

# CONSUMPTION-BASED FIXED REVENUE

A novel, equitable approach to  
financial sustainability

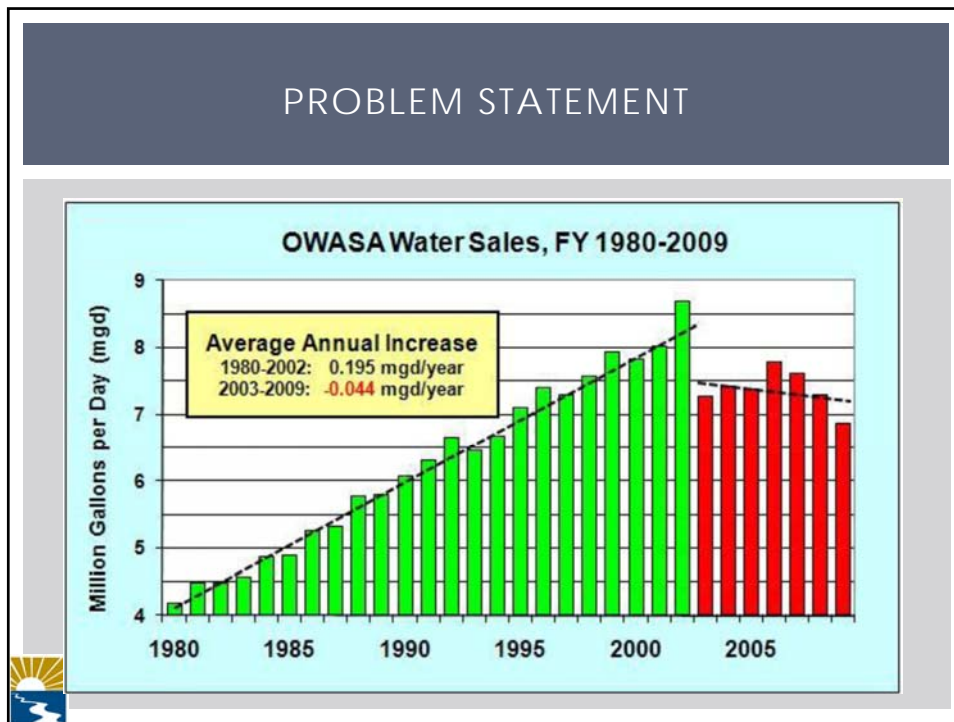
Matt Williams, MBA  
Davis resident

Frank Loge, PhD  
Civil & Environmental Engineering, Professor  
UC Davis Center for Water-Energy Efficiency, Director

## PROBLEM STATEMENT

- The efficiency of urban water use has been increasing between 1995 and 2005.
- Urban water use in California fell by nearly 25 percent from 247 to 201 gallons per person per day.

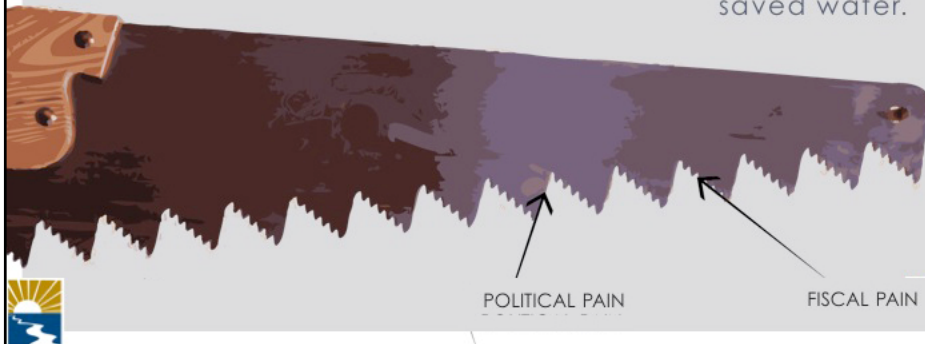




- ### PROBLEM STATEMENT
- The efficiency of urban water use has been increasing between 1995 and 2005.
  - Urban water use in California fell by nearly 25 percent from 247 to 201 gallons per person per day
  - When customers reduce water use, utilities lose money because they cannot cover their fixed costs, which for most utilities are the majority of total costs.

