



Water Rate Study

Rate Policy Decisions

Public Works Commission

May 10, 2018

By HF&H



Presentation Outline

- Introduction
- Rate policy decisions
 - Customer classes
 - Service charges
 - Quantity charges
 - Other
- Policy direction



Introduction

- Meeting objectives
 - Present preliminary rate policies
 - Receive input and direction from Commission
- Next steps
 - Revise as needed
 - Review with Ad Hoc Committee
 - Review with PW Commission
 - Present preliminary rates to City Council



Current Charges

Bi-monthly Customer Bill = Service Charge + Volume Charge

1. Service Charge (fixed)

- Fixed amount per bill
- Covers a portion of fixed costs
- Graduated in proportion to meter size

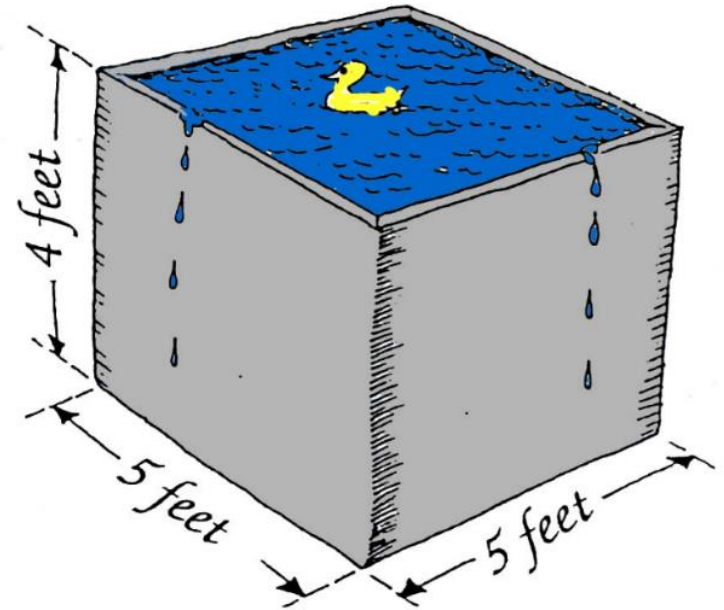
2. Volume Charge (variable)

- Varies from bill to bill based on water use
- Covers variable costs plus some fixed costs
- Rate per HCF multiplied times metered water use
 - Four-tiered structure for Single Family and Multi Family customers (on a per dwelling unit basis)
 - Uniform (no tiers) structure for Commercial customers



