PALMDALE WATER DISTRICT

SUMMARY OF FINDINGS – 15 AUGUST 2019

WATER RATE ANALYSIS, WATER RATE STRUCTURE MODIFICATIONS,
MULTI-YEAR WATER RATE PLAN, AND
PROPOSITION 218 PROCESS PUBLIC OUTREACH SUPPORT

RDN

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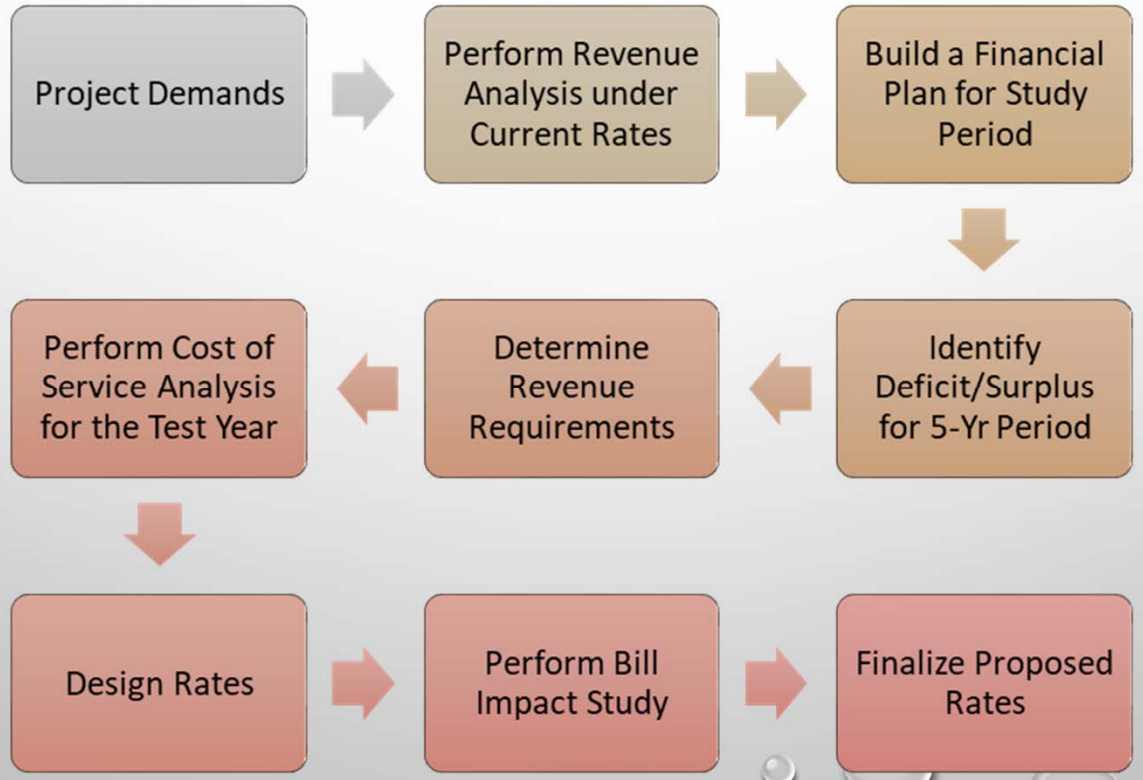
AGENDA

- Process of Rate Study
- Financial Outlook
- What is a Cost of Service Analysis?
- Recommended Rate Adjustments
- Customer Bill Impacts
- Rate Comparison Study



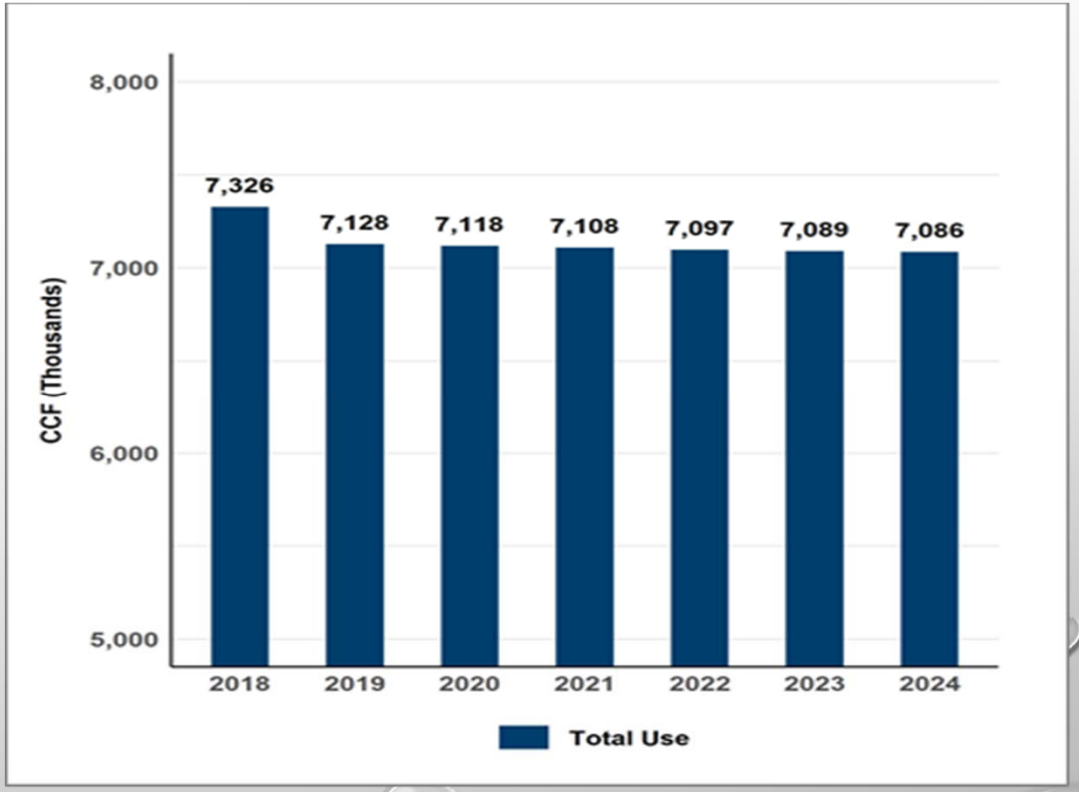
RATE STUDY PROCESS

5-Yr Study Period: CY 2020 – CY 2024, Test Year: CY 2020



DEMAND PROJECTIONS

Class	Annual Change
Commericial & Industrial	-2
Construction	-2
Irrigation	-1
Multi-Family Residential	2
Single-Family Residential	21



REVENUE ANALYSIS

Revenue Type	CY 2019	CY 2020	CY 2021	CY 2022	CY 2023	CY 2024
Revenues from rates	$23.1	$23.1	$23.1	$23.1	$23.0	$23.0
Other operating revenues	$1.2	$1.2	$1.2	$1.2	$1.2	$1.2
Non-operating revenues	$2.9	$2.9	$2.9	$3.0	$3.0	$3.1
Total	**$27.2**	**$27.2**	**$27.2**	**$27.2**	**$27.3**	**$27.3**



O&M EXPENSE

	CY 2019	CY 2020	CY 2021	CY 2022	CY 2023	CY 2024
Total O&M Expense	$21.8	$23.1	$23.8	$24.6	$25.3	$26.1
% Annual Increase		5.8%	3.1%	3.1%	3.1%	3.2%