## PROBLEM STATEMENT

- To eliminate losses, utilities then use rate increases which send confusing messages to water users.
- Instead of being rewarded for their behavior, customers are actually charged more after they have successfully saved water.



## SOLUTION STATEMENT

- The solution we propose is simply an extension of water budgets, in that it is allocating the fixed costs on a budget, as well as the variable costs.
- To truly achieve Prop 218 proportionality, we think the major consideration in any analysis of residential connections is the idea of actual water use relative to potential water use of each given account.



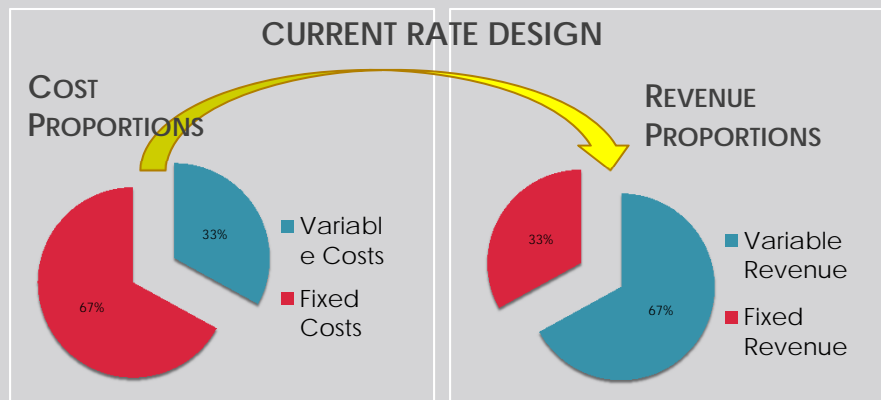
## WHEN WATER AGENCIES CREATE WATER RATE STRUCTURES, THEY ARE FORCED TO DEAL WITH THREE COMPETING FORCES

- California Constitution Article XIII (Prop 218)** -- The requirements of Proposition 218 passed in 1996 by California voters, which created the California Constitution article XIII D, section 6 ... specifically that property-related fees, such as water service fees, shall not exceed the proportional cost of providing the service attributable to a parcel
- California Constitution Article X Water Section 2** -- The provisions of California Constitution article X, section 2, which create the framework within which public agencies must establish and enforce water conservation measures and are charged with the responsibility of managing water resources, and
- Fiscal Responsibility** – with the two key components being FISCAL STABILITY and FISCAL SUSTAINABILITY



## FIXED VS. VARIABLE ... COST VS. REVENUES

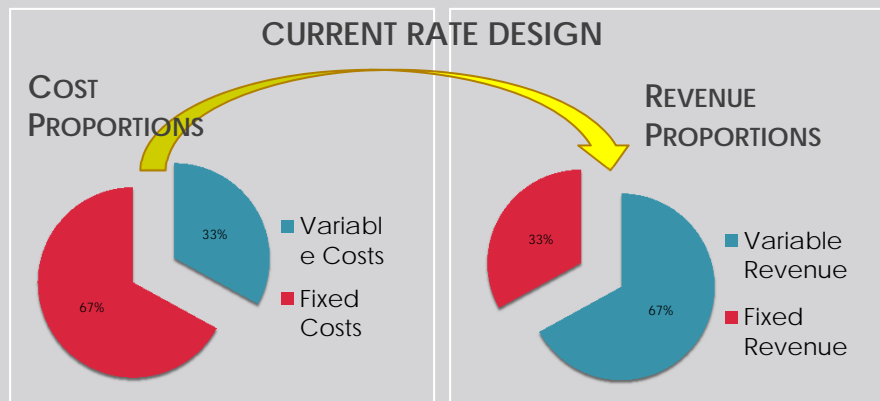
- For every \$2.00 of revenue lost to conservation...



