

# **Long-Term Financial Stability Workshop**

Long-term financial planning tool  
Affordability of EBMUD bill

# 3 Long-Term Financial Stability and Affordability Workshops



- Workshop #1 November 28, 2017
  - Long-term financial planning tool
  - Affordability for ratepayers
- Workshop #2 January 23, 2018
  - CA Low Income Rate Assistance Program (LIRA)
  - EBMUD Customer Assistance Program (CAP)
  - EBMUD payment plans and deposits
- Workshop #3 February 27, 2018
  - EBMUD shutoffs, key performance indicators, water use efficiency, outreach, education, and partnerships

# Workshop Agenda



- I. Overview of water system long-term financial planning tool
  - Key financial inputs and factors
  - Sample model runs
  - Link to System Capacity Charges
  
- II. Affordability of EBMUD bills for ratepayers
  - EBMUD charges for basic needs and typical/high use
  - EBMUD bimonthly bill
  - Agency Billing (sewer collection charges)

# Long Range Financial Plan



## I. Introducing the 20-year Water System Financial Planning Tool

# Basic Inputs of Water System Financial Planning Tool



## • Data Sources

- Growth assumptions
- Labor assumptions
- Outstanding debt
- Long Term CIP

## • Policy Parameters

- Debt service coverage
- Working capital
- Rate Stabilization Fund

## • Planning Factors

- CIP implementation rate
- Debt percentage
- Cost of future debt issuance
- Revenue structure
- Revenue growth

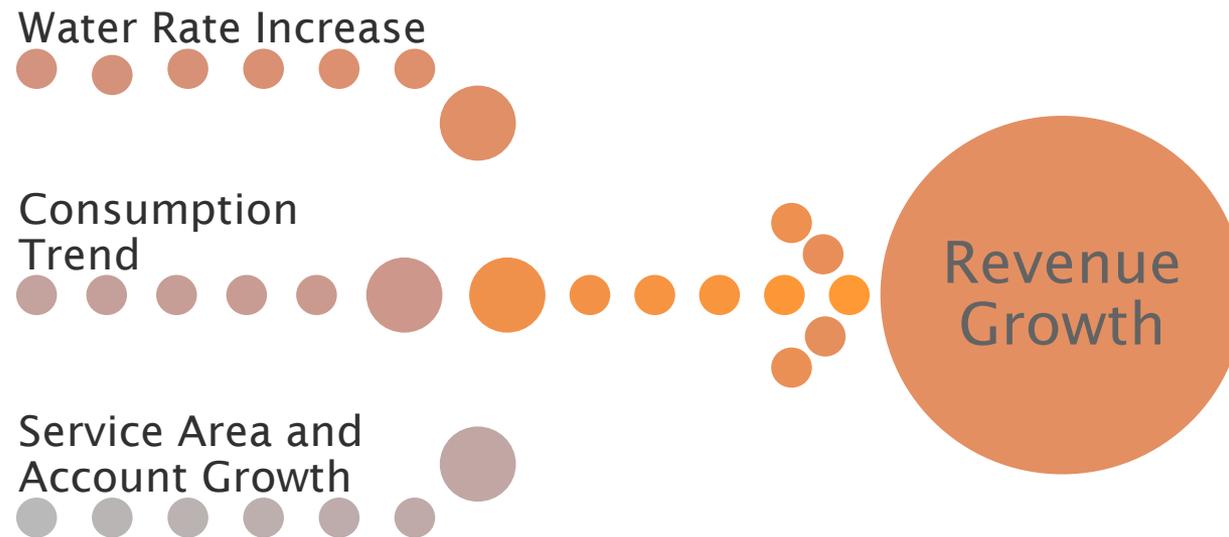
# Use of Financial Planning Tool



- Illustrates consequences of financial decisions
  - Allows changes to one or more Financial Planning Factors
    - Shows financial impact of the changes
    - Shows financial feasibility of the changes

# Key Considerations are Revenue Growth Assumptions

- Revenue growth is not just rate increases but is a close proxy



- Assumptions of low consumption & low account growth place increased financial pressure on rates

- Decision-making factors are interrelated
    - More debt funding
      - lowers near-term cash needs
      - lowers near-term revenue growth needs
- but*
- increases future expenses
  - reduces future debt (borrowing) capacity
  - reduce coverage ratio

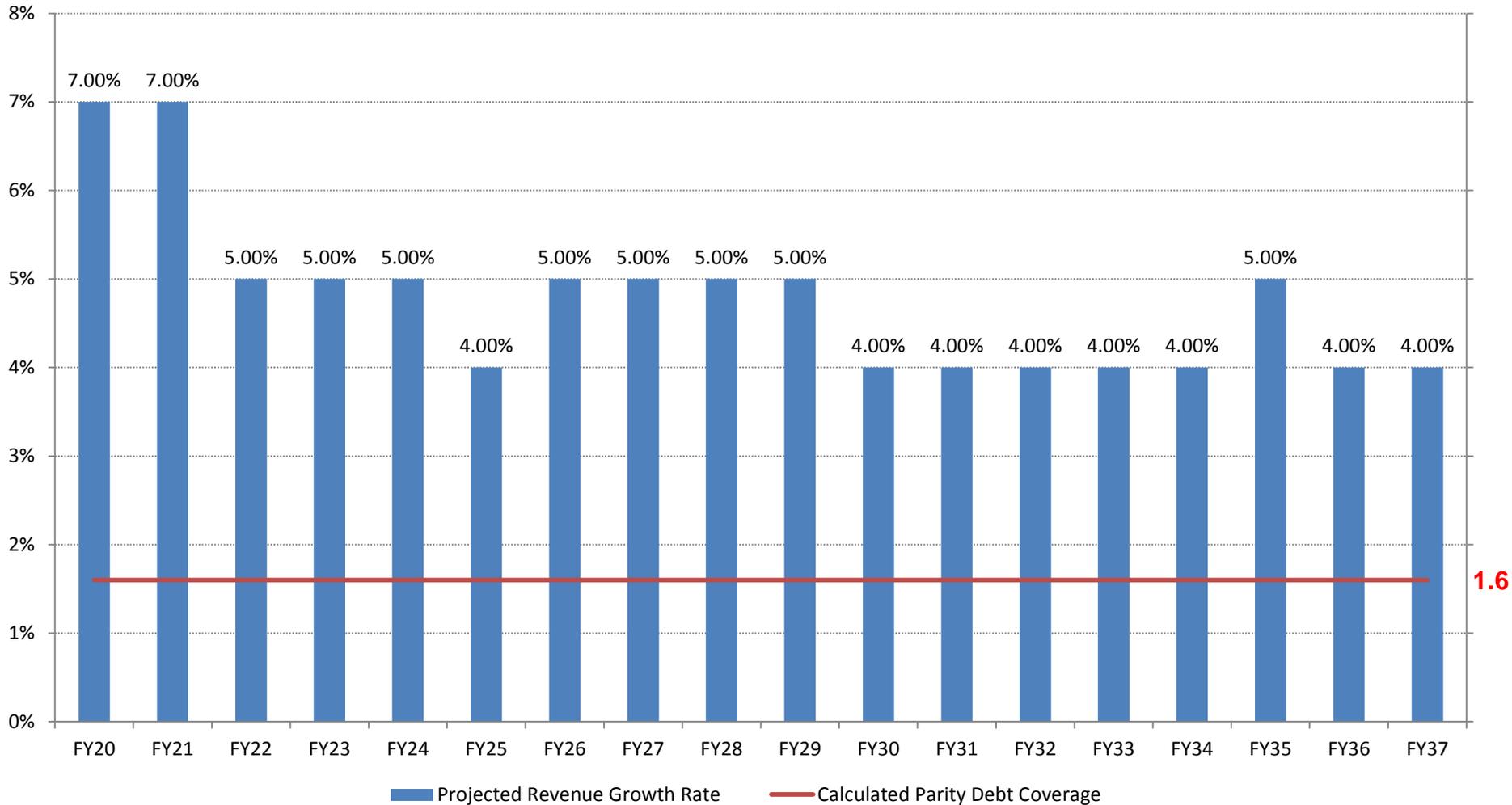
- Large shocks to any parameters can be absorbed over long-term
    - initially show stress in the forecast (compounded by desire to limit large rate increases)
- but*
- can be accommodated through smoothing rate increases over the long term