Expense Escalation Factors	CY 2019	CY 2020	CY 2021	CY 2022	CY 2023	CY 2024
Overall Inflation Rate:	*2.4%*	*2.4%*	*2.4%*	*2.4%*	*2.4%*	*2.4%*
Utility/Chemical Inflation Rate:	*4.1%*	*4.1%*	*4.1%*	*4.1%*	*4.1%*	*4.1%*
Treatment Inflation Rate:	*3.3%*	*3.3%*	*3.3%*	*3.3%*	*3.3%*	*3.3%*
Purchased Water Inflation Rate	*7.3%*	*7.3%*	*7.3%*	*7.3%*	*7.3%*	*7.3%*
Employee Expenses Inflation Rate:	*2.6%*	*2.6%*	*2.6%*	*2.6%*	*2.6%*	*2.6%*
Equipment Inflation Rate:	*0.8%*	*0.8%*	*0.8%*	*0.8%*	*0.8%*	*0.8%*
Fuels and Automobile Inflation Rate:	*3.6%*	*3.6%*	*3.6%*	*3.6%*	*3.6%*	*3.6%*
Construction Inflation Rate:	*3.0%*	*3.0%*	*3.0%*	*3.0%*	*3.0%*	*3.0%*
No Escalation:	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*

CIP EXPENSE

Total = $30 million

	CY 2020	CY 2021	CY 2022	CY 2023	CY 2024
Replacement/New Equipment	$440,217	$608,922	$375,113	$373,115	$483,704
Studies and Planning	$604,985	$125,000	$200,000	$125,000	$125,000
Water Supply	$512,177	$786,976	$806,143	$1,101,034	$0
Replacement Capital Projects	$3,056,808	$3,985,035	$4,469,925	$5,758,578	$2,554,233
New Capital Projects	$578,810	$0	$529,664	$0	$3,120,913
Total CIP Expense	**$5,192,998**	**$5,505,934**	**$6,380,845**	**$7,357,728**	**$6,283,850**

DEBT SERVICE

	CY 2019	CY 2020	CY 2021	CY 2022	CY 2023	CY 2024
Principal	$1.9	$1.9	$2.0	$2.7	$2.6	$2.8
Interest	$2.6	$2.5	$2.5	$3.1	$3.1	$3.0
Debt Service Total	**$4.5**	**$4.5**	**$4.5**	**$5.8**	**$5.7**	**$5.8**

- 2012 Private Placement
- 2013A Series Water Revenue Bonds
- 2018A Series Water Revenue Bond
- Capital Leases Payable – 2017
- 2021 Bond Issuance - $20 million

OTHER OBLIGATIONS

Reserves: District's Goal based on Reserve Policy Resolution No, 18-10 is $16.2 million
= $950,000 Annual Contribution