Current Rates

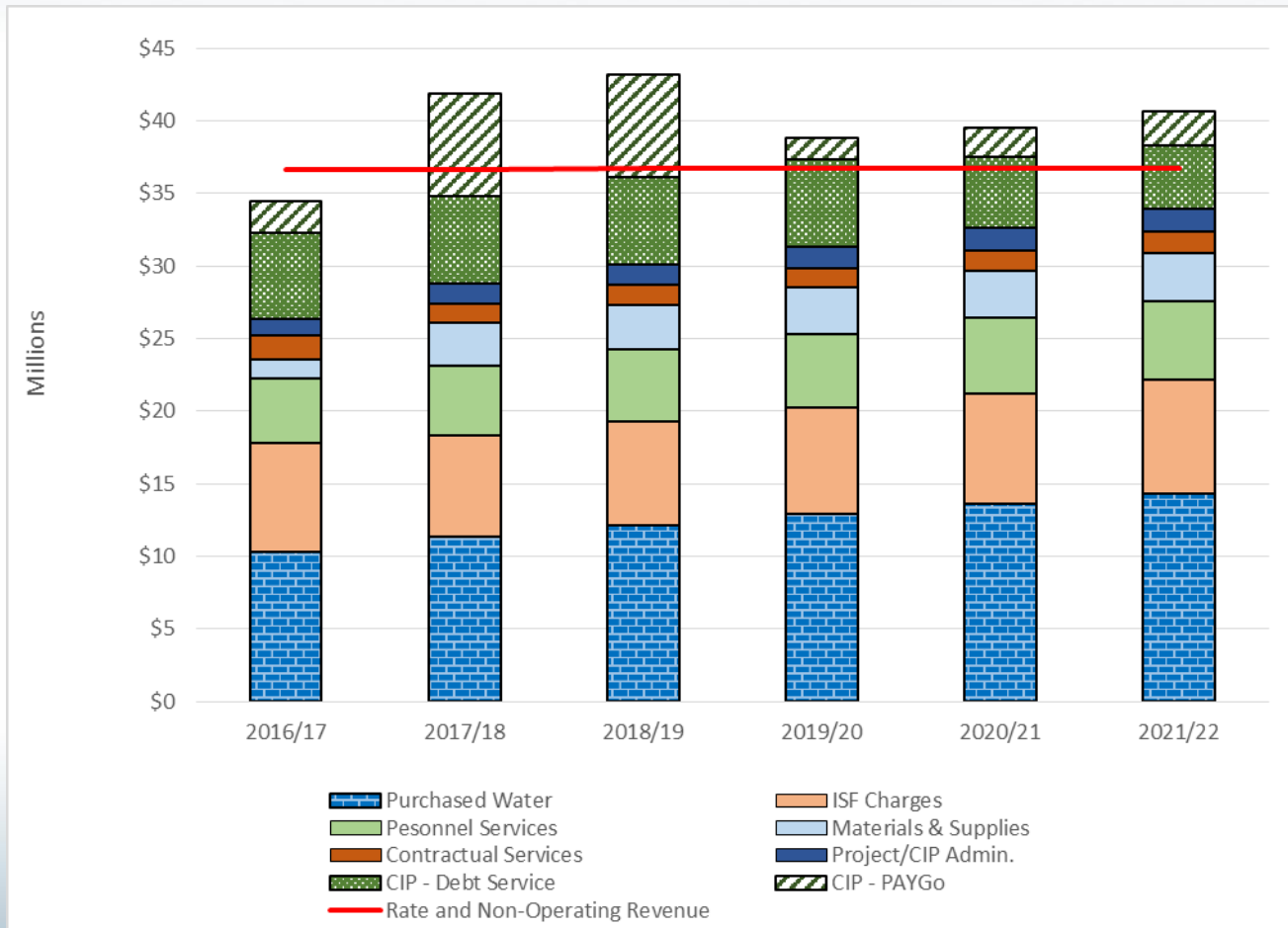
Service Charge (bi-monthly)	Beverly Hills
Meter Size	
1" or Smaller	\$44.66
1 1/2"	\$77.41
2"	\$116.72
3"	\$208.43
4"	\$339.44
6"	\$666.96
Volume Rates (\$ per HCF)	
Single-Family Residential	
Tier 1 0 up to 10 HCF	\$4.02
Tier 2 Over 10 up to 55 HCF	\$5.30
Tier 3 Over 55 up to 120 HCF	\$8.36
Tier 4 Over 120 HCF	\$16.15
Multi-Family Residential	
Tier 1 0 up to 4 HCF	\$4.02
Tier 2 Over 4 up to 9 HCF	\$5.30
Tier 3 Over 9 up to 16 HCF	\$8.36
Tier 4 Over 16 HCF	\$16.15
Commercial	
All water	\$6.86



HCF = Hundred Cubic Feet (748 gal)



