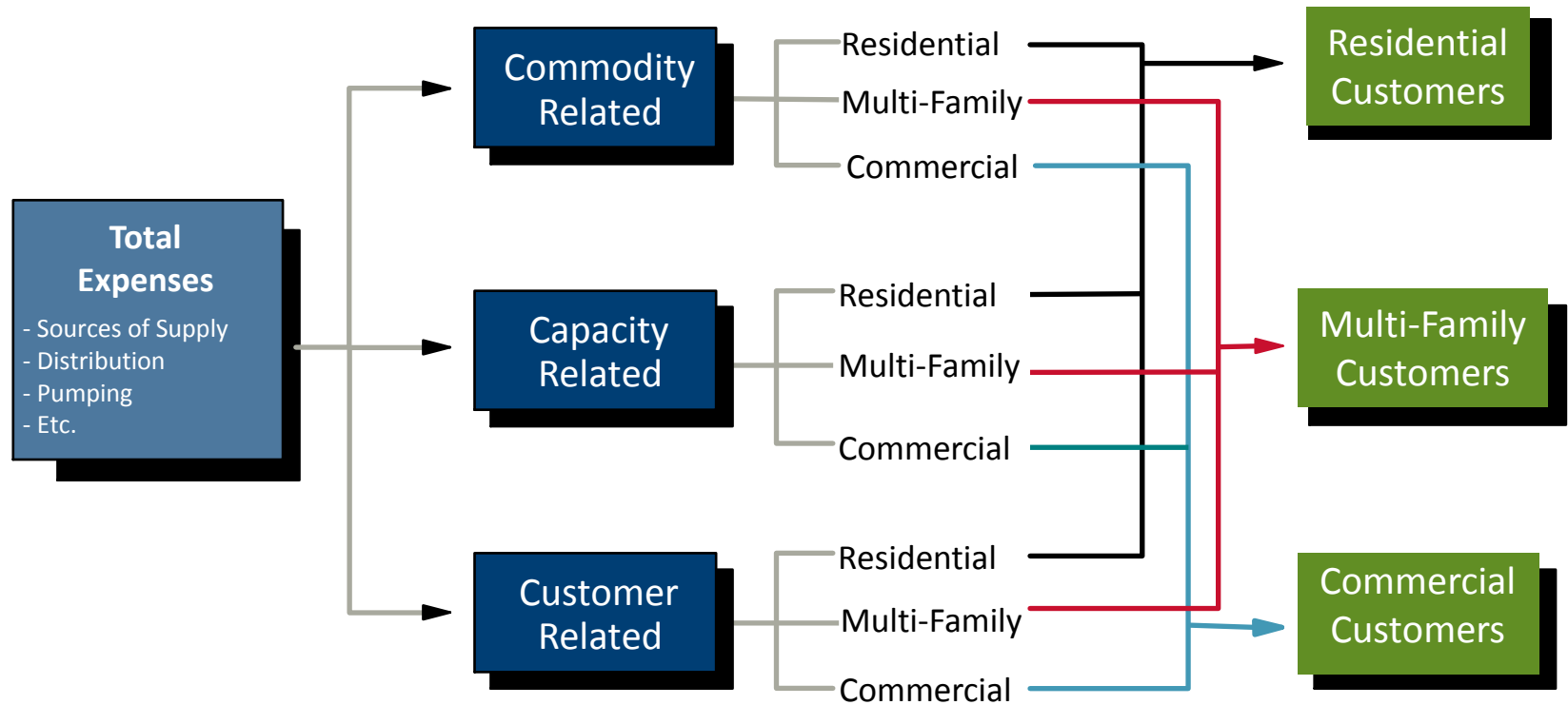
- Determine if subsidies exist
- Develop average unit costs