Water Conservation Rebate Program/Change in Investment in PRWA = $535,500

REVENUE REQUIREMENTS

CY 2020

O&M Expense - $23.1 million

CIP Expense - $5.2 million

Debt Service - $4.5 million

Other Obligations - $1.5 million

Total Cost - $34.3 million

Offset by Non-Rate Revenues - $4.1 million

Revenue Requirements - $30.2 million

REVENUE REQUIREMENTS

CY 2020

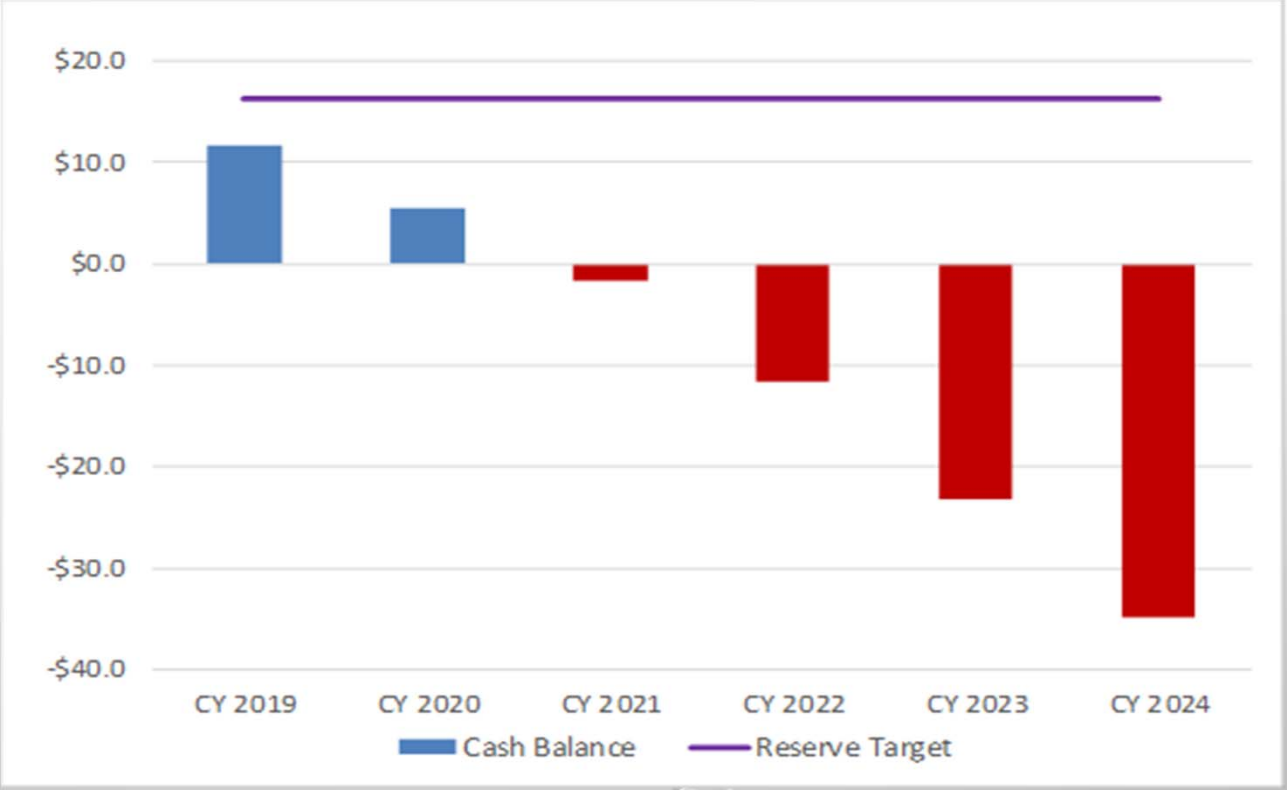
Revenues from Rates - $23.1 million

Revenue Requirements - $30.2 million

Deficit- $7.1 million

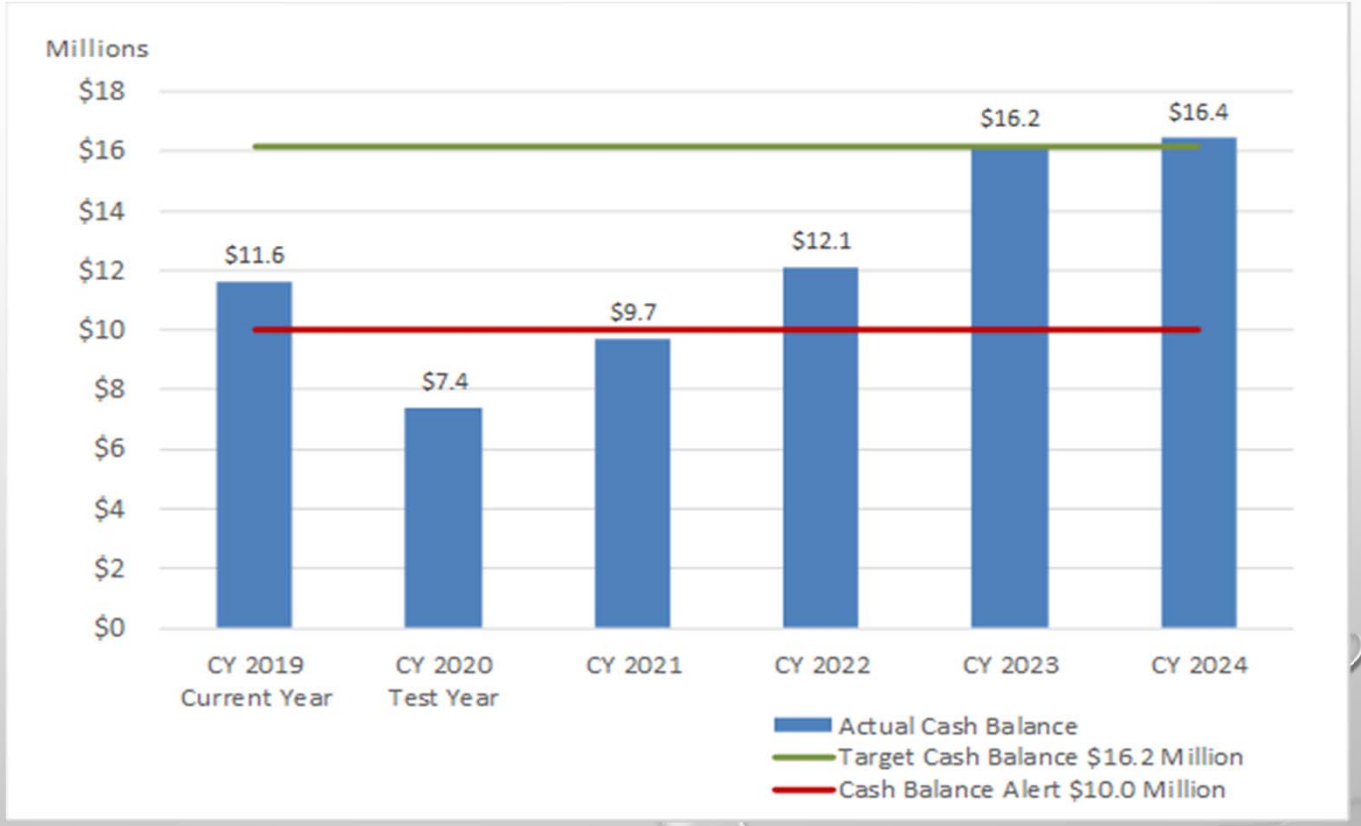
NO ACTION IS TAKEN

No rate adjustments, plus no new bond issuances



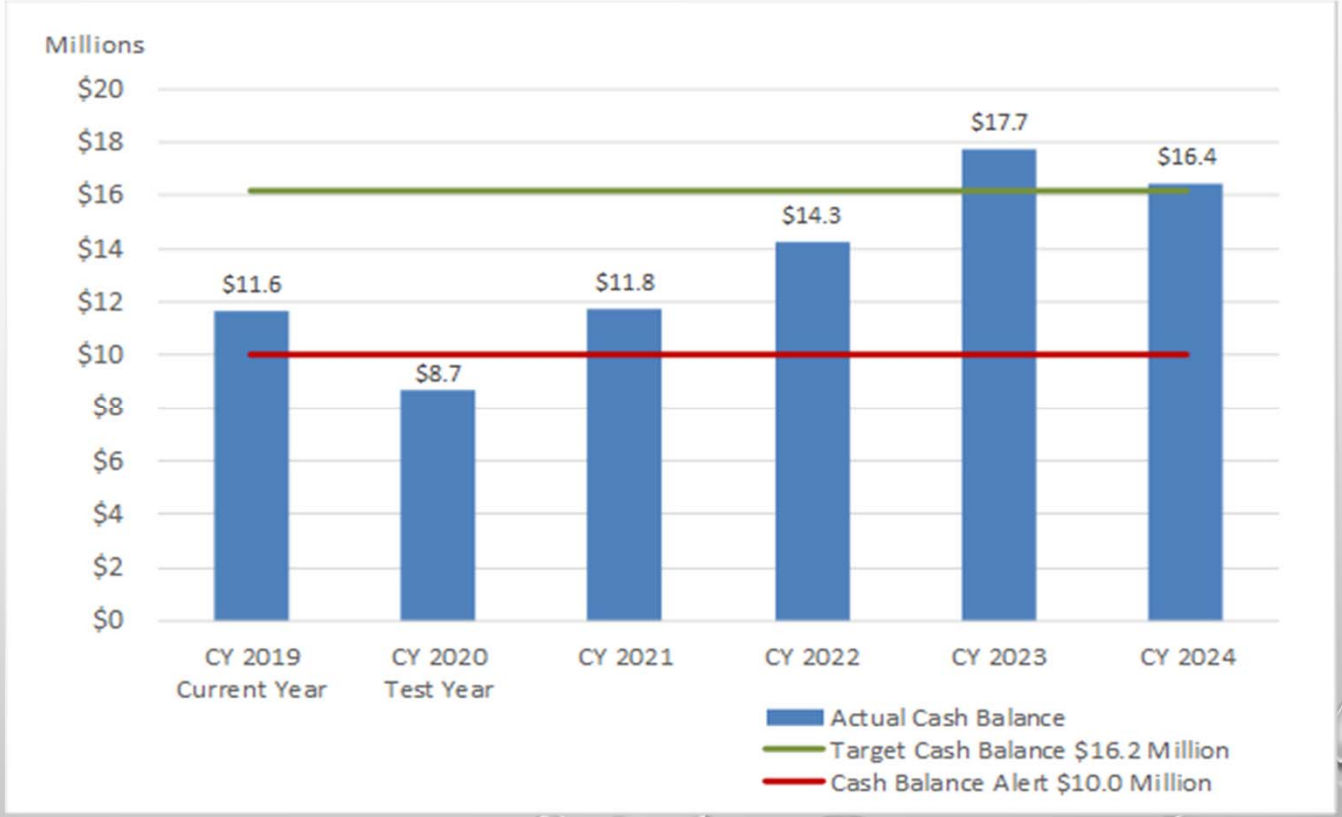
OPTION 1

An annual 8.1% rate adjustment



OPTION 2

An initial 13.9 % adjustment plus 5.5 % for 2021-24



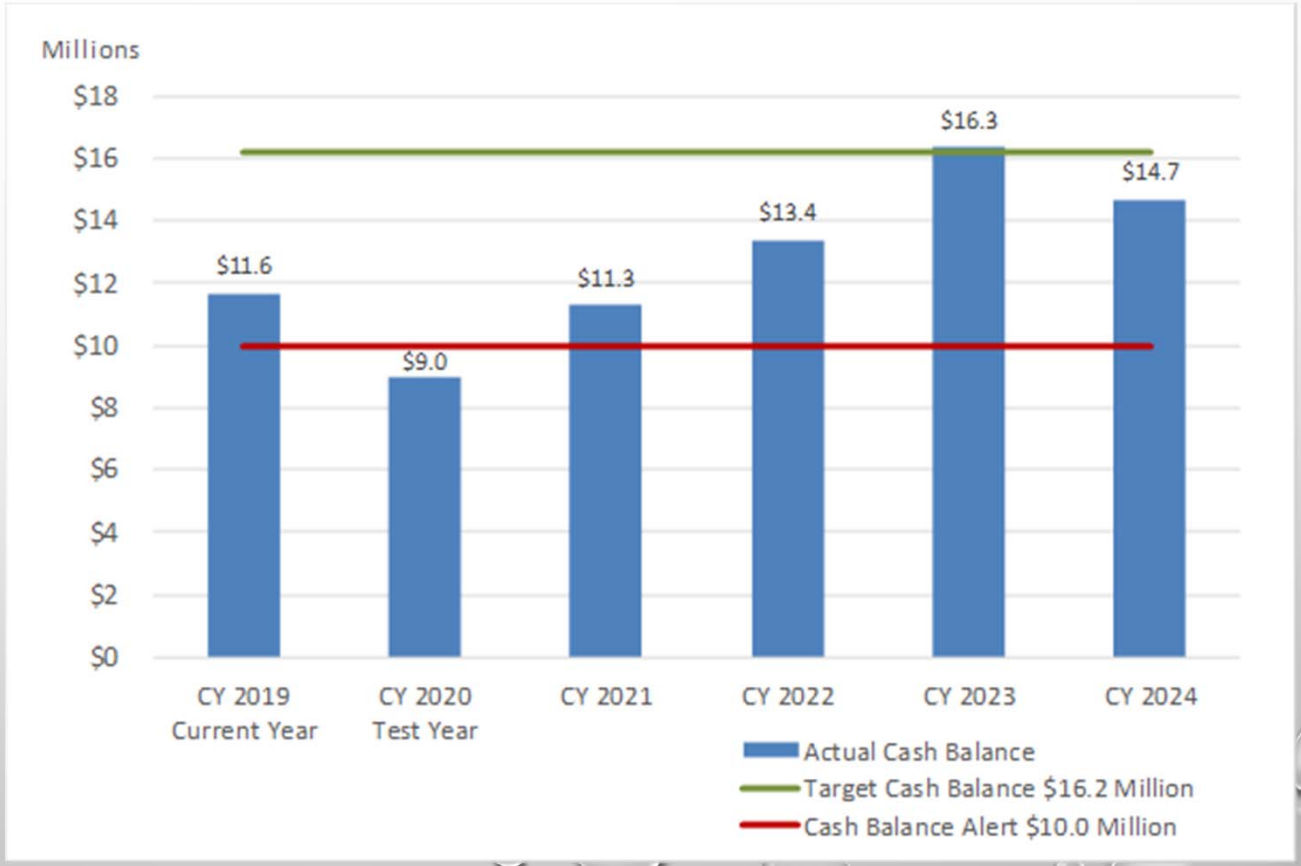
OPTION 3 (District Proposed)

- Move $1.2 million CIPs from CY 2020 to CY 2021
  ➡ prevents District's cash balance from falling too low

- Reduce the target reserve level from $16.2 million to $14.6 million ➡ reduces rate increase %

OPTION 3 (District Proposed)

An initial 9.6 % adjustment plus 6.8 % for 2021-24

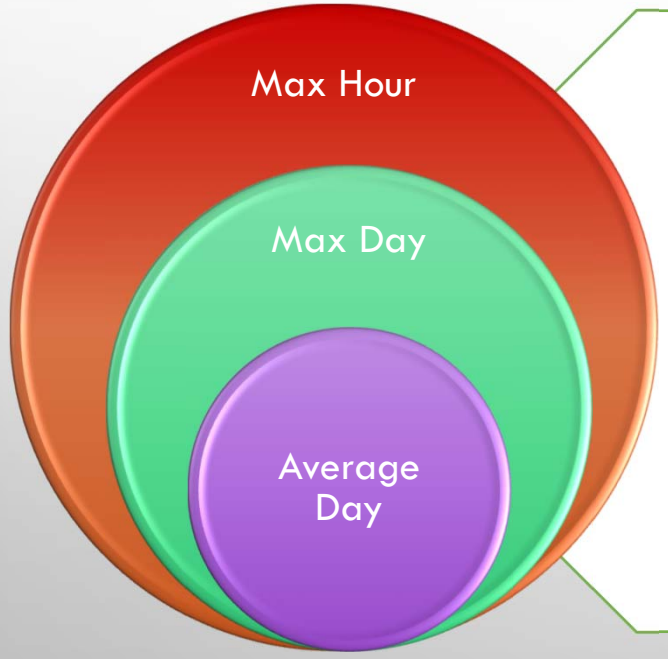


COST OF SERVICE ANALYSIS

How should costs be allocated equitably among all customers?

"The amount of the fee or charge imposed upon any parcel shall not exceed the proportional cost of service attributable to the parcel"- Proposition 218

COST OF SERVICE ANALYSIS



Cost Causative Components

- Water Supply
- Peaking Costs
  - Average Day
  - Max Day
  - Max Hour