# Sample Model Run #1: Inputs



- Using Historical Strategic Planning Factors Data
  - CIP implementation rate **current**
  - Debt-financed percentage **historical**
  - Interest rate for future debt **budgeted**
  - Percent of fixed revenues **actual**
  - Percent of volumetric revenues **actual**
  - Water demand growth **budgeted**
  - Revenue growth maximum **capped**
  - Debt Service Coverage Ratio **minimum**

# Sample Model Run #1: Results

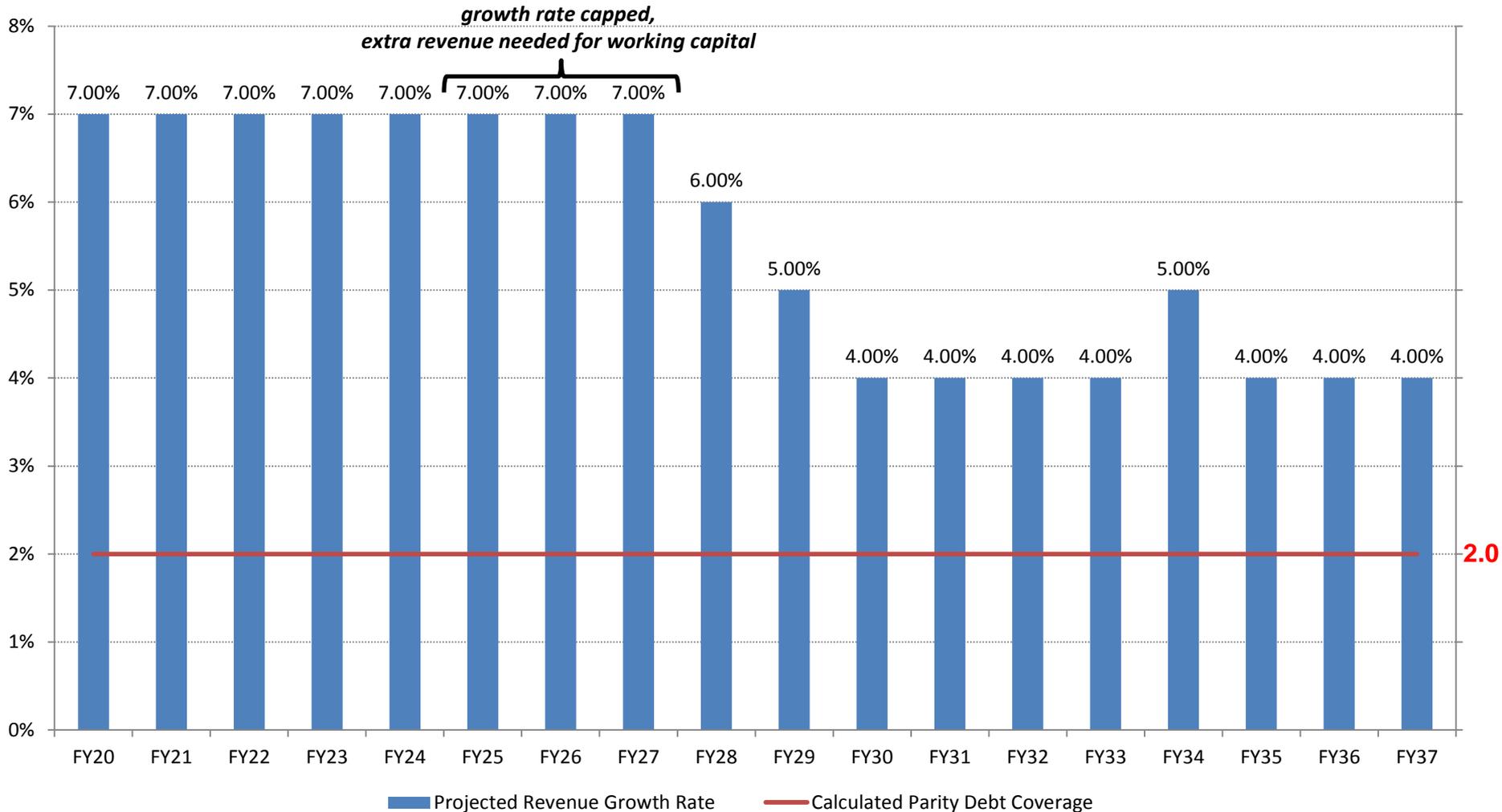


# Sample Model Run #2: Inputs



- Using Accelerated Strategic Planning Factors Data
  - CIP implementation rate increased
  - Debt-financed percentage lowered
  - Interest rate for future debt budgeted
  - Percent of fixed revenues actual
  - Percent of volumetric revenues actual
  - Water demand growth budgeted
  - Revenue growth maximum capped
  - Debt Service Coverage Ratio increased

# Sample Model Run #2: Results



# Drought Modeling Takeaways



- 3-year drought/7-year recovery was run
- Drought period impact
  - Drought rates and RSF are main tools
- Recovery period impact
  - Higher rate increases than projected to restore financial health
  - Can rely on increased borrowing – capacity limits may exist
  - Critical to replenish reserves
    - Multiple sequential drought events would compound issues

# Financial Planning Tool

## Conclusions



- Model runs show we will be able to meet CIP implementation goals with 4% -7% rate increases
- Need to stay on sound financial path we have been on (↑ Debt Coverage, ↓ Debt Funding)
- Biggest threat is drought or other similar event which disrupts water sales
  - Drought rates, strong reserves, and creation of borrowing capacity will all help
  - Sequential drought may disrupt rate plans

# System Capacity Charge



- Overview of structure and methodology of SCC
- Estimating future SCC projections
- Pilot for micro units