Water Utility Cost of Service Process

FUNCTIONALIZATION

ALLOCATION

DISTRIBUTION

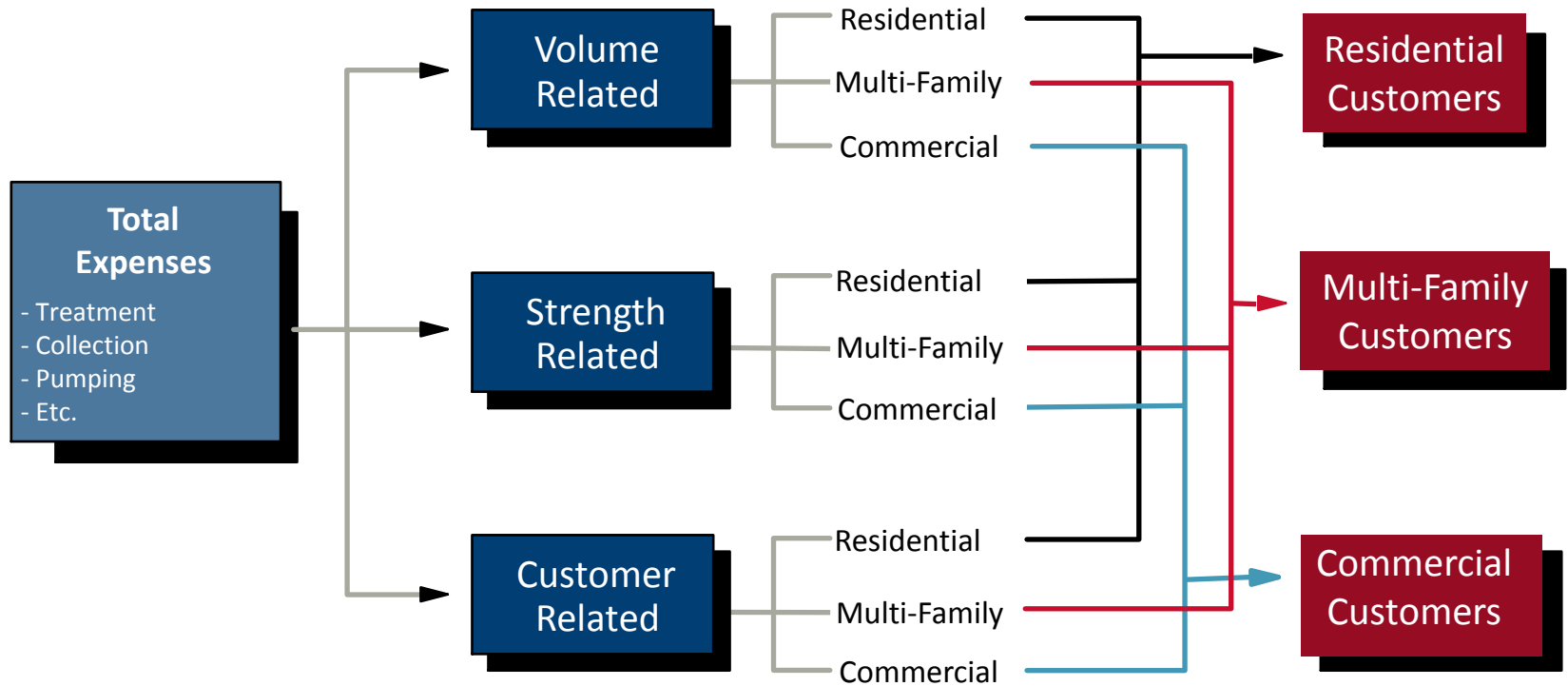


Sewer Utility Cost of Service Process

FUNCTIONALIZATION

ALLOCATION

DISTRIBUTION



Typical Rate Setting Goals and Objectives

- Revenue sufficiency
- Revenue stability
- Easy to understand (customer)
- Easy to administer (District)
- Affordability
- Economic development
- Encourage efficient use of the resource
- Equitable & non-discriminating (cost-based)
- Legally defensible

Always trade-offs between goals and objectives

Overview of Rate Design

Reflect the findings of the revenue requirement and cost of service analyses

Meet the rate design goals and objectives of the District

Produce sufficient revenues to meet the target revenues of the utility, and each class of service

Are cost-based and equitable

Water and Sewer Connection Fees

- **Purpose:** To bring equity to existing and new connections to the system and a method to fund infrastructure necessary to serve growth.
 - New connections pay a “buy-in” for existing assets and an “incremental” fee for future or new expansion related facilities
 - These are a one-time fee to pay into the system, a share equal to the value to the funds paid by others
 - New connections to pay an equitable share of expansion-related facilities needed to serve them