- Customer/Billing
- Water Conservation
- Public Fire Hydrants

COST OF SERVICE ANALYSIS

		Peaking Cost						
	Water Supply	Base	Max Day	Max Hour	Meters	Customer Service	Fire Protection Service	Water Conservation
O&M Cost	$3,861,070	$8,381,502	$3,162,820	$2,302,764	$708,055	$3,980,228	$312,327	$395,807
CIP Costs/Other Obligations		$5,248,721	$2,674,553	$1,271,394	$734,226	$280,144	$699,054	$2,131
Water Conservation								$236,500
Total Expense	**$3,861,070**	**$13,630,223**	**$5,837,372**	**$3,574,158**	**$1,442,281**	**$4,260,372**	**$1,011,381**	**$634,438**
Cost Distribution	**11%**	**40%**	**17%**	**10%**	**4%**	**12%**	**3%**	**2%**

RECOMMENDED STRUCTURAL CHANGE

- Reduce number of tiers from six to five
- Reduce water allocation per capita per day (GPCD) from 66 to 55
- Establish “Irrigable Area” for each parcel using Eagle Aerial data
- Use the water budget allocation method of Single Family Residential customers for Multi-Family residential customers
- Establish “Exempt Irrigation Accounts” to receive 100 % landscape factor (LF) for their water budget

RECOMMENDED STRUCTURAL CHANGE

Indoor Water Budget

$$= \frac{GPCD}{748\ gallons/hcf} \times Household\ Size \times \#\ of\ Dwelling\ Units \times Days\ of\ Service$$

SFR Indoor Water Budget (Proposed)

$$= \frac{\cancel{66}\ 55\ GPCD}{748\ gallons/hcf} \times 4\ persons \times 1\ unit \times 30\ days = 8.8\ hcf$$

MFR Indoor Water Budget (Proposed)

$$= \frac{55\ GPCD}{748\ gallons/hcf} \times 2\ persons \times 20\ units \times 30\ days = 88.2\ hcf$$