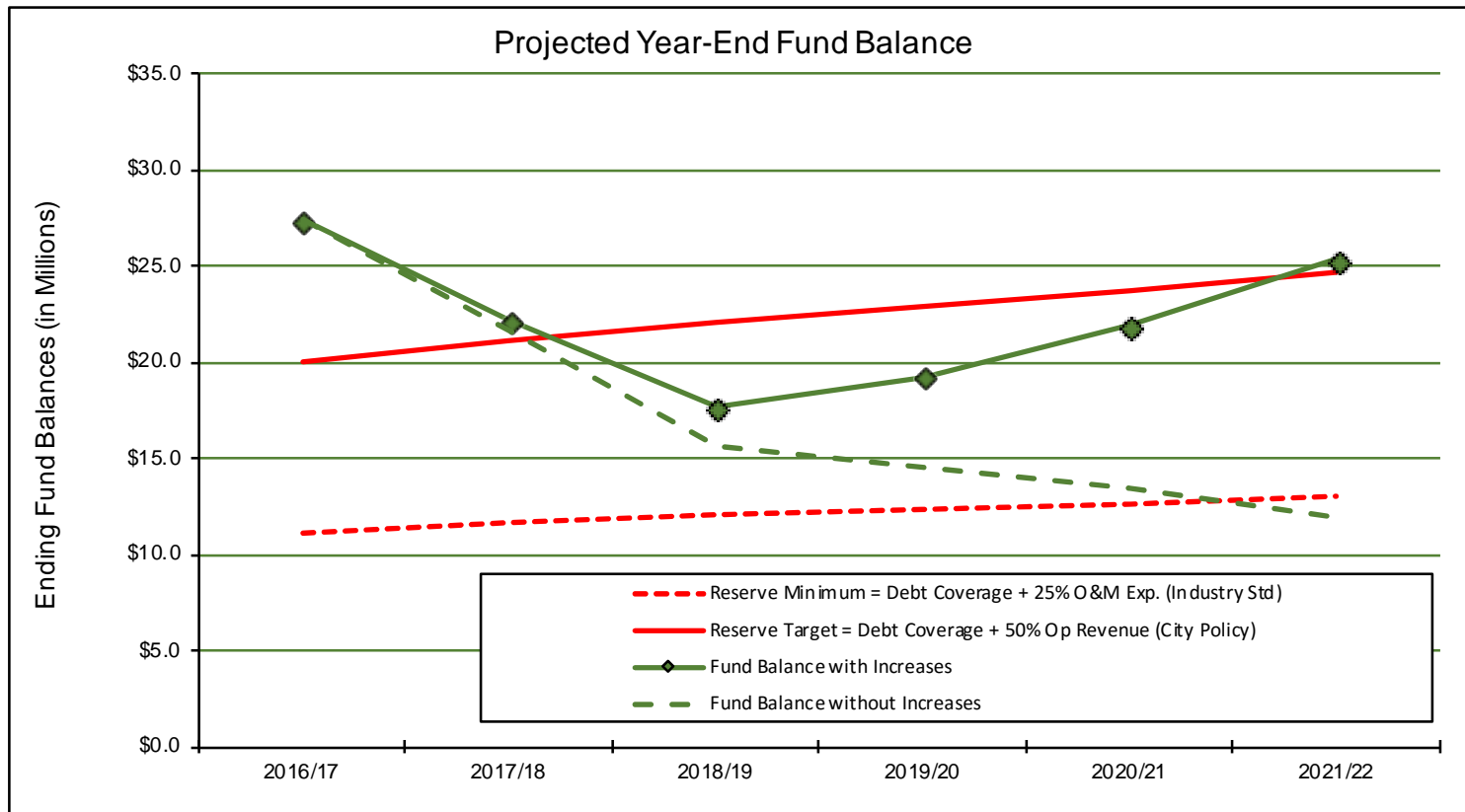
Projected Revenue Requirements





Projected Fund Balance

Fiscal Year	2017/18	2018/19	2019/20	2020/21	2021/22
Annual Revenue Increases	3.0%	3.0%	3.0%	3.0%	3.0%
eff. dates	1/1/18	1/1/19	1/1/20	1/1/21	1/1/22





Rate Policy Decisions

1. Customer classes

- a. Multi family
- b. Irrigation

2. Service charges

- a. Fixed/variable charges
- b. Fire service

3. Quantity charges

- a. Single family
- b. Multi family
- c. Commercial
- d. Irrigation

4. Other rate issues

- a. Water supply reliability charge
- b. Water shortage revenue stabilization adjustments
- c. Outside City rates



Customer Class Policies

Issue 1a	Status of Multi Family customer class
Options	<ul style="list-style-type: none">- Maintain current separate class- Combine Multi Family with Single Family- Combine Multi Family with Commercial
Recommendation	<ul style="list-style-type: none">- Maintain a separate Multi Family class
Rationale	<ul style="list-style-type: none">- Multi Family customers are a distinct class with unique demand patterns that should be reflected in their rates- A Multi Family class has been long established in Beverly Hills- Separate Multi Family classes are a common industry practice
Outcomes	<ul style="list-style-type: none">- Maintaining separate Multi Family class acknowledges difference in Multi Family demand pattern compared with Single Family and Commercial classes



Multi Family Classes

Jurisdiction	Multi Family Customers are...		
	In a Separate Class	Combined w/ Single Family	Combined w/ Commercial
Beverly Hills - Current	X		
Beverly Hills - HF&H Proposed	X		
Palo Alto			X
Santa Barbara	X		
Scottsdale, AZ			X
LADWP	X		
Burlingame			X
Santa Monica	X		