Water Rate Study



Water Revenue Requirement – Key Assumptions

- Starting point was the FY 2016 and FY 2017 Budgets
- Developed a 5-year financial plan
 - Rate revenues were calculated based on current rates, customer counts, consumption levels, and growth estimates
 - O&M was escalated annually by inflationary factors for each line item
- Capital funding plan was developed based on current capital improvement and replacement plans
 - Adequately fund renewal and replacement of the existing system

Water Capital Plan (\$000s)

	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Capital Improvement Projects (CIP)						
Redundant Water Supply Project	\$0	\$0	\$0	\$0	\$0	\$0
RSC Phase 2 PRV	0	0	54	0	0	0
East Booster Pump Station - Replcmnt	0	0	0	0	0	629
East Booster Pump Station - Expansion	0	0	0	0	0	310
Total CIP	\$0	\$0	\$54	\$0	\$0	\$939
Capital Replacement Projects (CRP)						
Services	\$0	\$0	\$307	\$0	\$0	\$0
Gate / BF Valves	0	0	31	0	0	0
ARV / BO Valves	0	7	0	0	0	0
Tanks	248	0	0	0	0	133
Meters	0	153	9	7	17	7
Facilities	9	0	0	0	0	0
Equipment	44	21	142	3	0	93
Shared Facilities - 305	0	2	0	81	71	2
Shared Facilities - 1810	6	24	47	0	9	39
Total CRP	\$307	\$206	\$536	\$92	\$97	\$274
<i>To Water FARF</i>	\$43	\$194	\$0	\$408	\$453	\$0
<i>Future Unidentified Projects</i>	0	0	0	0	0	0
<i>To Capital Reserves</i>	0	0	0	0	0	0
Total Capital Improvement Projects	\$350	\$400	\$590	\$500	\$550	\$1,213
Less: Outside Funding Sources						
Operating Reserve	\$0	\$0	\$0	\$0	\$0	\$0
Capital Reserve	0	0	54	0	0	310
Fixed Asset Replacement Fund	0	0	86	0	0	303
New SRF Loans	0	0	0	0	0	0
New Revenue Bonds	0	0	0	0	0	0
Total Outside Funding Sources	\$0	\$0	\$140	\$0	\$0	\$613
Rate Funded Capital (CRP)	\$350	\$400	\$450	\$500	\$550	\$600



Water Revenue Requirement – Preliminary Results (\$000s)

	<i>Budgeted</i>	<i>Projected</i>				
	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Revenues						
Rate Revenues	\$1,651	\$1,659	\$1,667	\$1,675	\$1,688	\$1,701
Non-Operating Revenues	<u>204</u>	<u>207</u>	<u>210</u>	<u>213</u>	<u>217</u>	<u>219</u>
Total Revenues	\$1,855	\$1,866	\$1,877	\$1,888	\$1,905	\$1,919
Expenses						
Total Water Department Expenses	\$647	\$673	\$701	\$729	\$759	\$790
Total Administration Expenses	550	692	712	732	753	775
Net Annual Debt Service	128	102	102	102	102	102
Rate Funded Capital (CRP)	350	400	450	500	550	600
Transfer To / (From) Reserves	<u>181</u>	<u>48</u>	<u>14</u>	<u>(20)</u>	<u>(29)</u>	<u>(38)</u>
Total Expenses	\$1,855	\$1,916	\$1,979	\$2,044	\$2,135	\$2,229
Bal/(Def.) of Funds	\$0	(\$50)	(\$102)	(\$155)	(\$230)	(\$309)
<i>Rate Adj. as a % of Rate Rev.</i>	<i>0.0%</i>	<i>3.0%</i>	<i>6.1%</i>	<i>9.3%</i>	<i>13.6%</i>	<i>18.2%</i>
Proposed Rate Adjustment	0.0%	3.0%	3.0%	3.0%	4.0%	4.0%
Add'l Revenue from Adj.	\$0	\$50	\$102	\$155	\$230	\$309
Total Bal/(Def.) of Funds	\$0	(\$0)	(\$0)	(\$0)	\$0	\$0

Summary of the Preliminary Water Revenue Requirement

- Preliminary rate adjustments are required in order to adequately fund the water utility (FY 2018 – FY 2022)
 - Sufficiently fund O&M expenses
 - Provide adequate funds for the capital replacement and improvement projects
 - Maintain prudent ending reserve fund levels
- Driven by need to cash fund capital replacement projects
 - Assumes no long-term debt issues over the time period reviewed