- Only \$1.00 of Cost is saved...

## FIXED VS. VARIABLE ... COST VS. REVENUES

- For Agencies this disconnect means a STRUCTURAL DEFICIT...



- And the more we conserve, the more DEFICIT we create

## DEALING WITH A STRUCTURAL DEFICIT

- Build a cushion ("gouge" customers in early years?)
- Run with the deficit and/or draw down reserves
- Go back to the consumers frequently with a new rate structure with higher rates

NONE OF THESE OPTIONS MEET THE STANDARD OF PROVIDING  
REASONABLE AND STABLE WATER RATES FOR THE CONSUMER AND...  
ALL ARE POLITICAL DYNAMITE




# CREATING CONSUMPTION-BASED FIXED REVENUE

A step by  
step  
process

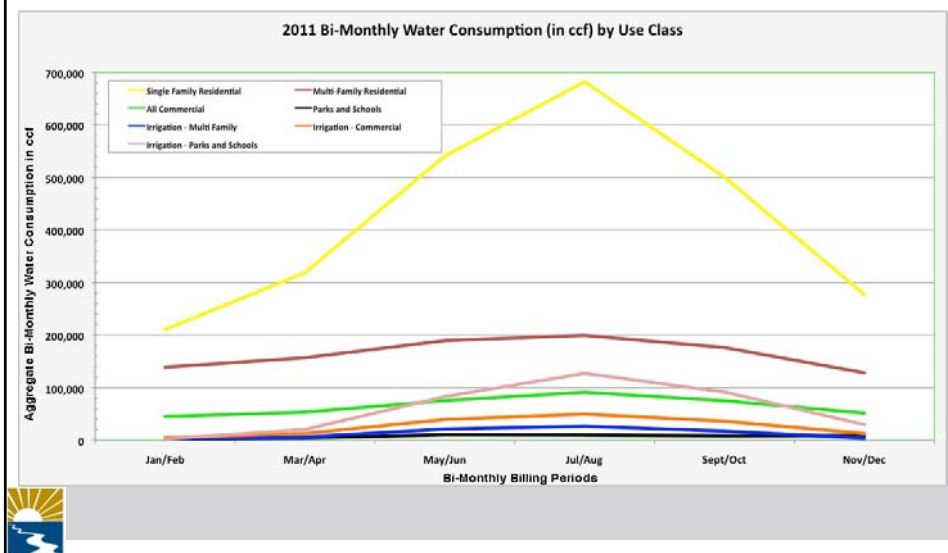


## (1) CHOOSE REPRESENTATIVE PERIOD

2011							
Class	Jan/Feb	Mar/Apr	May/Jun	Jul/Aug	Sept/Oct	Nov/Dec	Total
Single Family Residential	209,572	316,471	536,079	676,186	497,243	275,765	2,511,316
La Buena Vida (SFR)	2,083	2,984	5,188	6,436	3,800	2,353	22,844
Multi-Family Residential	137,573	155,415	188,376	198,744	174,755	127,190	982,053
Small Commercial	29,395	35,359	49,068	60,096	48,852	33,372	256,142
Large Commercial	18,476	22,971	34,815	39,148	34,039	22,347	171,796
Irrigation	7,091	27,955	83,722	109,950	73,548	25,734	328,000
City Domestic	468	793	2,199	1,749	1,657	5,646	12,512
City Irrigation	2,307	12,203	61,391	95,268	72,801	21,305	265,275
<b>Total</b>	<b>406,965</b>	<b>574,151</b>	<b>960,838</b>	<b>1,187,577</b>	<b>906,695</b>	<b>513,712</b>	<b>4,549,938</b>