# System Capacity Charge Structure and Methodology



- Started in 1983 (1987 wastewater)
- Assessed on new connections or increased demand to recover cost of system investments
- Three water component costs: system-wide, regional, and future water supply
- Based on expected water use by customer class and SCC region
- SCC revenue pays a portion of annual debt service and cash funds capital rehab projects

# SCC Calculated from Expected Consumption and Unit Costs



SCC Region	System-Wide/ Regional/ FWS \$/100 gpd	SFR Expected Consump gpd	SFR SCC	MFR Expected Consump per Dwelling Unit gpd	MFR SCC per Dwelling Unit
Region 1	\$5,979	280	\$16,740	163	\$10,200
Region 2	8,067	360	29,040	168	14,160
Region 3	6,388	580	37,050	199	13,300

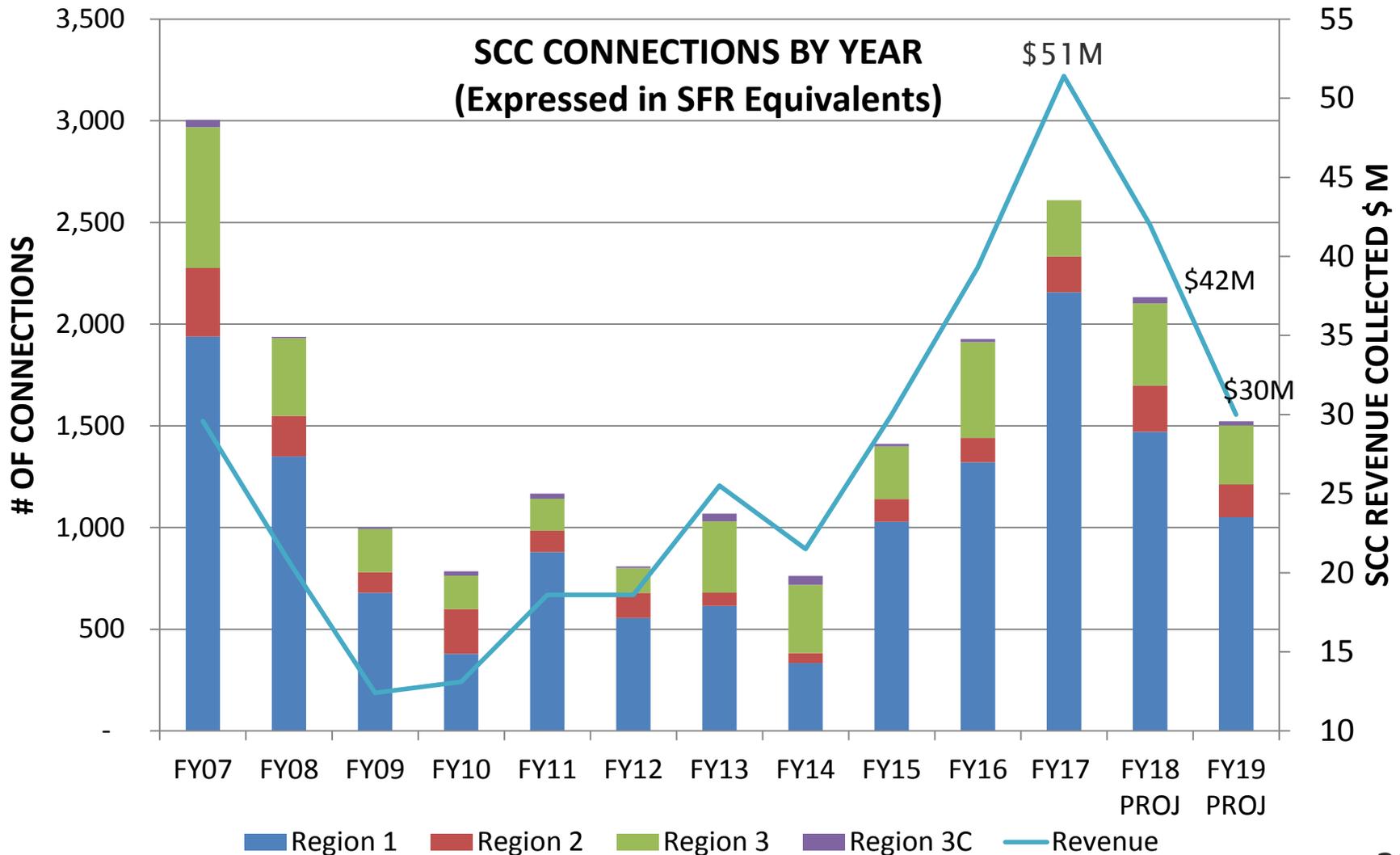
Commercial (over 1.5") SCC based on District review of applicant's expected water use gpd

# Estimating Future SCC Projections



- Contingent upon building/economic trends and timing of specific development projects
- Historic SCC data and trends
- Consideration from regional projections from ABAG and LAFCO, building permits, development community feedback
- SCC credits for infill development adds a variable to projections
- “Boom and Bust” cycles

# Historic SCC Collections



# Micro Unit Pilot



- Objective is to evaluate how micro unit projects should be addressed in the SCC
  - Evaluate gpd of micro units projects during pilot
- District is currently updating the system wide water demands - will be incorporated into a comprehensive update to the SCC
- Timeline
  - Micro Unit Pilot – 2018/2019
  - Demand study – 2019
  - SCC COS – 2020
  - Proposed adoption - 2021



# Affordability for Ratepayers



## II. Affordability for ratepayers

# Is Water and Wastewater Service Affordable?



- Most common test of W and WW affordability is annual bill  $\leq$  4.5% of median household (MHI) income\*
  - Assumes W bill  $\leq$  2.5% of MHI and WW bill  $\leq$  2% of MHI
  - Note that half of the population earns less than the median
  - Include all W and WW charges - sewer collection charges
- The cost of W and WW services is 2.2% of MHI in Alameda County and 1.9% of MHI in Contra Costa County
  - Represents combined W and WW bill based on typical use and including agency sewer collection charge in each county

\* US Environmental Protection Agency



# Median Household Income Varies in Service Area



Place*	County	Median household income
<a href="#">Piedmont</a>	<a href="#">Alameda</a>	\$212,222
<a href="#">Orinda</a>	<a href="#">Contra Costa</a>	\$166,866
<a href="#">Alamo</a>	<a href="#">Contra Costa</a>	\$163,151
<a href="#">Danville</a>	<a href="#">Contra Costa</a>	\$140,616
<a href="#">Lafayette</a>	<a href="#">Contra Costa</a>	\$138,073
<a href="#">Moraga</a>	<a href="#">Contra Costa</a>	\$132,651
<a href="#">Hercules</a>	<a href="#">Contra Costa</a>	\$100,267
<a href="#">El Cerrito</a>	<a href="#">Contra Costa</a>	\$88,380
<a href="#">Castro Valley</a>	<a href="#">Alameda</a>	\$83,442
<a href="#">Walnut Creek</a>	<a href="#">Contra Costa</a>	\$80,399
<a href="#">Albany</a>	<a href="#">Alameda</a>	\$78,769
<a href="#">Alameda</a>	<a href="#">Alameda</a>	\$75,763