Water Cost of Service – Key Assumptions

- Allocated the revenue requirement for FY 2018
- Classify costs into the appropriate component (commodity, capacity, customer, etc.)
- Allocate costs to the following customer class
 - Residential (SFR)
 - Condos/Apartments/Duplexes/Secondary Units (MFR)
 - Commercial
 - Irrigation
- Allocate costs to each tier
 - Requirement of Prop 218 and San Juan Capistrano decision

Water Cost of Service – Preliminary Results (\$000s)

	Residential (SFR)				Multi-Family	Commercial	Irrigation
	<i>Tier 1</i>	<i>Tier 2</i>	<i>Tier 3</i>	<i>Tier 4</i>			
Rate Revenue	\$174	\$111	\$34	\$160	\$743	\$280	\$158
Allocated Costs	186	118	36	171	827	194	178
Unit Costs							
<i>Fixed (\$/Acct.)</i>	\$950	\$950	\$950	\$950	\$475	\$704	\$704
<i>Variable (\$/1,000 gal)</i>	\$4.35	\$7.99	\$12.23	\$26.06	\$6.90	\$5.30	\$9.03

Summary of the Preliminary Water Cost of Service

- Results are used to develop the pricing for each class of service
- Cost differences between the various customer classes of service
- First cost of service in over 10 years
- Provides the cost basis for the fixed and consumption charges for each customer class of service
- Bill impacts will not be the same for all customers
 - Even within the same customer class

Water Rate Design – Key Assumptions

- Maintain current rate structure for most customer classes
 - Exception is multi-family customers
- Fixed meter charge
 - Single Family Residential based on account
 - Plus accessory dwelling unit if applicable
 - Multi-Family Residential based on living units
 - Commercial & Irrigation based on meter size
- Volumetric component on a per 1,000 gallon basis
 - Single Family Residential: 4-tiered rate
 - Basis of the tier pricing is the cost of service unit costs
 - Multi-Family Residential: Transition from 4-tiered rate to uniform rate
 - Commercial & Irrigation: Uniform rate

Preliminary Water Rate Alternative – Fixed Charges

	<i>Present Rates</i>	FY 2018 <i>3.0%</i>	FY 2019 <i>3.0%</i>	FY 2020 <i>3.0%</i>	FY 2021 <i>4.0%</i>	FY 2022 <i>4.0%</i>
Fixed Charge \$/Acct or LU/Year						
Residential (SFR)	\$836.00	\$915.00	\$942.45	\$970.75	\$1,010.00	\$1,050.50
Condo/Apt./Duplex/Second Unit (MFR)	\$418.00	\$503.25	\$518.35	\$533.90	\$555.50	\$577.80
Commercial / Irrigation						
5/8"	\$285.00	\$915.00	\$942.45	\$970.75	\$1,010.00	\$1,050.50
3/4"	311.00	998.47	1,028.43	1,059.31	1,102.14	1,146.34
1"	347.00	1,114.05	1,147.47	1,181.93	1,229.72	1,279.03
1 1/2"	697.00	2,237.74	2,304.87	2,374.08	2,470.07	2,569.12
2"	1,112.00	3,570.11	3,677.21	3,787.63	3,940.77	4,098.79
3"	2,088.00	6,703.58	6,904.69	7,112.02	7,399.58	7,696.29
4"	3,483.00	11,182.26	11,517.73	11,863.59	12,343.26	12,838.22
6"	6,967.00	22,367.74	23,038.77	23,730.58	24,690.07	25,680.12

Preliminary Water Rate Alternative Consumption Charges

	<i>Present Rates</i>	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
		3.0%	3.0%	3.0%	4.0%	4.0%
Consumption Charge \$ / 1,000 gal						
Residential (SFR)						
0 - 120	\$3.04	\$4.35	\$4.48	\$4.62	\$4.80	\$5.00
120 - 220	10.38	7.99	8.23	8.49	8.82	9.18
220 - 280	15.13	12.23	12.60	12.99	13.50	14.06
280 +	31.74	26.06	26.84	27.68	28.76	29.95
Condo/Apt./Duplex/Second Unit (MFR)						
0 - 120	\$3.04	N/A	N/A	N/A	N/A	N/A
120 - 220	10.38	N/A	N/A	N/A	N/A	N/A
220 - 280	15.13	N/A	N/A	N/A	N/A	N/A
280 +	31.74	N/A	N/A	N/A	N/A	N/A
All Usage	N/A	\$6.90	\$7.11	\$7.33	\$7.62	\$7.91
Commercial	\$11.08	\$5.30	\$5.46	\$5.62	\$5.85	\$6.08
Irrigation	\$12.41	\$9.03	\$9.30	\$9.60	\$10.00	\$10.40