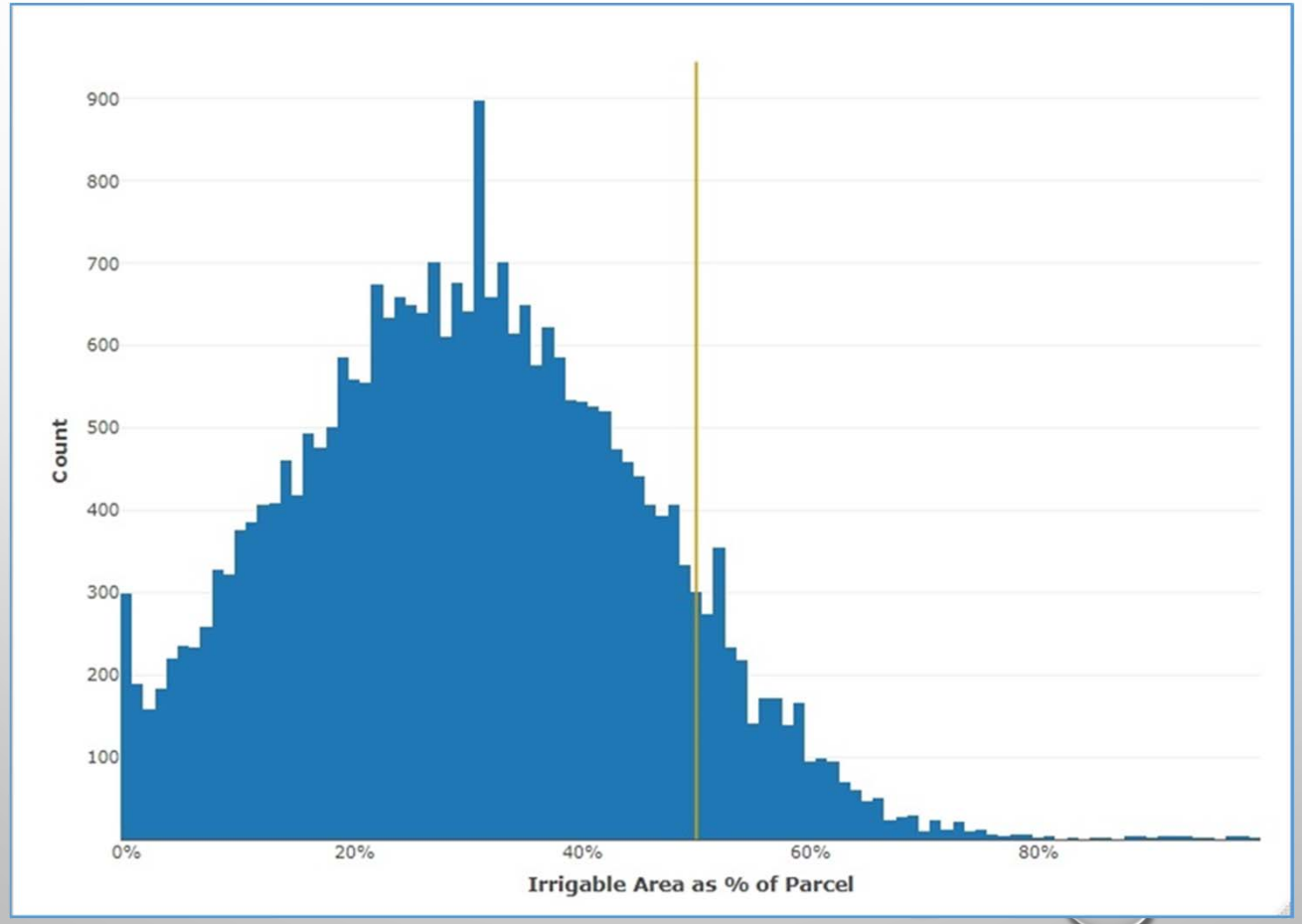
RECOMMENDED STRUCTURAL CHANGE

Outdoor Water Budget (Current and Proposed)

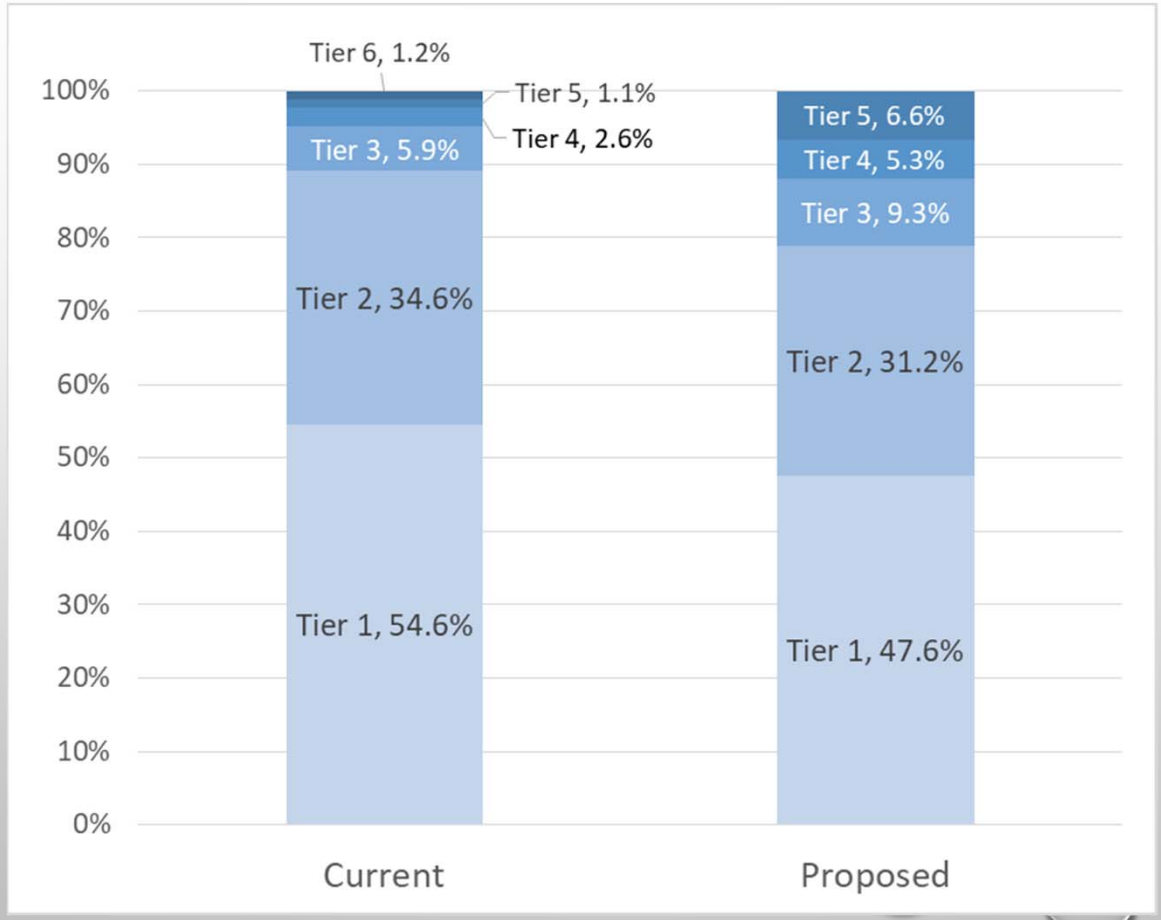
$$= \frac{\textit{Landscape Area (Irrigable)} \times \frac{\textit{ETO}}{12\ \textit{in/ft}}}{100\ \textit{sf/hcf}} \times \textit{LF}\ (0.7) \times \textit{DF}$$

- Residential Customers Irrigable Area, currently set at 50% of Parcel = The actual measurement from EA data
- Exempt Irrigation Accounts Landscape Factor (LF) = 1
- Drought Factor (DF) = 1

RECOMMENDED STRUCTURAL CHANGE



RECOMMENDED STRUCTURAL CHANGE



PROPOSED RATES – OPTION 1

Fixed Charge Monthly					
Meter Size	CY 2020	CY 2021	CY 2022	CY 2023	CY 2024
5/8-in	$38.22	$41.60	$45.52	$49.79	$54.43
3/4-in	$38.22	$41.60	$45.52	$49.79	$54.43
1-in	$38.22	$41.60	$45.52	$49.79	$54.43
1 1/2-in	$92.99	$101.49	$111.51	$122.47	$134.37
2-in	$140.84	$153.81	$169.16	$185.96	$204.21
3-in	$252.48	$275.89	$303.69	$334.10	$367.16
4-in	$412.05	$450.38	$495.96	$545.84	$600.07
6-in	$810.62	$886.21	$976.21	$1,074.72	$1,181.81
8-in	$1,289.09	$1,409.41	$1,552.74	$1,709.62	$1,880.17
10-in	$1,847.47	$2,019.99	$2,225.56	$2,450.56	$2,695.17