Place*	County	Median household income
<a href="#">Pinole</a>	<a href="#">Contra Costa</a>	\$74,379
<a href="#">San Lorenzo</a>	<a href="#">Alameda</a>	\$74,283
<a href="#">Emeryville</a>	<a href="#">Alameda</a>	\$69,329
<a href="#">Berkeley</a>	<a href="#">Alameda</a>	\$65,283
<a href="#">San Leandro</a>	<a href="#">Alameda</a>	\$64,279
<a href="#">El Sobrante</a>	<a href="#">Contra Costa</a>	\$60,732
<a href="#">Richmond</a>	<a href="#">Contra Costa</a>	\$54,857
<a href="#">Oakland</a>	<a href="#">Alameda</a>	\$52,962
<a href="#">Cherryland</a>	<a href="#">Alameda</a>	\$50,374
<a href="#">Ashland</a>	<a href="#">Alameda</a>	\$45,074
<a href="#">San Pablo</a>	<a href="#">Contra Costa</a>	\$42,746

\*Selected cities

# Household Income Distribution and Utility Burden - Alameda County



Income Range	% of Households	% of Income for W and WW - Typical Use	% of Income for W and WW - Basic Needs	% of Income for W and WW Basic Needs CAP Customers
Less than \$10,000	5.3%	15.8%	10.6%	8.0%
\$10,000 to \$14,999	4.5%	10.5%	7.1%	5.3%
\$15,000 to \$24,999	7.7%	6.3%	4.2%	3.2%
\$25,000 to \$34,999	7.0%	4.5%	3.0%	2.3%
\$35,000 to \$49,999	9.9%	3.2%	2.1%	1.6%
\$50,000 to \$74,999	15.3%	2.1%	1.4%	1.1%
\$75,000 to \$99,999	11.9%	1.6%	1.1%	0.8%
\$100,000 to \$149,999	17.5%	1.1%	0.7%	0.5%
\$150,000 to \$199,999	9.4%	0.8%	0.5%	0.4%
<b>MEDIAN of \$75,619</b>	--	<b>2.1%</b>	<b>1.4%</b>	<b>1.1%</b>

Note: Includes multi-family households that do not directly pay EBMUD bill and uses top end of each income range 25

# Water Affordability – Basic Needs



- World Health Organization's standard for basic human needs is 13-26 gallons per person per day
  - 25 gpd = 1 CCF/person/month
- Cost of water use for basic needs
  - 3 CCF per month for household, (1 CCF per person for a household of 3)
  - \$1.08 per day (\$0.36 per person per day) or \$32.95/month
  - \$0.11-\$0.13 per day for each additional CCF or \$4/month for an additional person
- Conservatively, at basic needs level of use, ~9% of Alameda County households in District service area pay more than 2.5% of their income toward water service

# Single Family Residential Water Use Distribution



SUMMARY SFR QUARTILES		
SFR Consumption Level*	Annual Use CCF	Equivalent Monthly Use CCF
25%	48	4
50% (median use)	72	6
75%	120	10
95%	264	22
Average SFR**	96	8

\*Represents historical average single-family residential use. District customers have conserved 13% over 2013 average use to date so average use is currently lower the historical average.

\*\*While average SFR currently uses 8 CCF/month, we have used 9 CCF/month for examples used in this workshop for ease of illustration as 3 times 3 CCF/month basic needs use.

# Water Affordability – Typical Use



- Affordability of typical example household water use
  - 9 CCF per month for a household, (3 CCF/person for a household of 3)
  - \$1.85/day (\$0.62/person/day) or **\$56.23/month**
  - \$0.13-\$0.16/day for each additional CCF

# EBMUD Wastewater Treatment Service



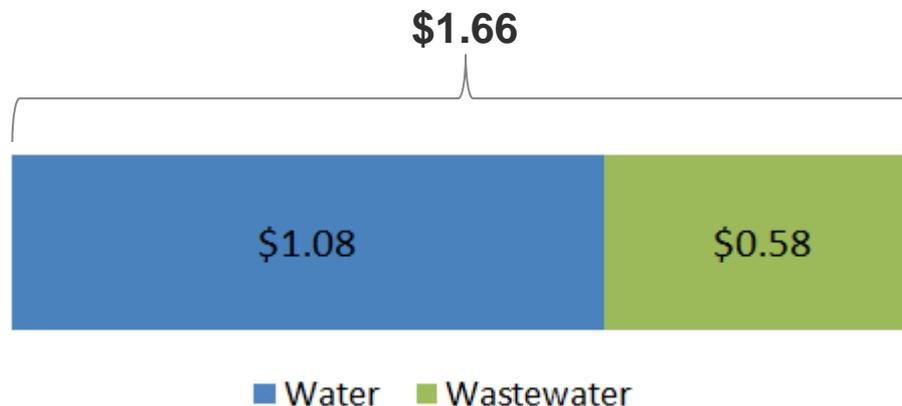
- A portion of District Water customers (~140,000 SFR accounts) are also Wastewater customers
- These customers have combined bills with both Water and Wastewater charges from the District



# Affordability of Combined Water and Wastewater Bill – Basic Needs



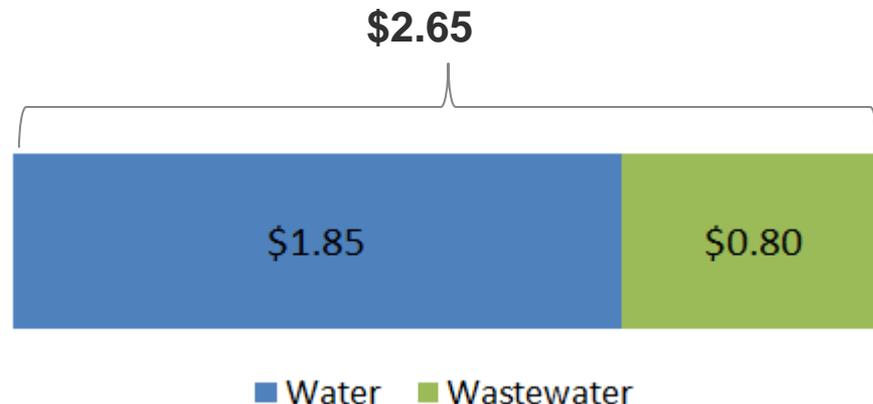
- Combined W and WW bill for basic needs
  - What the customer gets:
    - 3 CCF/month for household, (1 CCF/person for a household of 3)
    - Wastewater treatment
  - What it costs:
    - \$1.66 per day (\$0.55/person/day) or **\$50.42/month**
    - \$0.15-\$0.17/day for each additional CCF or **~\$5/month** for each person over 3