Summary of the Water Rate Study

- Revenue requirement shows a need for rate adjustments from FY 2018 – FY 2022
 - 3%-4% per year to adequately fund operating and capital needs
- Cost of service provides the pricing for the fixed and consumption charges
 - Provides year 1 (FY 2018) rates, future years are adjusted by rate transition plan
- Maintained the rate structure for residential, commercial, and irrigation
 - Multi-family rate structure alternative transitions to a uniform rate
- Bill impacts will vary from overall revenue adjustment for the utility (e.g., 3%/4%)

Sewer Rate Study



Sewer Revenue Requirement – Key Assumptions

- The starting point was the FY 2017 Budget
- Developed a 5-year financial plan
 - Rate revenues were calculated based on current rates and customer counts plus growth estimates
 - O&M was escalated by inflationary factors for each line item
- Developed capital funding plan
 - Based on the District's current CIP & CRP
 - Adequately funds renewal and replacement of the existing system

Sewer Capital Plan (\$000s)

Capital Projects	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Capital Improvement Projects (CIP)						
Truckee River Siphon - Replace	\$0	\$902	\$0	\$0	\$0	\$0
Truckee River Siphon - Expansion	0	1,102	0	0	0	0
Sewer Flow Meters	0	0	0	0	0	117
Total CIP	\$0	\$2,004	\$0	\$0	\$0	\$117
Capital Replacement Projects (CRP)						
Mains	\$0	\$0	\$0	\$0	\$0	\$0
Laterals	0	0	0	0	0	0
Manholes	25	0	0	0	0	0
Cleanouts	0	30	0	0	0	12
Flow Meters	0	0	0	0	0	0
Shared Facilities - 305	0	2	0	81	71	2
Shared Facilities - 1810	6	24	47	0	9	39
Total CRP	\$31	\$56	\$47	\$81	\$80	\$53
<i>To Sewer FARF</i>	\$319	\$0	\$403	\$419	\$470	\$547
<i>Future Unidentified Projects</i>	0	0	0	0	0	0
<i>To Capital Reserves</i>	0	0	0	0	0	0
Total Capital Improvement Projects	\$350	\$2,060	\$450	\$500	\$550	\$717
Less: Outside Funding Sources						
Operating Reserve	\$0	\$0	\$0	\$0	\$0	\$0
Capital Reserve	0	1,102	0	0	0	117
Fixed Asset Replacement Fund	0	558	0	0	0	0
New SRF Loans	0	0	0	0	0	0
New Revenue Bonds	0	0	0	0	0	0
Total Outside Funding Sources	\$0	\$1,660	\$0	\$0	\$0	\$117
Rate Funded Capital (CRP)	\$350	\$400	\$450	\$500	\$550	\$600



Sewer Revenue Requirement – Preliminary Results (\$000s)

	<i>Budgeted</i>	<i>Projected</i>				
	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Revenues						
Rate Revenues	\$1,102	\$1,108	\$1,114	\$1,119	\$1,127	\$1,136
Non-Operating Revenues	<u>40</u>	<u>218</u>	<u>217</u>	<u>222</u>	<u>226</u>	<u>231</u>
Total Revenues	\$1,142	\$1,326	\$1,331	\$1,341	\$1,354	\$1,367
Expenses						
Total Sewer Department Expenses	\$359	\$373	\$388	\$403	\$418	\$435
Total Administration Expenses	332	413	425	437	450	462
Net Annual Debt Service	131	83	83	59	58	58
Rate Funded Capital (CRP)	350	400	450	500	550	600
Transfer To / (From) Reserves	<u>(29)</u>	<u>100</u>	<u>76</u>	<u>82</u>	<u>69</u>	<u>58</u>
Total Expenses	\$1,142	\$1,370	\$1,421	\$1,481	\$1,545	\$1,613
Bal/(Def.) of Funds	\$0	(\$44)	(\$91)	(\$140)	(\$192)	(\$246)
<i>Rate Adj. as a % of Rate Rev.</i>	<i>0.0%</i>	<i>4.0%</i>	<i>8.2%</i>	<i>12.5%</i>	<i>17.0%</i>	<i>21.7%</i>
Proposed Rate Adjustment	0.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Add'l Revenue from Adj.	\$0	\$44	\$91	\$140	\$192	\$246
Total Bal/(Def.) of Funds	\$0	(\$0)	\$0	\$0	\$0	(\$0)