## (1) CHOOSE REPRESENTATIVE PERIOD



## (2) CALCULATE ALLOCATION PROPORTIONS

2011						Average
Class	Jul/Aug	Total	Annual Proportion	Jul/Aug Proportion	Accounts	Account Allocation
Single Family Residential	676,186	2,511,316	55.2%	56.8%	14,395	0.003834%
La Buena Vida (SFR)	6,436	22,844	0.5%	0.5%	342	0.001468%
Multi-Family Residential	198,744	982,053	21.6%	16.7%	517	0.041748%
Small Commercial	60,096	256,142	5.6%	5.0%	558	0.010089%
Large Commercial	39,148	171,796	3.8%	3.3%	131	0.028823%
Irrigation	109,950	328,000	7.2%	9.2%	255	0.028270%
City Domestic	1,749	12,512	0.3%	0.5%	26	0.010577%
City Irrigation	95,268	265,275	5.8%	8.0%	208	0.028030%
Total	1,187,577	4,549,938	100.0%	100.0%	16,432	

### (3) IDENTIFY & BUDGET FIXED & VARIABLE COSTS

Budgeted Expense	2011/12 Budget	Estimated Fixed %	Estimated Variable %	Estimated Fixed \$	Estimated Variable \$
<b>FUND 511 - Water Operations</b>					
1110-7252 Miscellaneous	\$351,260	60%	40%	\$211,000	\$141,000
7520 Utility Resources Management	\$370,745	80%	20%	\$297,000	\$74,000
7522 Water Production	\$2,869,635	50%	50%	\$1,435,000	\$1,435,000
7523 Water Distribution	\$2,053,439	50%	50%	\$1,027,000	\$1,027,000
7526 Cross-Connection Control	\$121,296	100%	0%	\$121,000	\$0
7527 Fire Hydrant Maintenance	\$702,217	100%	0%	\$702,000	\$0
7528 Water Conservation	\$0	50%	50%	\$0	\$0
7529 New Services/Meter Install	\$16,906	100%	0%	\$17,000	\$0
7531 North Davis Meadows	\$86,732	100%	0%	\$87,000	\$0
7536 Water Support - City Facilities	\$45,395	100%	0%	\$45,000	\$0
7565 Water Inter-Department Charges	\$234,119	100%	0%	\$234,000	\$0
7602 - 8543 Miscellaneous	\$329,924	60%	40%	\$198,000	\$132,000
8835 Debt Service	\$163,789	100%	0%	\$164,000	\$0
9895 Transfer to Capital Replacement Fund 512	\$2,767,268	80%	20%	\$2,214,000	\$553,000
<b>Total</b>	<b>10,112,725</b>			<b>\$6,752,000</b>	<b>\$3,362,000</b>
<b>Percentage Split</b>				<b>67%</b>	<b>33%</b>
<b>FUND 512 - Water Capital Replacement</b>					
7520 Utility Resources Management	\$70,000	80%	20%	\$56,000	\$14,000
8110-8217 Capital Replacement Misc.	\$2,981,603	80%	20%	\$2,385,000	\$596,000
8543 JPA Contribution	\$4,275,000	90%	10%	\$3,848,000	\$428,000
8836 - 8840 Debt Service	\$1,042,154	100%	0%	\$1,042,000	\$0
9895 Transfer from Fund 511	(\$2,767,268)	80%	20%	(\$2,214,000)	(\$553,000)
<b>Total</b>	<b>\$5,601,489</b>			<b>\$5,117,000</b>	<b>\$485,000</b>
<b>Percentage Split</b>				<b>91%</b>	<b>9%</b>
<b>FUND 513 - Water Capital Expansion</b>					
8110-8185 Capital Expansion	\$349,533	100%	0%	\$350,000	\$0
8543-8552 JPA Contribution	\$0	100%	0%	\$0	\$0
8836 Debt Service	\$302,416	100%	0%	\$302,000	\$0
9895 Contribution transfer from ?????	(\$150,000)	100%	0%	(\$150,000)	\$0
8223-8225 Capital Expansion	\$1,015,000	100%	0%	\$1,015,000	\$0
<b>Total</b>	<b>\$1,516,949</b>			<b>\$1,517,000</b>	<b>\$0</b>
<b>Percentage Split</b>				<b>100%</b>	<b>0%</b>
<b>Total All Water Funds</b>	<b>\$17,231,163</b>			<b>\$13,386,000</b>	<b>\$3,847,000</b>
<b>Percentage Split</b>				<b>78%</b>	<b>22%</b>