# Affordability of Combined Water and Wastewater Bill – Typical Use



- Combined W and WW bill for typical example household use
  - What the customer gets:
    - 9 CCF, (3 CCF/person for a household of 3)
    - Wastewater treatment
  - What it costs:
    - \$2.65 per day (\$0.88/person/day) or **\$80.54/month**
    - \$0.16-\$0.17/day for each additional CCF or **~\$5/month** for each person over 3



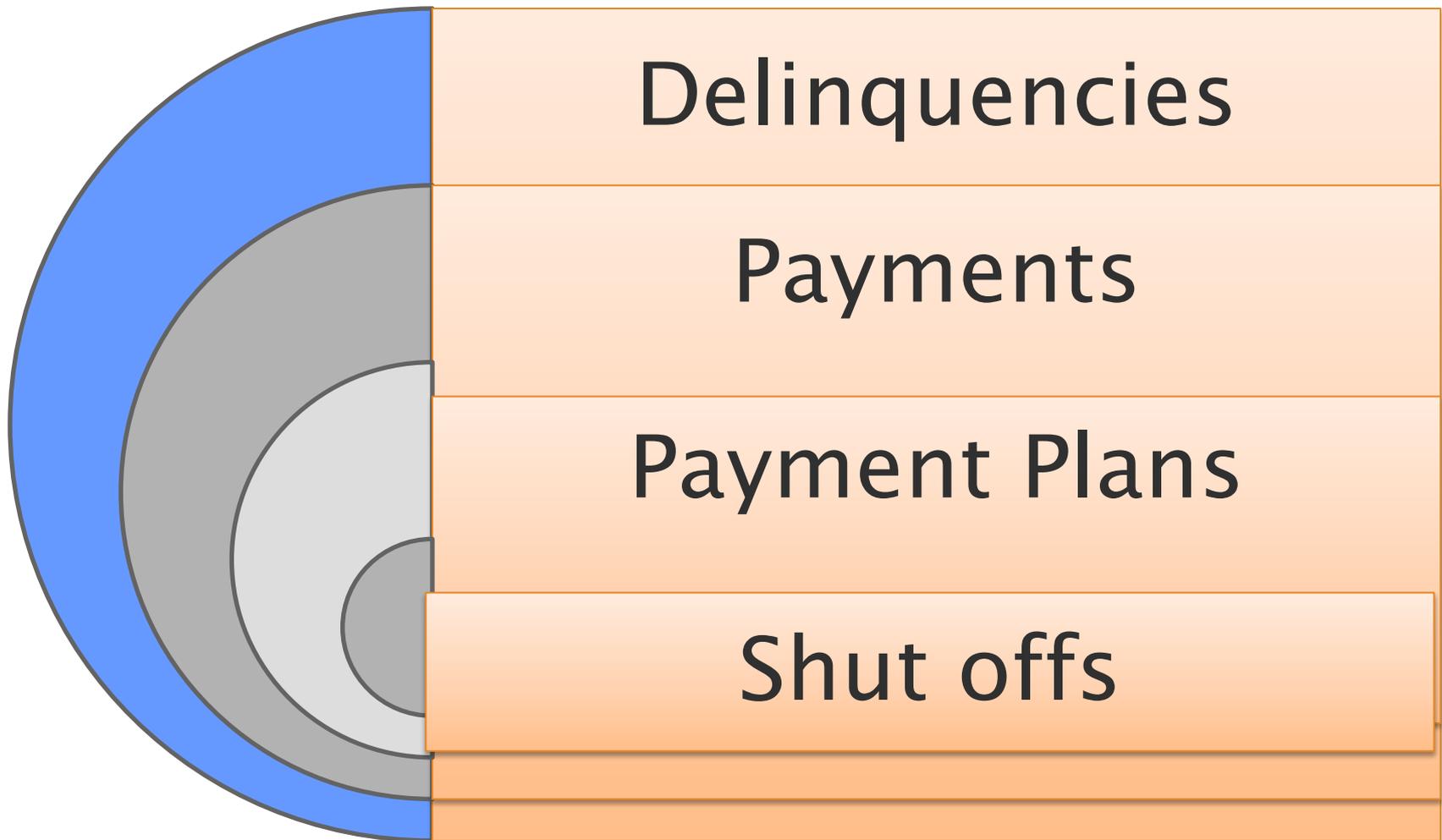
# Is EBMUD Service Affordable?



- Yes, for the majority of our customers our services are affordable, for those with very low incomes we have the CAP and the State is working on LIRA
- Basic W and WW needs cost roughly the same as a 20 oz. bottle of water per day
  - Assumes basic needs water use for a household of three
- Typical W and WW usage level costs roughly the same as large cup of coffee per day
  - Assumes typical water use for a household of three



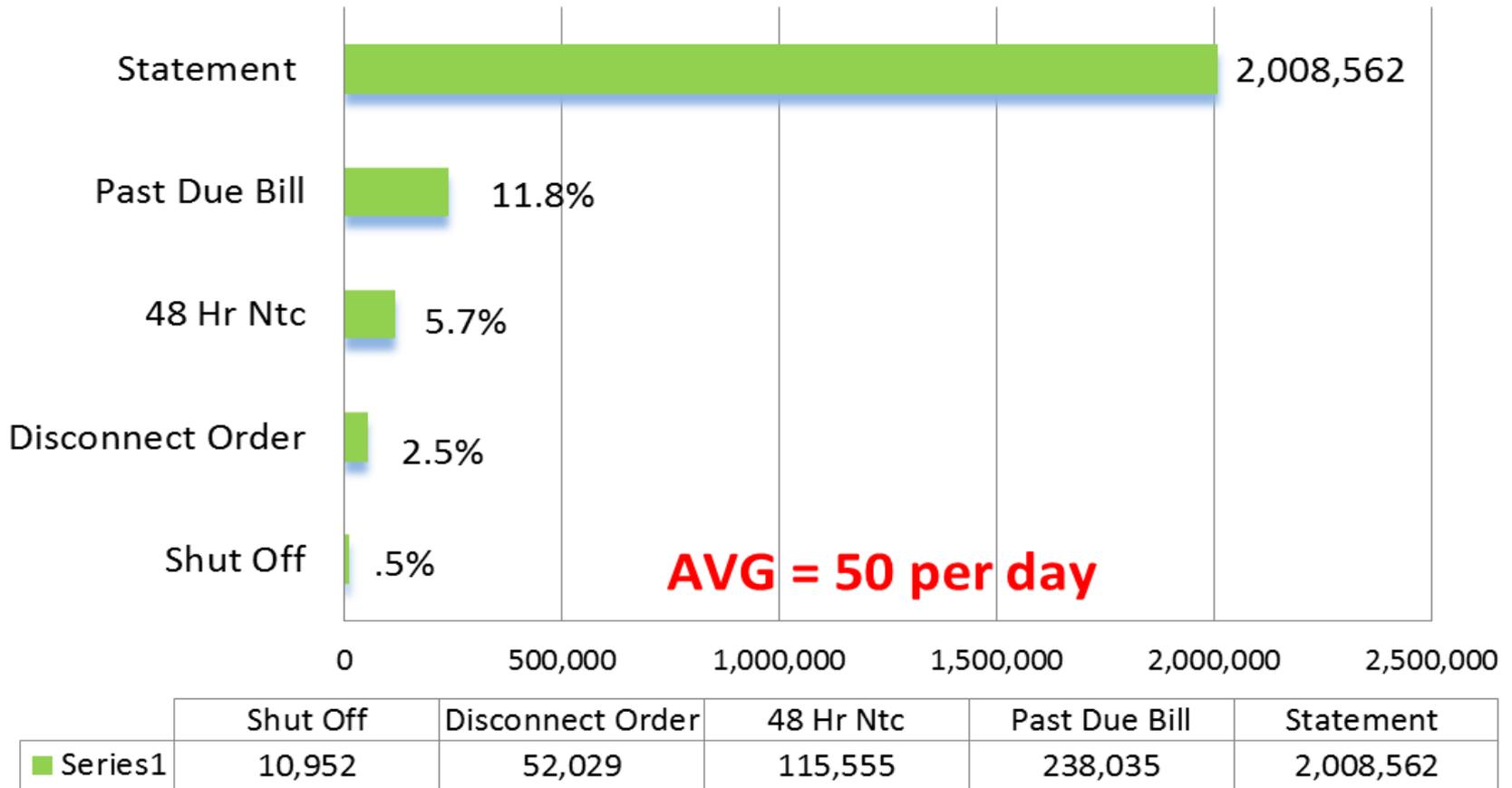
# Single Family Residential (SFR) Billing Statistics