Customer Class Policies

Issue 1b	Create Irrigation customer classes (Single Family, Multi Family, Commercial)
Options	<ul style="list-style-type: none">- Maintain current practice that treats irrigation the same as other customers in the class- Create separate Irrigation classes within each class paying the same rates but subject to higher cutbacks during shortages
Recommendation	<ul style="list-style-type: none">- Create separate Single Family, Multi Family, and Commercial Irrigation classes- Charge separately but at the same applicable rates as Single Family, Multi Family, and Commercial
Rationale	<ul style="list-style-type: none">- City should have irrigation classes now that there is a mandatory requirement to install irrigation meters- Improves ability to manage water supplies- Recognizes the interruptible status of irrigation
Outcomes	<ul style="list-style-type: none">- Irrigation customers will be required to cutback more during shortages and will be charged higher Revenue Stabilization rates to maintain revenue neutrality



Irrigation Classes

Jurisdiction	Separate Irrigation Class?			
	Single Family	Multi Family	Commercial	Irrigation
Beverly Hills - Current	No	No	No	No
Beverly Hills - HF&H Proposed ¹	Yes	Yes	Yes	No
Palo Alto	No	No	No	Yes
Santa Barbara	Yes	Yes	Yes	No
Scottsdale, AZ ¹	No	Yes	Yes	No
LADWP ²	No	No	No	Yes
Burlingame	No	No	No	No
Santa Monica	No	No	No	No