### (3) ALLOCATE FIXED COSTS

2011 Class	Accounts	Average Account Allocation	Fixed Costs Proportion
Single Family Residential	14,395	0.003834%	\$ 3,726,734
La Buena Vida (SFR)	342	0.001468%	\$ 33,900
Multi-Family Residential	517	0.041748%	\$ 1,457,343
Small Commercial	558	0.010089%	\$ 380,109
Large Commercial	131	0.028823%	\$ 254,941
Irrigation	255	0.028270%	\$ 486,744
City Domestic	26	0.010577%	\$ 18,568
City Irrigation	208	0.028030%	\$ 393,661
<b>Total</b>	<b>16,432</b>		<b>\$ 6,752,000</b>



## RECOVERING FIXED COSTS

### Meter Capacity Basis

Pie represents total fixed charges

- Most widely used method
- Simple to understand
- Each meter size further subdivided

### Consumption Based-Fixed

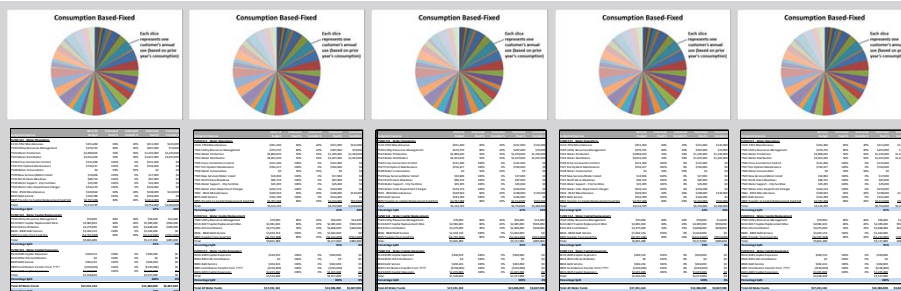
Pie represents total fixed charges

- Supports Fiscal Stability and Sustainability
- Expands conservation message to "stewardship of collective asset"

## (4) VARIABLE COSTS PROPORTIONALITY

	2011		Variable	
		CCF	Costs	Variable
Class	Accounts	Total	Proportion	\$ per CCF
Single Family Residential	14,395	2,511,316	\$ 1,855,640	\$ 0.7389
La Buena Vida (SFR)	342	22,844	\$ 16,880	\$ 0.7389
Multi-Family Residential	517	982,053	\$ 725,650	\$ 0.7389
Small Commercial	558	256,142	\$ 189,266	\$ 0.7389
Large Commercial	131	171,796	\$ 126,942	\$ 0.7389
Irrigation	255	328,000	\$ 242,363	\$ 0.7389
City Domestic	26	12,512	\$ 9,245	\$ 0.7389
City Irrigation	208	265,275	\$ 196,014	\$ 0.7389
<b>Total</b>	<b>16,432</b>	<b>4,549,938</b>	<b>\$ 3,362,000</b>	

## (5) ANNUAL REALLOCATION OF FIXED COSTS



Annual Reallocation means:

- ✓ 100% of each Fiscal Year's Fixed Costs are covered
- ✓ Water Conservers are rewarded for positive actions