# Delinquencies FY17



## All Single Family Residential Customers

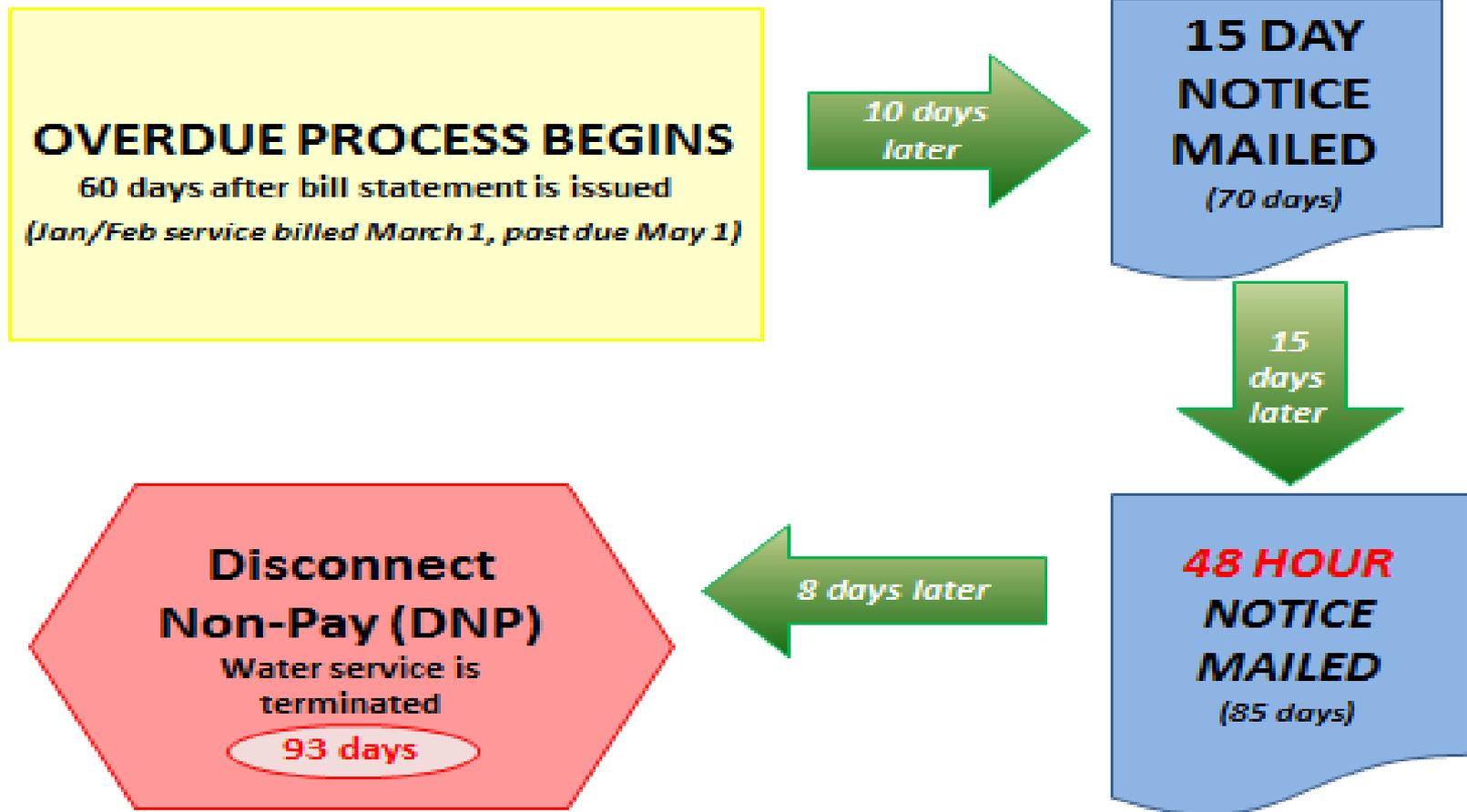


\* Over 90% of shut-offs are restored

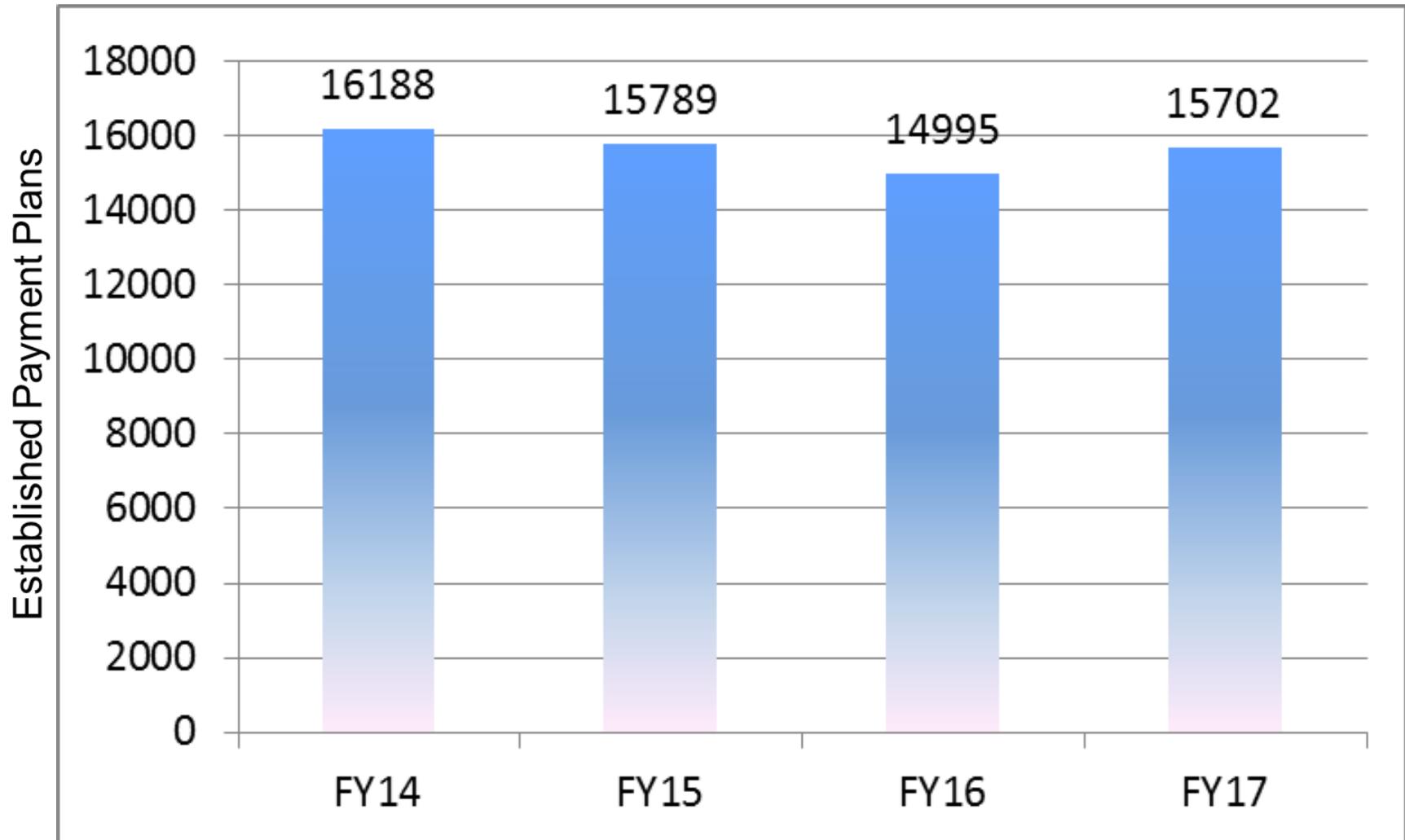