Summary of the Preliminary Sewer Revenue Requirement

- Preliminary rate adjustments are required in order to adequately fund the water utility (FY 2018 – FY 2022)
 - Sufficiently fund O&M expenses
 - Provide adequate funds for the capital replacement and improvement projects
 - Maintain prudent ending reserve fund levels
- Driven by need to cash fund capital replacement projects
 - Assumes no long-term debt issues over the time period reviewed

Sewer Cost of Service – Key Assumptions

- Allocated the revenue requirement for FY 2018
- Classify costs into the appropriate component (volume, customer)
- Allocated costs to the following customer classes of service
 - Residential (SFR)
 - Condos/Apartments/Duplex/Secondary Units (MFR)
 - Commercial
 - Church

Sewer Cost of Service – Preliminary Results (\$000s)

	Residential (SFRI)	Multi- Family	Commercial	Church
Rate Revenue	\$171	\$588	\$344	\$5
Allocated Costs	\$217	582	346	7
Unit Costs				
<i>Fixed (\$/Acct.)</i>	\$687	\$486	N/A	\$3420
<i>Variable (\$/1,000 gal)</i>	N/A	N/A	13.19	N/A

Summary of the Preliminary Sewer Cost of Service Analysis

- Results are used to develop the pricing for each class of service
- Cost differences between the various customer classes of service
- First cost of service in over 10 years
- Cost of service provides the basis for the fixed and volume charge (commercial only)
- Bill impacts will not be the same for all customers

Sewer Rate Design – Key Assumptions

- Maintain current rate structure for most customer classes
 - Exception is multi-family customers
- Fixed charge
 - Single Family Residential based on account
 - Plus accessory dwelling (MFR) unit if applicable
 - Multi-Family Residential based on living units
 - Commercial based on account
 - Church based on account
- Volumetric component on a per 1,000 gallon basis
 - Commercial customers only
 - >75,000 gallons annually

Preliminary Sewer Rate Alternative

	<i>Present Rates</i>	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
		4.0%	4.0%	4.0%	4.0%	4.0%
<u>Fixed Charge</u>	<u>\$/Year</u>					
Residential (SFR)	\$540.00	\$686.00	\$713.44	\$741.98	\$771.66	\$802.53
Condo/Apt./Duplex/Second Unit (MFR)	\$466.00	\$490.00	\$509.60	\$529.98	\$551.18	\$573.23
Commercial	\$954.00	\$990.00	\$1,029.60	\$1,070.78	\$1,113.61	\$1,158.15
Residential - Pool / Spa	\$767.00	\$797.00	\$828.88	\$862.04	\$896.52	\$932.38
Church	N/A	\$3,420.00	\$3,557.00	\$3,699.00	\$3,847.00	\$4,001.00
<u>Consumption Charge</u>	<u>\$/1,000 gal</u>					
Commercial > 75,000	\$12.74	\$13.20	\$13.73	\$14.28	\$14.85	\$15.44

Summary of the Sewer Rate Study

- Revenue requirement shows a need for rate adjustments from FY 2018 – FY 2022
 - 4% per year to adequately fund operating and capital needs
- Cost of service provides the pricing for the fixed and volumetric charges
 - Provides year 1 (FY 2018) rates, future years are adjusted by rate transition plan
- Maintained the rate structure for residential and commercial customers
 - Multi-family will depend on current billed method
- Bill impacts will vary from overall revenue adjustment for the utility (e.g., 4%)

Connection Fees



Definition of a Connection Fee

- A connection fee is defined as a:
 - Fee for new customer demand only
 - Fee required of all new customers desiring water or sewer service or existing customers requesting increased water or sewer service capacity.
 - Charge based on the value of the utility's capacity and the amount of capacity needed by the new customer.
 - Capacity can be defined in different ways (e.g., MGD, EDU)