¹ Separate Irrigation class but same rates as others in class

² Public irrigation

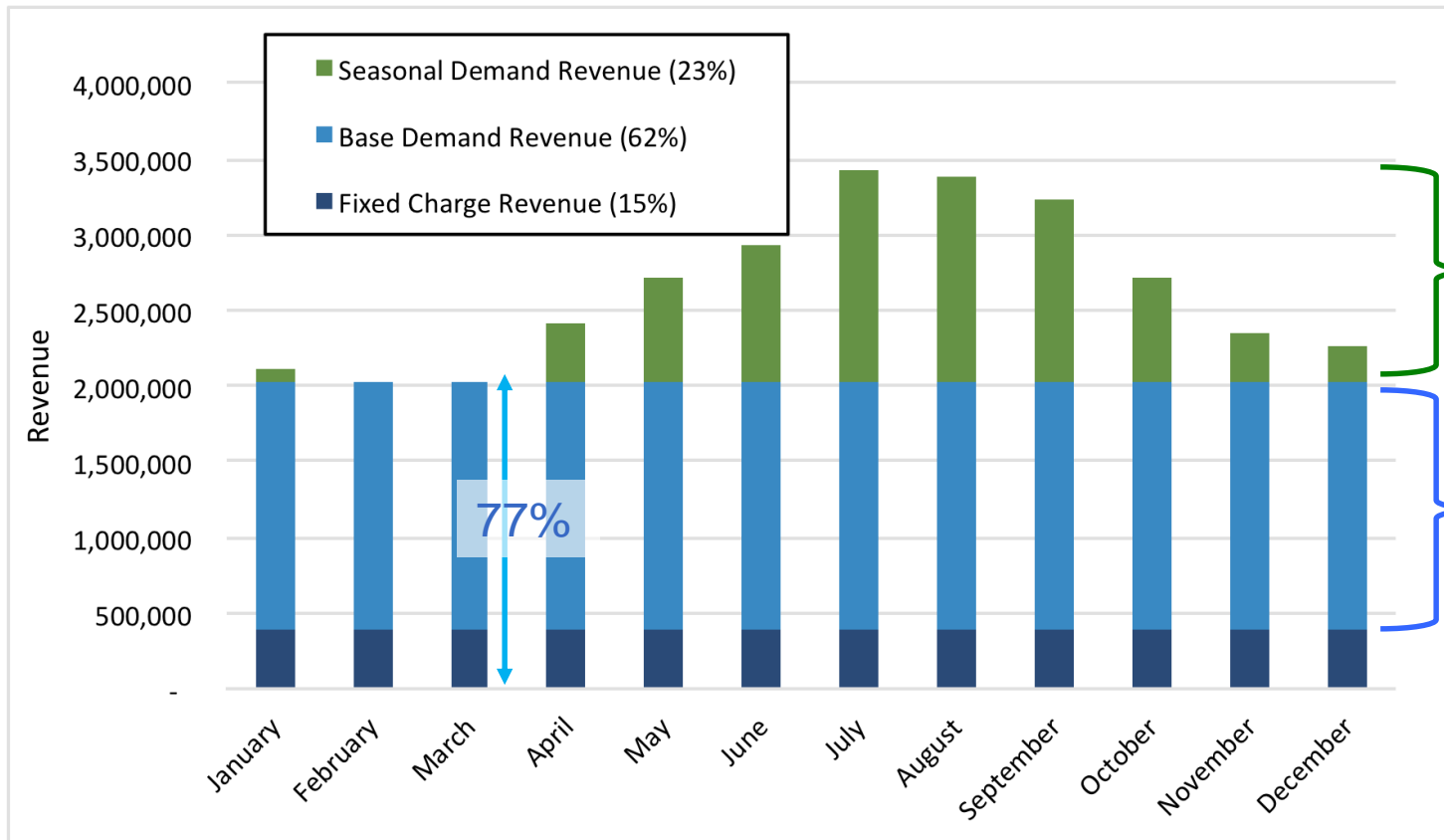


Service Charge Policies

Issue 2a	Revenue from fixed and variable charges
Options	<ul style="list-style-type: none"> - Maintain current balance (15% from fixed service plus fire service charges and 85% from variable quantity charges) - Increase or decrease portion of revenue from fixed service charges
Recommendation	<ul style="list-style-type: none"> - Maintain current balance
Rationale	<ul style="list-style-type: none"> - Revenue from fixed service charges plus revenue from non-seasonal quantity charges comes close to matching fixed costs, which provides reasonable revenue stability - Increasing the revenue from fixed charges will weaken the incentive to conserve or deterrent to waste water - Increasing the fixed charges worsens affordability for low-use customers - There are other tools to improve revenue stability
Outcomes	<ul style="list-style-type: none"> - Customer bills will be responsive to changes in demand



Seasonal Demand Patterns



Revenue from seasonal demand is variable

Revenue from non-seasonal base demand is fairly stable and fixed



Service Charge Policies

	Fixed		Variable		Total	
	\$	% of Total Costs	\$	% of Total Costs	\$	% of Total Costs
Costs						
MWD Purchased Water	\$1,200,000	3%	\$11,000,000	31%	\$12,200,000	35%
Utilities, Chemicals	-	0%	1,200,000	3%	1,200,000	3%
Salaries/Benefits	5,000,000	14%		0%	5,000,000	14%
ISF Overhead	7,200,000	20%		0%	7,200,000	20%
Other O&M	1,200,000	3%		0%	1,200,000	3%
Capital PAYGo/Debt Service	8,500,000	24%		0%	8,500,000	24%
Total	\$23,100,000	65%	\$12,200,000	35%	\$35,300,000	100%
Revenue						
	\$	% of Total Revs	\$	% of Total Revs	\$	% of Total Revs
Service Charges	\$4,317,000	12%		0%	\$4,317,000	12%
Fire Protection Charges	\$1,012,000	3%		0%	\$1,012,000	3%
Volume Charges						
Non-seasonal Base		0%	\$22,000,000	62%	22,000,000	62%
Seasonal		0%	\$8,171,000	23%	8,171,000	23%
Total	\$5,329,000	15%	\$30,171,000	85%	\$35,500,000	100%



Service Charge Policies

Issue 2b	Revenue from fire service charges
Options	<ul style="list-style-type: none"> - Maintain current revenue from fire service charges (3% of total revenue) - Increase or decrease portion of revenue from charges
Recommendation	<ul style="list-style-type: none"> - Maintain current 3% of total revenue - Consider slight adjustment to meter equivalencies
Rationale	<ul style="list-style-type: none"> - Current charges cover the cost of O&M and a portion of the peak capacity associated with fire suppression - Fire suppression capacity is integral with capacity for other peak demands that should be recovered from other customers
Outcomes	<ul style="list-style-type: none"> - An equitable balance is maintained by paying for the capacity for fire suppression through a combination of fire service charges and rates paid by other customers who indirectly benefit from fire service - Adjusting meter equivalencies will shift cost from higher to lower fire services