Commodity Charges per HCF					
Proposed Rates	CY 2020	CY 2021	CY 2022	CY 2023	CY 2024
Tier 1	$0.88	$0.93	$0.98	$1.03	$1.08
Tier 2	$1.52	$1.63	$1.74	$1.86	$1.98
Tier 3	$2.03	$2.15	$2.27	$2.40	$2.54
Tier 4	$3.29	$3.51	$3.74	$3.98	$4.23
Tier 5	$4.64	$5.01	$5.39	$5.79	$6.23

PROPOSED RATES – OPTION 2

Fixed Charge Monthly					
Meter Size	CY 2020	CY 2021	CY 2022	CY 2023	CY 2024
5/8-in	$41.70	$43.53	$45.67	$47.93	$50.29
3/4-in	$41.70	$43.53	$45.67	$47.93	$50.29
1-in	$41.70	$43.53	$45.67	$47.93	$50.29
1 1/2-in	$104.09	$108.40	$113.62	$119.11	$124.81
2-in	$158.60	$165.07	$172.98	$181.29	$189.91
3-in	$285.79	$297.30	$311.47	$326.37	$341.82
4-in	$467.58	$486.29	$509.43	$533.74	$558.93
6-in	$921.64	$958.35	$1,003.87	$1,051.70	$1,101.22
8-in	$1,466.73	$1,525.05	$1,597.44	$1,673.49	$1,752.24
10-in	$2,102.85	$2,186.38	$2,290.14	$2,399.13	$2,511.97

Volumetric Charges per HCF					
Proposed Rates	CY 2020	CY 2021	CY 2022	CY 2023	CY 2024
Tier 1	$0.88	$0.94	$1.00	$1.06	$1.13
Tier 2	$1.52	$1.63	$1.74	$1.86	$1.98
Tier 3	$2.03	$2.15	$2.27	$2.40	$2.54
Tier 4	$3.33	$3.53	$3.72	$3.93	$4.14
Tier 5	$4.74	$5.03	$5.34	$5.65	$5.99

PROPOSED RATES – OPTION 3

Fixed Charge Monthly					
Meter Size	CY 2020	CY 2021	CY 2022	CY 2023	CY 2024
5/8-in	$38.36	$41.12	$44.06	$47.23	$50.61
3/4-in	$38.36	$41.12	$44.06	$47.23	$50.61
1-in	$38.36	$41.12	$44.06	$47.23	$50.61
1 1/2-in	$93.70	$100.62	$108.00	$115.93	$124.39
2-in	$142.05	$152.60	$163.85	$175.95	$188.85
3-in	$254.87	$273.88	$294.17	$315.99	$339.24
4-in	$416.12	$447.23	$480.43	$516.14	$554.20
6-in	$818.88	$880.21	$945.67	$1,016.08	$1,091.11
8-in	$1,302.39	$1,399.99	$1,504.19	$1,616.24	$1,735.66
10-in	$1,866.64	$2,006.58	$2,155.97	$2,316.63	$2,487.85

Volumetric Charges per HCF					
Proposed Rates	CY 2020	CY 2021	CY 2022	CY 2023	CY 2024
Tier 1	$0.88	$0.92	$0.98	$1.03	$1.09
Tier 2	$1.52	$1.62	$1.73	$1.85	$1.97
Tier 3	$2.20	$2.31	$2.44	$2.58	$2.72
Tier 4	$3.74	$3.98	$4.23	$4.50	$4.79
Tier 5	$4.71	$5.03	$5.37	$5.73	$6.12

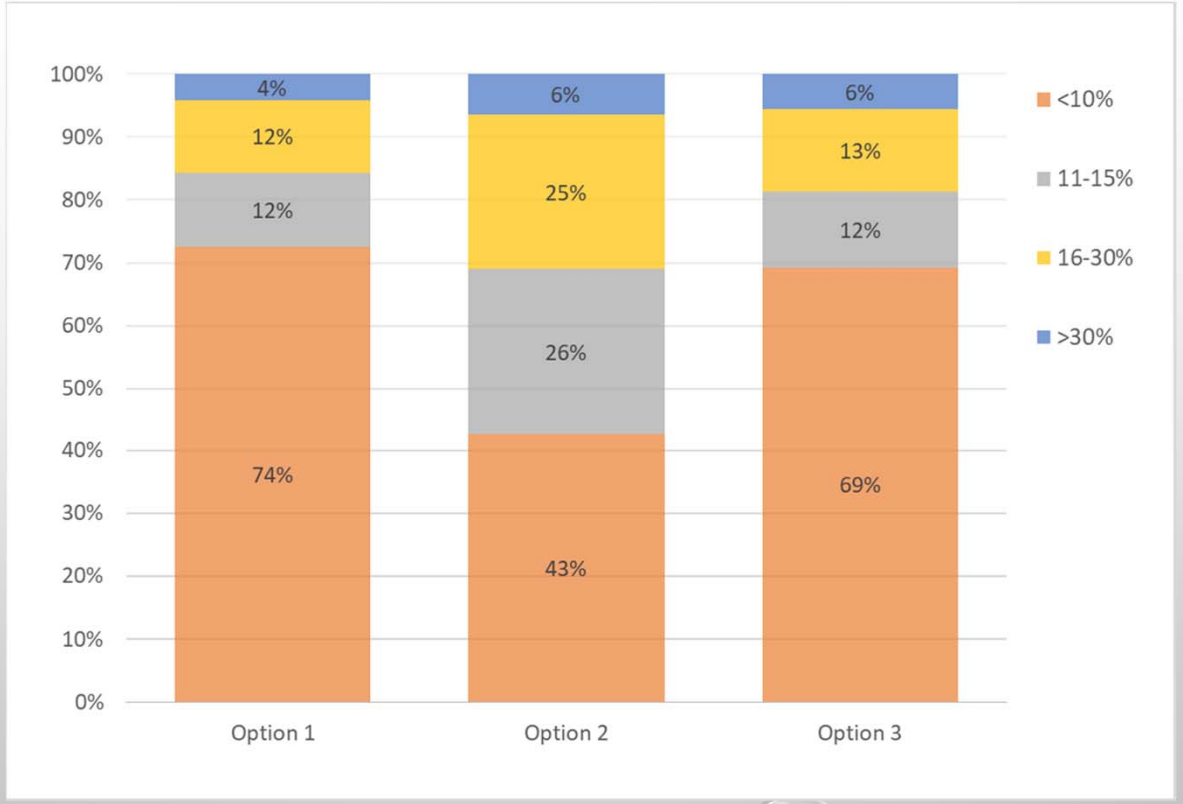
SINGLE FAMILY RESIDENTIAL CUSTOMERS BILL IMPACTS

CY 2020

	Current	Option 1	Option 2	Option 3
5 hcf	$42.17	$42.62	$46.10	$42.76
10 hcf	$46.57	$47.77	$51.25	$47.91
17 hcf	$53.56	$58.63	$62.11	$58.85
35 hcf	$100.98	$123.61	$128.14	$127.42
45 hcf	$156.01	$170.01	$175.54	$174.52