Criteria in Determining Connection Fees

- System planning criteria
- Determination of an Equivalent Dwelling Unit (EDU)
 - City planning analysis of the areas of growth
 - Master plan EDUs for system capacity
- Capital improvement needs
- System financing
- Various methodologies
 - Buy-in Approach
 - Incremental (Marginal) Approach
 - Combined (Hybrid)
- Legal requirements

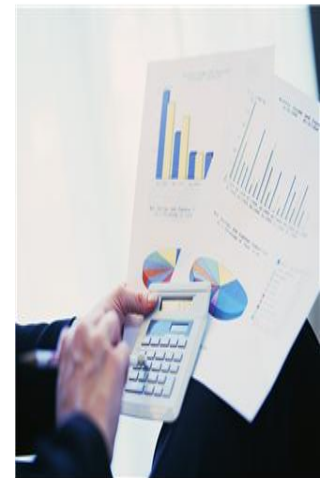


Legal Considerations

- State Laws and Regulations
 - AB 1600 Mitigation Fee Act
- Rational Nexus -relationship between the price & cost incurred
 - Connection be established between new development and the new or expanded facility to accommodate such development
 - Identification of the cost of those new or expanded facilities needed to accommodate development
 - Appropriate apportionment of cost to new development in relationship to benefits reasonably received
- Reasonable relationship to the burden imposed to provide capacity
 - Reasonable relationship does not mean mathematically exact

Connection Fee Methodology

- Using the combined methodology
- Buy-In (Existing assets)
 - Asset replacement costs from District's Capital Replacement Plan model
 - Used costs that are connection fee eligible
 - Reduced by outstanding debt principal
 - Divided by current + future ERUs
- Incremental (Future assets)
 - Used current capital improvement plan
 - Included on connection fee eligible projects
 - Divided by current + future ERUs



Summary of the Preliminary Water Connection Fee

Component	Existing	Future	Total
Source	\$1,452.17	\$0.00	\$1,452.17
Pumping	70.91	555.17	626.08
Storage	586.78	0.00	586.78
Trans. & Dist.	4,942.73	173.49	5,116.22
General Plant	3,750.92	0.00	3,750.92
Debt Service	<u>(253.12)</u>	<u>N/A</u>	<u>(253.12)</u>
Total	\$10,550.40	\$728.66	\$11,279.06
		Rounded	\$11,280.00

Water Connection Fee – Rate Comparison

- Current
 - Based on 30 equivalent fixture units
 - Fee = \$8,414
 - 5/8" = 30 EFUs
 - 3/4" = 31-54 EFUs
 - 1" = 55-127 EFUs
- Preliminary Results
 - Based on 1 ERU
 - Fee = \$11,280
 - Increases based on service meter size and AWWA equivalent meter ratios

Summary of the Preliminary Sewer Connection Fee

Component	Existing	Future	Total
Collection	\$5,553.58	\$1,470.38	\$7,023.96
General Plant	2,950.20	0.00	2,950.20
Debt Service	<u>(268.15)</u>	<u>N/A</u>	<u>(268.15)</u>
<i>Total</i>	\$8,235.62	\$1,470.38	\$9,706.00
		Rounded	\$9,705.00

Sewer Connection Fee – Rate Comparison

- Current
 - Based on fixture units
 - Fee = \$1,211
 - Based on 22 EFUs
- Preliminary Results
 - Based on 1 ERU
 - Fee = \$9,705
 - Increases based on service meter size and AWWA equivalent meter ratios

Summary of the Preliminary Connection Fee Study

- Basis of the connection fee is the existing system and future improvements necessary to meet new growth on the systems
 - Excludes projects not funded by the District
- Maintains equity between existing and future customers
- Study provides the basis for the maximum allowable connection fee
 - Board policy decision on the final level
- Fee can be adjusted annually
 - Engineering News Record Construction Cost Index (ENR CCI)

Next Steps...

- Incorporate provided policy direction
- Finalize the revenue requirement (rate transition plan), cost of service, and rate design
- Finalize connection fee analyses
- Present final rate transition plans and begin rate adoption process (e.g., Prop 218)



Questions and Discussion