Fire Service Charge Comparison

Meter Size	Meter Count	Beverly Hills	Palo Alto	Scottsdale AZ	Burlingame	LADWP	Santa Barbara	Santa Monica
2"	84	\$27.20	\$7.58	\$4.00	\$4.00	\$32.88	\$10.94	\$69.07
3"	5	\$59.08		\$4.00	\$6.00	\$80.98		\$118.87
4"	462	\$114.11	\$46.84	\$4.00	\$8.00	\$129.06	\$42.90	\$189.99
6"	188	\$311.62	\$136.06	\$4.00	\$12.00	\$228.22	\$115.52	\$367.71
8"	41	\$652.26	\$289.94	\$4.00	\$16.00	\$446.82	\$240.76	\$580.99
10"	7	\$1,164.63	\$521.40	\$4.00	\$20.00	\$538.12	\$429.16	\$829.80



Quantity Charge Policies

Issue 3a	Single Family residential tiers
Options	<ul style="list-style-type: none"> - Maintain current four tiers - Increase or decrease the number of tiers
Recommendation	<ul style="list-style-type: none"> - Maintain four tiers - Adjust the size of the tiers based on recent Single Family demand patterns using billing data
Rationale	<ul style="list-style-type: none"> - Tiered rates are best suited for a homogenous demand pattern (i.e., Single Family residential) - Four tiers includes natural ranges of base and peak demands for deriving the cost of service - Consistent with recent appellate court decision
Outcomes	<ul style="list-style-type: none"> - Tier sizes reflect current customer demand - Size of each tier provides realistic price breaks that will encourage customers to manage water use more efficiently



Single Family Quantity Charge Comparison

	Beverly Hills	Palo Alto	Scottsdale AZ	Burlingame	LADWP	Santa Barbara	Santa Monica
	Current						
Rates (\$/HCF)							
Tier 1	\$4.02	\$6.66	\$1.65	\$9.11	\$1.999	\$4.44	\$3.01
Tier 2	\$5.30	\$9.18	\$2.95	\$10.21	\$1.999	\$12.96	\$4.50
Tier 3	\$8.36		\$3.70	\$11.33	\$2.746	\$23.98	\$6.76
Tier 4	\$16.15		\$4.75	\$12.45	\$2.746		\$10.57
Tier 5			\$5.55	\$13.56			
Breakpoints							
T1 / T2 Breakpoint	10	6	14	5	8	4	14
T2 / T3 Breakpoint	55		32	11	15	16	40
T3 / T4 Breakpoint	120		80	21	29		148
T4 / T5 Breakpoint			178	32			

¹ LADWP Tier 2 / Tier 3 and Tier 3 / Tier 4 breakpoints differ by lot size (5), temperature zone (3), and season (2). Breakpoints shown are for a 7,000 sq ft lot in the Medium temperature zone in the summer.



Quantity Charge Policies

Issue 3b	Multi Family residential tiers
Options	<ul style="list-style-type: none"> - Maintain four tiers - Reduce the size of the tiers based on recent Multi Family demand patterns - Can implement reduction over more than one year
Recommendation	<ul style="list-style-type: none"> - Reduce from four tiers to two tiers - Set breakpoint between tiers at average demand
Rationale	<ul style="list-style-type: none"> - Range in Multi Family usage is too narrow for four tiers based on peak demand analysis - Continued use of tiers (rather than a uniform rate) maintains a conservation signal
Outcomes	<ul style="list-style-type: none"> - Bills for low-use apartments will increase and bills for high-use will decrease - Improved equity because rates will not favor smaller apartments or low occupancy



Multi Family Quantity Charge Comparison

	Beverly Hills	Palo Alto	Scottsdale AZ	Burlingame	LADWP	Santa Barbara	Santa Monica
	Current						
Rates (\$/HCF)							
Tier 1	\$4.02	\$7.68	\$1.65	\$10.66	\$1.999	\$4.44	\$3.01
Tier 2	\$5.30		\$2.95		\$3.409	\$12.96	\$4.50
Tier 3	\$8.36		\$3.70			\$23.98	\$6.76
Tier 4	\$16.15		\$4.75				\$10.57
Breakpoints							
T1 / T2 Breakpoint	4		14		various ¹	4	4
T2 / T3 Breakpoint	9		32			8	9
T3 / T4 Breakpoint	16		80				20
Basis							
	Per DU	Per Account	Per Account	Per Account	Per Account	Per DU	Per DU

¹ LADWP breakpoints differ by customer based on prior baseline usage. 48 HCF minimum per account.