SINGLE FAMILY RESIDENTIAL CUSTOMERS BILL IMPACTS

CY 2020



COMMERCIAL CUSTOMERS BILL IMPACTS

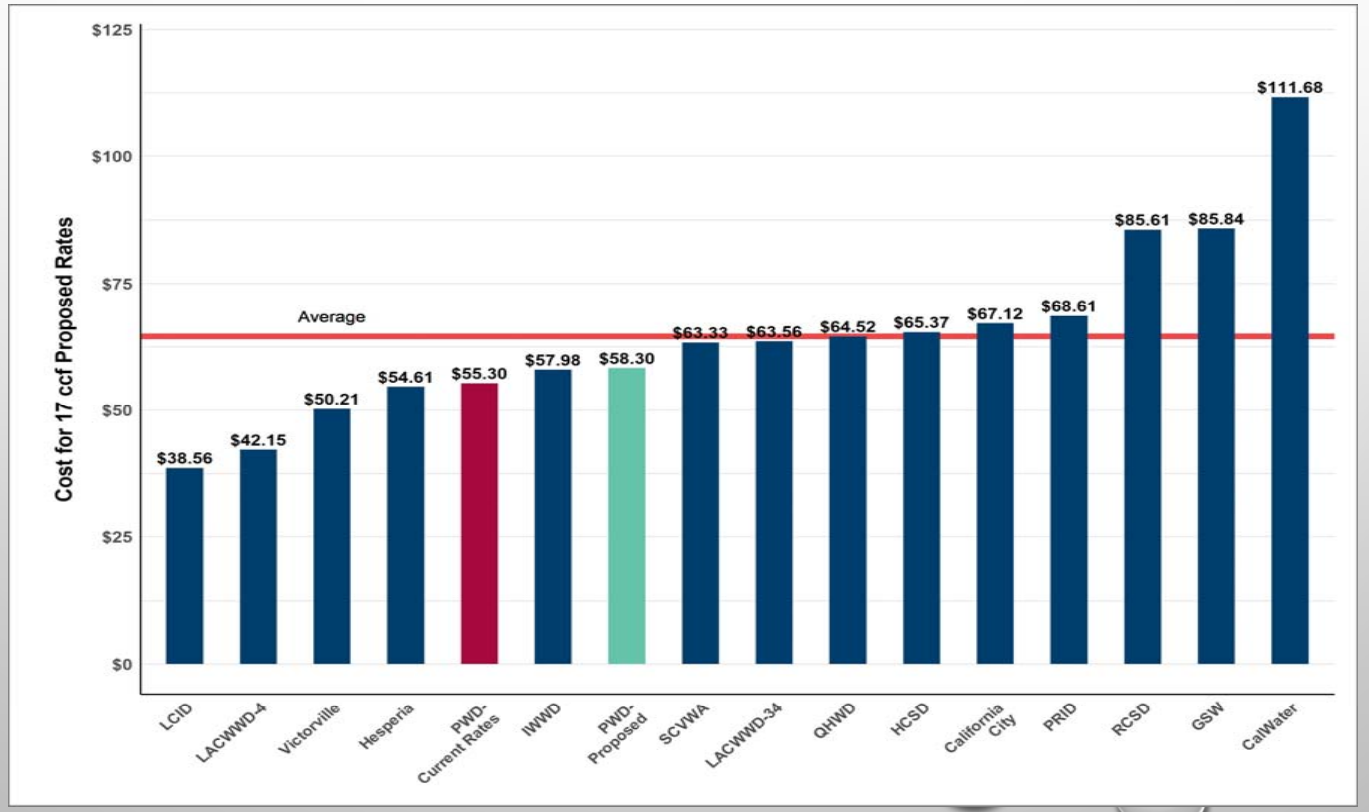
CY 2020

Approximately 56 percent of commercial customers have 1-inch or less size meter.

	Essential Allocation	Efficient Allocation	Usage	Current Rates	Model 1	Model 2	Model 3
1"	13	30	30	$67.33	$75.50	$78.98	$75.73