## PROBLEMS AREN'T ONLY FISCAL

- Aggregate subsidization between classes

Class	Current Fees	New Fees	Change	Subsidization
Large Commercial	\$ 398,675	\$ 453,057	\$ 54,382	13.6%
Small Commercial	\$ 672,576	\$ 749,412	\$ 76,836	11.4%
Church	\$ 37,693	\$ 48,930	\$ 11,237	29.8%
Parks	\$ 569,866	\$ 783,419	\$ 213,554	37.5%
Schools	\$ 240,377	\$ 324,257	\$ 83,880	34.9%
Multi-Family Residential	\$ 2,079,206	\$ 1,898,314	\$ (180,893)	-8.7%
Multi-Family Residential - Irrigation	\$ 140,076	\$ 210,322	\$ 70,246	50.1%
Single Family Residential	\$ 6,245,047	\$ 6,018,411	\$ (226,636)	-3.6%



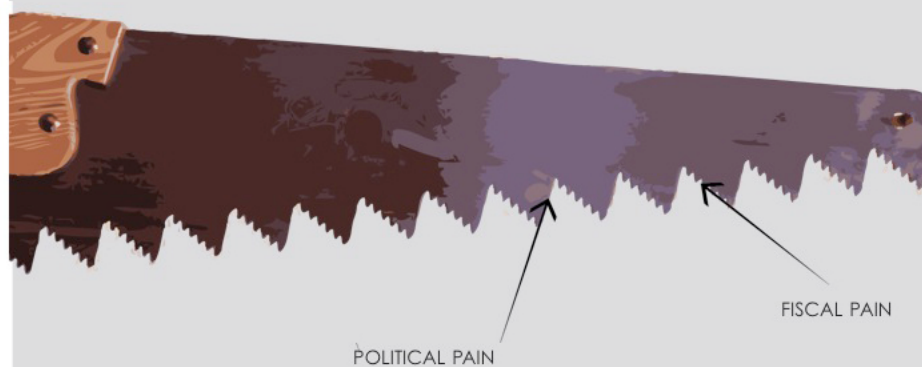
## ARGUABLY, SETTING FIXED FEES BY METER SIZE FAILS PROPOSITION 218'S PROPORTIONALITY TEST

- It requires low-water-use customers to pay fixed costs for water they have the theoretical potential to use, but do not have the actual capacity to use.
- It gives those customers who use a larger "share" of the water infrastructure (based on meter size) an incentive to do so.
- Thrifty and extravagant water users pay the same fixed fee, but derive entirely different benefits from the system.
- The thrifty user's fixed fees cover some of the fixed costs the wasteful user imparts on the system, in effect subsidizing the water waster.



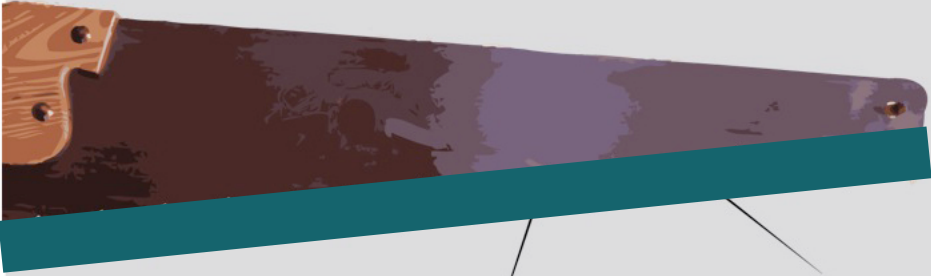
## SOLUTION STATEMENT

- Balance is achieved between competing objectives




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NO POLITICAL PAIN

NO FISCAL PAIN



## FUNDING IMPACT

- 100% volumetric for purposes of BMP-1 compliance.
- Full access to State Revolving Fund financing.
- Five year stable rate structure means more reliable revenue stream for bond funding.
- More Revenue Bond funding rather than General Obligation Bond funding
- Lower interest rates for bond funding



# QUESTIONS?



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Matt Williams  
mattwill@pacbell.net  
Frank Loge, PhD  
UC Davis Center for Water-Energy Efficiency, Director  
[floge@ucdavis.edu](mailto:floge@ucdavis.edu)

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