Quantity Charge Policies

Issue 3c	Commercial uniform rate
Options	<ul style="list-style-type: none">- Maintain current uniform rate- Convert to tiered structure
Recommendation	<ul style="list-style-type: none">- Maintain current uniform rate structure
Rationale	<ul style="list-style-type: none">- Uniform rates are best suited for a heterogeneous demand pattern (i.e., wide range from low to high use)- Determining the size of tiers for a diverse customer class is problematic – with large tiers, high-use customers pay highest tier rate even if they are efficient and do not peak
Outcomes	<ul style="list-style-type: none">- Uniform rates do not favor small users (which may have high peaking) over large users (which may not peak)



Commercial Quantity Charge Comparison

	Beverly Hills	Palo Alto	Scottsdale AZ	Burlingame	LADWP	Santa Barbara	Santa Monica
	Current						
Rates (\$/HCF)							
Tier 1	\$6.86	\$7.68	\$1.65	\$10.66	\$1.999	\$6.52	\$4.27
Tier 2			\$2.95		\$3.500	\$23.91	\$10.53
Tier 3			\$3.70				
Tier 4			\$4.75				
Breakpoints							
T1 / T2 Breakpoint			14		various ¹	various ²	various ³
T2 / T3 Breakpoint			32				
T3 / T4 Breakpoint			80				

¹ LADWP commercial breakpoints differ by customer based on prior baseline usage and season.

² Santa Barbara commercial breakpoints differ by customer based on prior year's off-peak use.

³ Santa Monica commercial breakpoints differ by meter size.



Quantity Charge Policies

Issue 3d	Single Family, Multi Family, and Commercial Irrigation rates
Options	<ul style="list-style-type: none"> - Continue to charge Irrigation customers the same rates as the other customers in the Single Family, Multi Family, and Commercial classes - Develop separate Irrigation rate/s
Recommendation	<ul style="list-style-type: none"> - Charge the same rates as other customers in the class - Require higher reductions irrigation water use during shortages - Increase rates during water shortages to maintain revenue neutrality - Re-evaluate irrigation rates as class grows
Rationale	<ul style="list-style-type: none"> - Irrigation demand is integral with the customer's indoor water use
Outcomes	<ul style="list-style-type: none"> - Provides rates for Irrigation customers - Reduces Single Family and Multi Family bills when irrigation demand is separated from domestic demand - Avoids charging more for irrigation, which is less reliable and subject to greater interruption



Irrigation Quantity Charge Comparison

	Beverly Hills	Palo Alto	Scottsdale AZ	Burlingame	LADWP	Santa Barbara	Santa Monica
Rates (\$/HCF)							
Tier 1		\$9.08	\$1.65		\$3.498	\$3.01 - \$12.96 ¹	
Tier 2			\$2.95		\$8.183	\$23.91	
Tier 3			\$3.70				
Tier 4			\$4.75				
Breakpoints							
T1 / T2 Breakpoint			14		various ²	various ²	
T2 / T3 Breakpoint			32				
T3 / T4 Breakpoint			80				

¹ Tier 1 rate varies depending on customer type (e.g., recreation, agriculture, and residential/commercial).

² Breakpoints differ by customer based on water budget for irrigated landscapes.



Other Policies

Issue 4a	Create Water Supply Reliability Charge
Options	<ul style="list-style-type: none"> - Add charge to all quantity charges (including Irrigation customers) - Add charge to Outside City quantity charges and cover Inside portion from General Fund (no charge for Inside) - No charge but integrate rate in quantity charges
Recommendation	<ul style="list-style-type: none"> - Add charge to all quantity charges - Charge is uniform - Leave open whether General Fund will cover Inside charge - Charge can be derived as a constant amount based on the life cycle cost or incorporated into the cost of service analysis
Rationale	<ul style="list-style-type: none"> - Creating a separate charge for a major capital improvement draws attention to the cost of improving supplies
Outcomes	<ul style="list-style-type: none"> - Provides an additional funding source based on long-term cost recovery