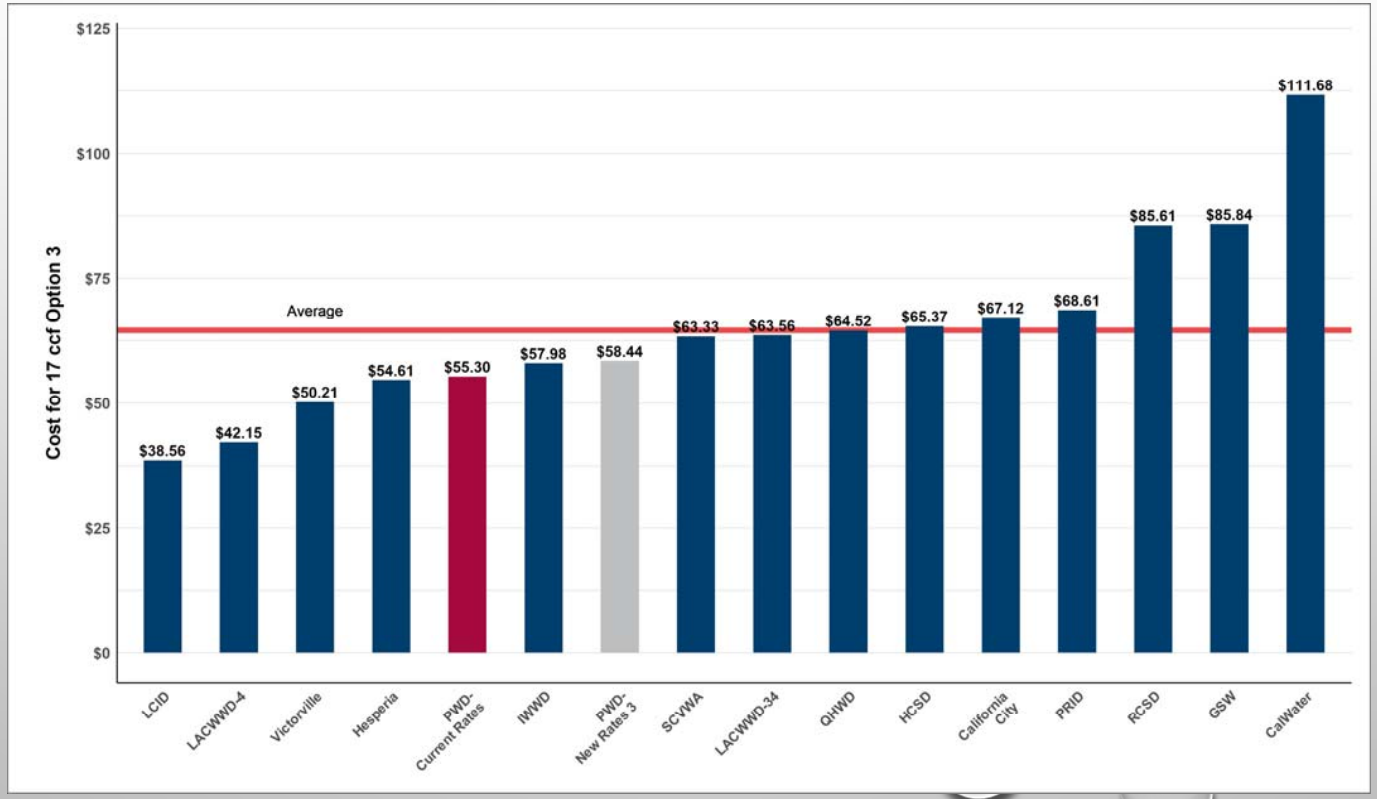
RATE COMPARISON STUDY

Rate Comparison @ 17 hcf – Option 1



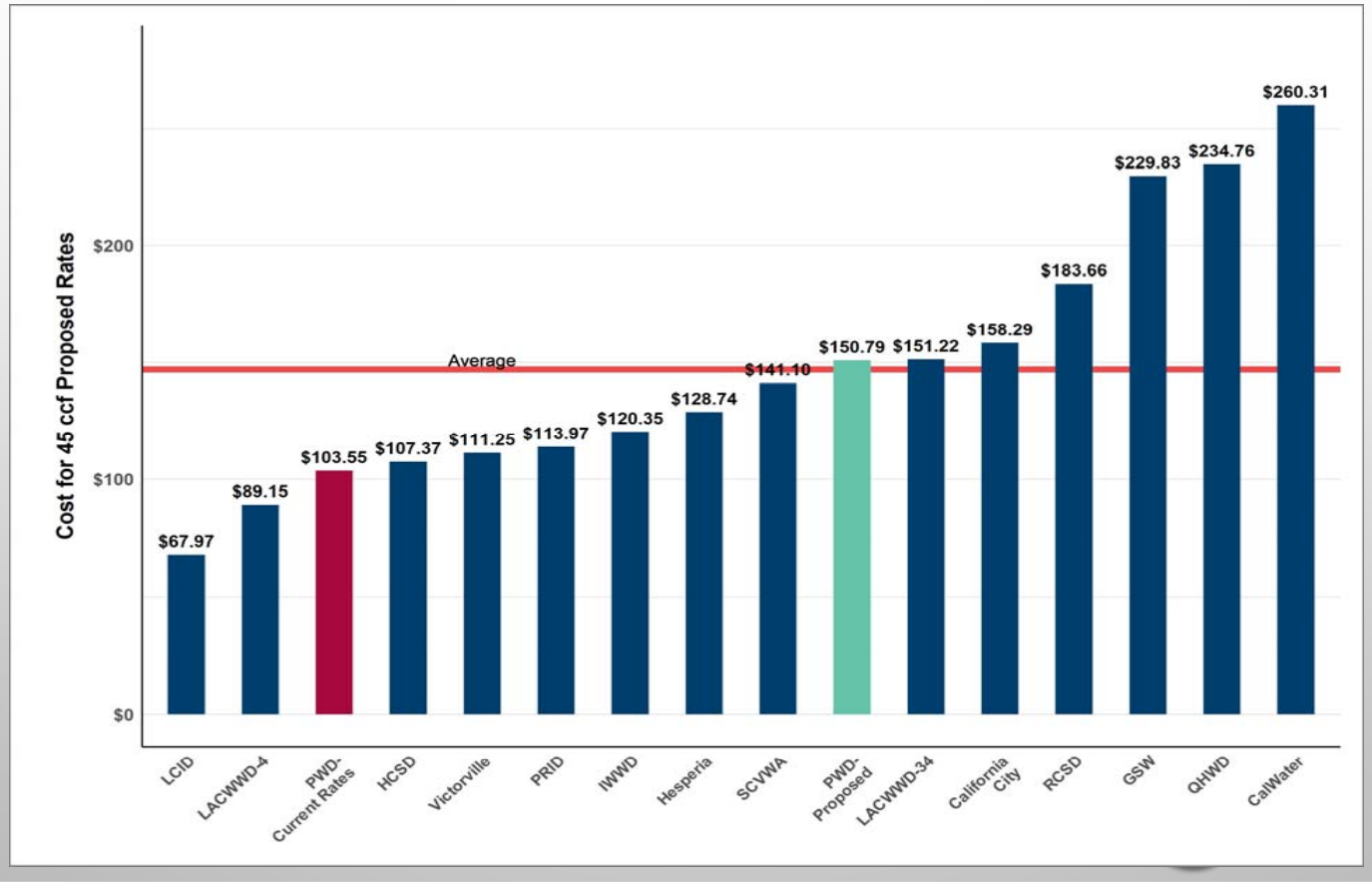
RATE COMPARISON STUDY

Rate Comparison @ 17 hcf – Option 3



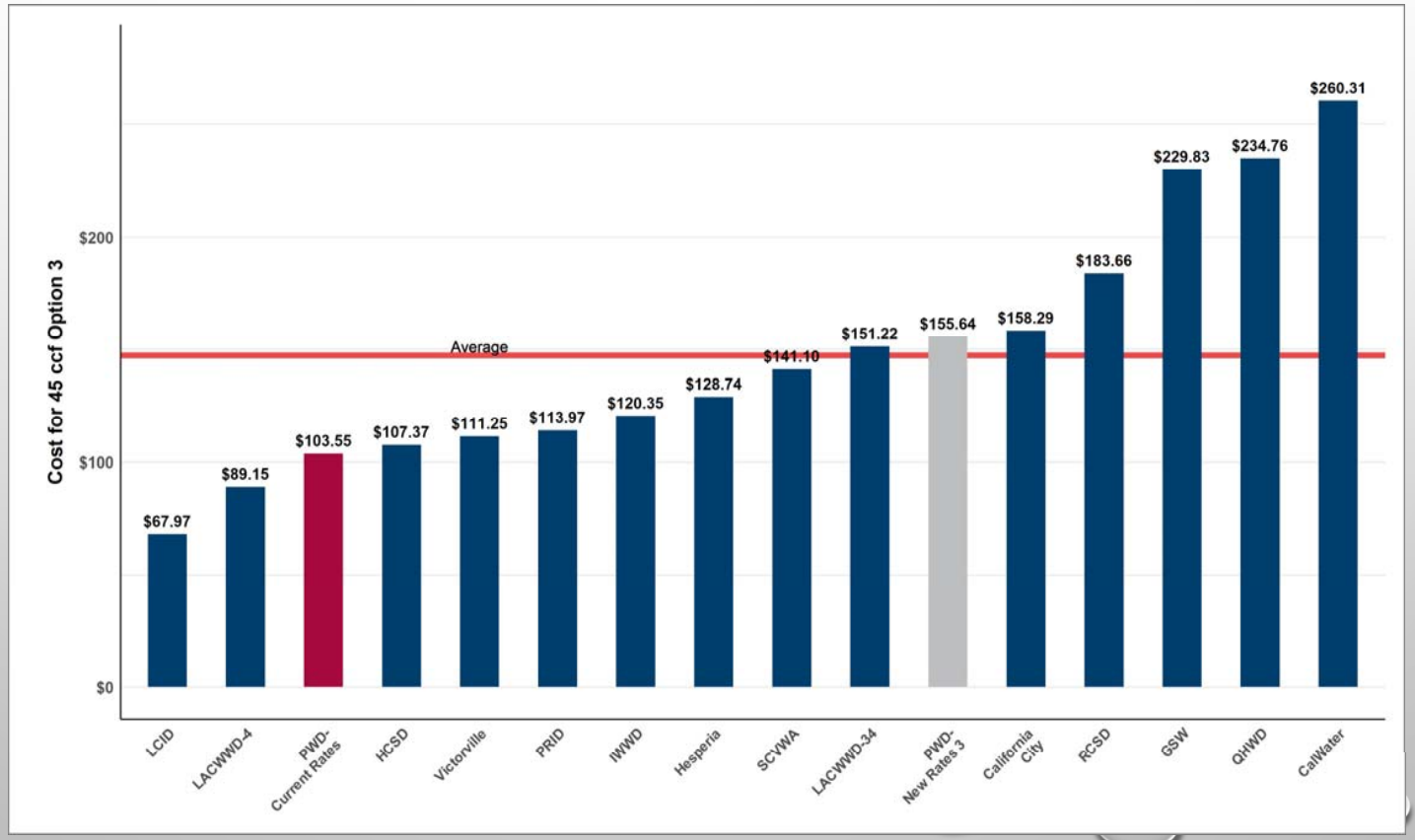
RATE COMPARISON STUDY

Rate Comparison @ 45 hcf – Option 1



RATE COMPARISON STUDY

Rate Comparison @ 45 hcf – Option 3



QUESTIONS