# Overdue Process



Effective process for customer notification prior to shut-off.



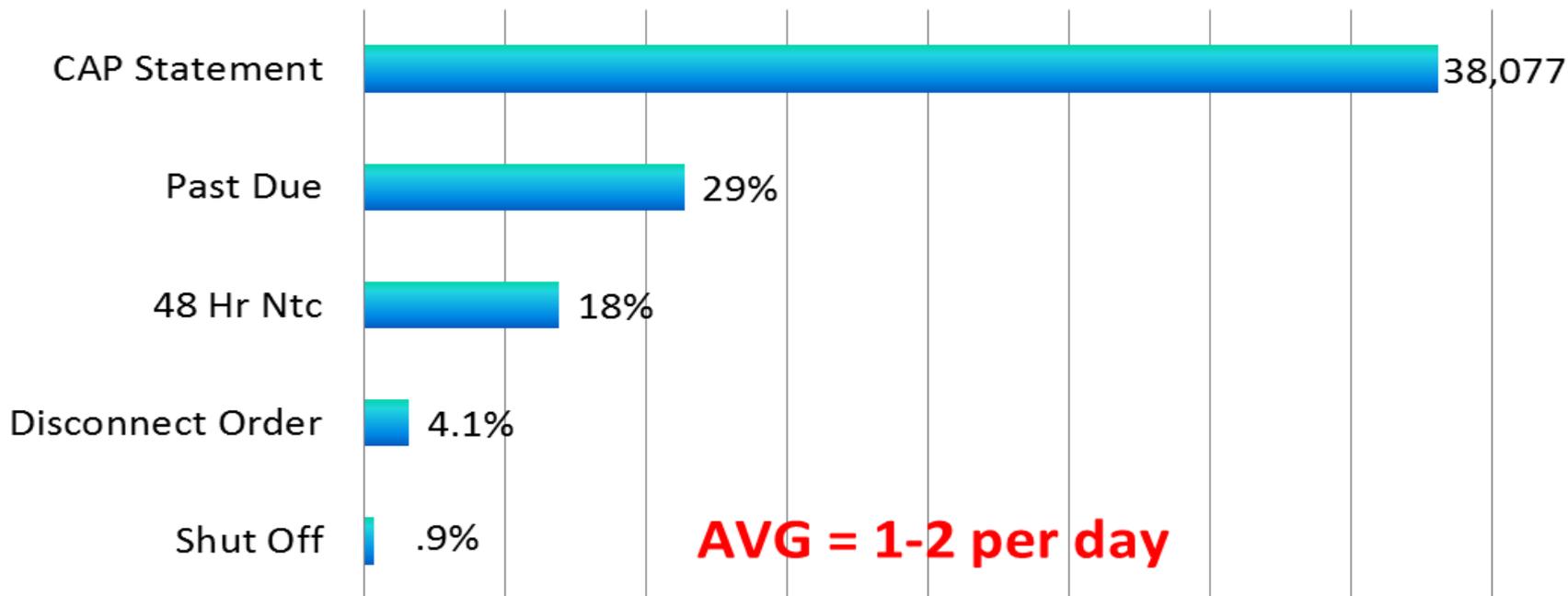
# Annual Customer Payment Plans FY14 - FY17