Other Policies

Issue 4b	Apply revenue stabilization adjustments during shortages
Options	<ul style="list-style-type: none">- Automatically adjust volume charges during shortages to offset revenue lost due to conservation- Adjust rates during shortages following Prop 218 protest hearing process
Recommendation	<ul style="list-style-type: none">- Adopt automatic adjustments- Link adjustment factors to Shortage Allocation Plan's staged cutback requirements- Adjustment procedure is adopted as part of Prop 218 process
Rationale	<ul style="list-style-type: none">- Procedural simplicity allows for more responsive adjustments- Adjustments track conservation reductions to protect reserves
Outcomes	<ul style="list-style-type: none">- Better revenue management- Maintains revenue neutrality



Shortage Reductions

30% Stage D Reduction									
Class	Baseline Annual Demand (HCF)			Reductions					
	Total	Indoor	Outdoor	Indoor	Outdoor	Indoor	Outdoor	Total	Total
SFR	2,173,620	1,175,808	997,812	11.5%	69.0%	135,121	687,998	823,119	38%
MFR	817,717	751,716	66,001	11.5%	69.0%	86,385	45,508	131,894	16%
Commercial	927,764	810,198	117,566	11.5%	69.0%	93,106	81,063	174,169	19%
Irrigation	119,508	-	119,508	11.5%	69.0%	-	82,402	82,402	69%
Total	4,038,609	2,737,722	1,300,887	11.5%	69.0%	314,613	896,970	1,211,583	30%

Example using Stage D

Outdoor water use is reduced six times more than Indoor water use to achieve a 30% overall reduction

Shortage Reductions By Class					
Class	Stage A	Stage B	Stage C	Stage D	Stage E
	5% Reduction	10% Reduction	20% Reduction	30% Reduction	50% Reduction
SFR	6%	13%	25%	38%	60%
MFR	3%	5%	11%	16%	32%
Commercial	3%	6%	13%	19%	36%
Irrigation	11%	23%	46%	69%	100%



Revenue Stabilization Factors

The factors are adopted as part of the Prop 218 notice.

Once adopted, they can be applied when shortages are declared without the need for a public hearing process.

Shortage Reductions By Class					
Class	Stage A	Stage B	Stage C	Stage D	Stage E
	5% Reduction	10% Reduction	20% Reduction	30% Reduction	50% Reduction
SFR	6%	13%	25%	38%	60%
MFR	3%	5%	11%	16%	32%
Commercial	3%	6%	13%	19%	36%
Irrigation	11%	23%	46%	69%	100%

Revenue Stabilization Factors By Class					
Class	Stage A	Stage B	Stage C	Stage D	Stage E
	5% Reduction	10% Reduction	20% Reduction	30% Reduction	50% Reduction
SFR	1.040	1.085	1.199	1.359	1.886
MFR	1.016	1.033	1.071	1.113	1.279
Commercial	1.019	1.039	1.084	1.136	1.325
Irrigation	1.076	1.176	1.500	2.306	n/a

To be applied to the non-shortage rates in effect prior to the shortage has been declared.

May 10, 2018



Other Policies

Issue 4c	Outside City differential
Options	<ul style="list-style-type: none">- Maintain current 1.25 multiplier- Convert from a multiplier to a cost-based differential
Recommendation	<ul style="list-style-type: none">- Convert from multiplier to cost-based dollar differential- Apply differential to quantity charge only- Document procedure in municipal code
Rationale	<ul style="list-style-type: none">- Consistent with cost of service principles- Sets forth procedure for future rate making
Outcomes	<ul style="list-style-type: none">- Provides clarity on determining the differential



Summary of Recommendations

Policy	Recommendation
1a. Multi Family customer class	- Maintain separate class
1b. Irrigation customer class	- Create Single Family, Multi Family, and Commercial Irrigation customer classes
2a. Fixed/variable revenue	- Maintain current 15% fixed revenue
2b. Fire service charges	- Maintain current 3% fixed revenue
3a. Single Family tiers	- Adjust four tiers to current demand patterns
3b. Multi Family tiers	- Reduce from four to two and size to current demands
3c. Commercial uniform rate	- Maintain uniform rate
3d. Single Family and Commercial Irrigation rates	- Apply same rates as Single Family and Commercial customers
4a. WSR charge	- Add charge to all quantity charges
4b. Shortage Stabil. Adjmts	- Apply adjustment factors linked to Shortage Plan
4c. Outside City rates	- Convert from multiplier to cost allocation for quantity charges



END OF PRESENTATION