# CAP Customer Delinquencies FY17



## CAP Customers



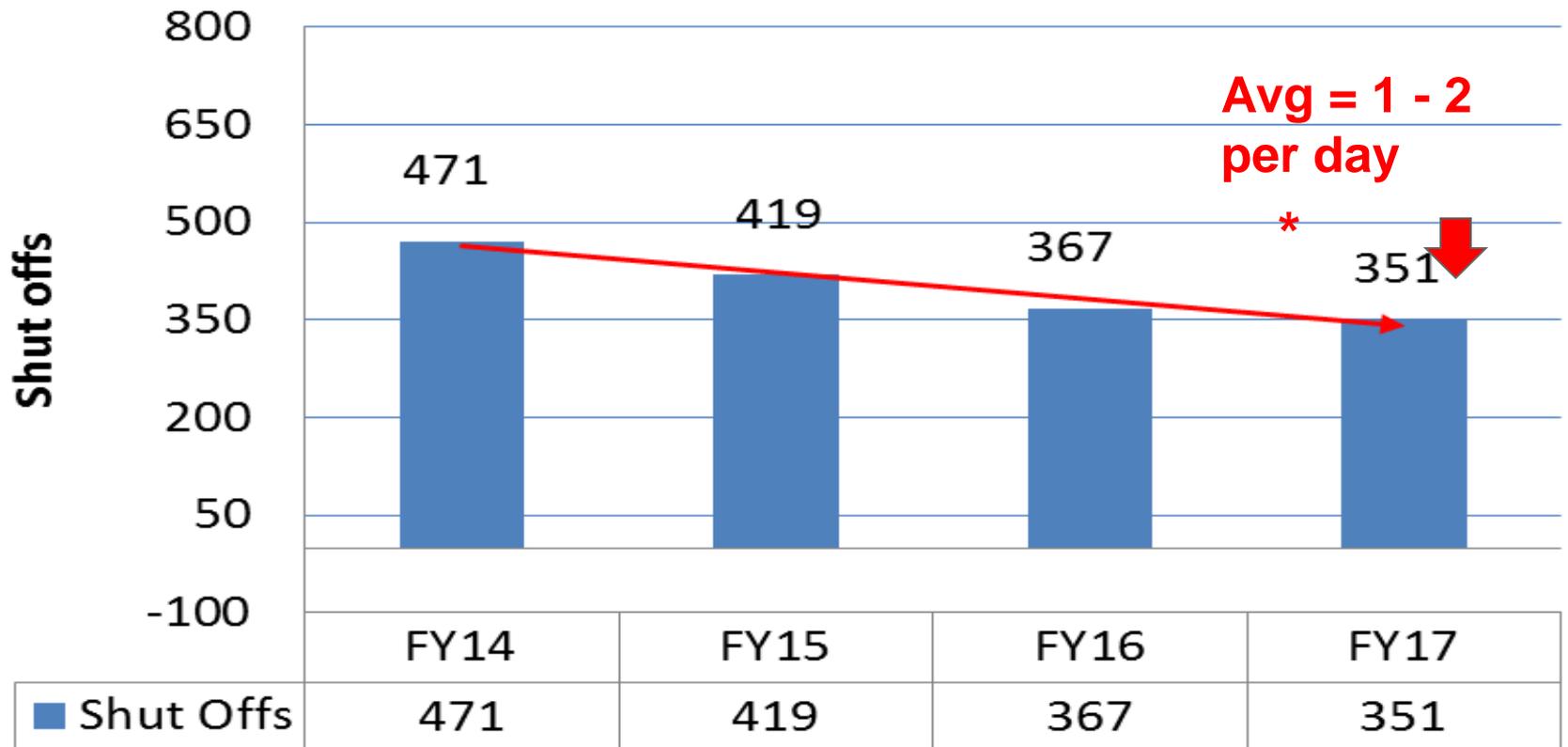
	Shut Off	Disconnect Order	48 Hr Ntc	Past Due	CAP Statement
Series1	351	1,588	6,927	11,363	38,077

\* Over 90% of shut-offs are restored

# CAP Customer Annual Shut Offs FY14 - FY17



## Annual CAP Shut Offs



**\* 25% reduction within last 3 years**

# Summary SFR Billing Statistics



Water and wastewater charges are affordable:

- 99.5% of SFR bills are paid or establish payment plans
- Very small % of shut-offs
- Services are available to assist low income customers to maintain water service
- We have made progress to reduce shut-offs and will continue to identify enhancements

# BREAK!



# Affordability Considerations



- Bimonthly Billing – Affects how bill is perceived
- Bill Format – Affects how bill is perceived
- Agency Billing – Affects affordability and how bill is perceived
- Rate Structure – Affects affordability
- EBMUD Payment Plans Deposits
- EBMUD Low Income Program (CAP)
- EBMUD Delinquent Process and Shutoffs, KPIs, Water Use Efficiency
- State’s LIRA initiative

Will be Discussed in Workshops 2 and 3

# Recap Affordability - Total Bill at Basic Needs and Typical Level



		EBMUD Monthly			Oakland	Total	Total	Total
Use		W	WW	EBMUD Total	Sewer	Daily Bill	Monthly Bill	Bimonthly Bill
Basic Needs	3 CCF	\$32.95	\$17.47	\$50.42	\$37.57	\$2.89	\$87.99	\$175.98
Typical	9 CCF	56.23	24.31	\$80.54	\$37.57	\$3.88	\$118.11	\$236.22
		EBMUD Monthly			Berkeley	Total	Total	Total
Use		W	WW	EBMUD Total	Sewer	Daily Bill	Monthly Bill	Bimonthly Bill
Basic Needs	3 CCF	\$32.95	\$17.47	\$50.42	\$16.92	\$2.21	\$67.34	\$134.68
Typical	9 CCF	56.23	24.31	\$80.54	\$50.76	\$4.31	\$131.30	\$262.60

Note high level of fixed charge for Oakland sewer collection leads to small difference between Basic Needs and Typical Use in Oakland. Further, sewer agencies do not have CAP programs.

# Bimonthly Billing Affects How Bill is Perceived



- District W service costs just
  - \$1.08 per day for basic needs
  - \$1.85 per day for typical use
- District W and WW service cost
  - \$1.66 per day for basic needs
  - \$2.65 per day for typical use
- The District bills residential customers every two months
  - Two months worth of charges at once
  - Bills other charges on behalf of outside agencies

**EAST BAY MUNICIPAL UTILITY DISTRICT**  
 EBMUD 1-866-40-EBMUD YOUR ACCOUNT NO. IS: 12345678001

Next Read Date is 01/16/2018  
 Your Payment is Due by 12/04/2017  
 Enroll in paperless bills! Make your water bill payments in a flash, with zero fees and zero trees required. With our new secure payment service, you can schedule automatic payments from your bank account, pay by text message or log in online to pay wherever you are. Sign up at ebmud.com/Zero.

Bill Date: 11/17/17  
 Billing Period: 9/14/17 to 11/13/17

For: 1234 Pipeline St Private Residence

	AMOUNT	TOTAL
<b>PREVIOUS CHARGES AND CREDITS</b>		
PREVIOUS AMOUNT DUE	269.40	
FULL PAYMENT - 09/25/17	-269.40	0.00
<b>WATER CHARGES - EBMUD</b>		
WATER SERVICE CHARGE	45.20	
WATER FLOW CHARGE 14 UNITS @3.45	48.30	
4 UNITS @4.74	18.96	112.46
<b>WASTEWATER CHARGES - EBMUD</b>		
WASTEWATER TREATMENT CHARGE	48.22	
SF BAY POLLUTION PREVENTION FEE	0.40	48.62
<b>CITY OF OAKLAND SEWER SERVICE</b>		75.14
<b>PLEASE SEE REVERSE SIDE FOR BILLING EXPLANATION</b>		<b>236.22</b>

METER SIZE	ELEV. Band	METER READINGS Current	METER READINGS Previous	UNITS	CONSUMPTION Gallons	INFORMATION Days	Gal/Day
5/8 inch	1	2,699	2,681	18	13,464	60	224
		LAST	YEAR	18	13,464	60	224

PLEASE DETACH AND RETURN THIS PAYMENT STUB WITH CHECK OR MONEY ORDER PAYABLE TO EBMUD  
 1234 Pipeline St, Oakland, CA 946051234 9/14/17 11/14/17 ACCOUNT NO: 12345678001

Pay by credit/ATM/e-check for a fee. Call 1-888-963-0909

Mail payment to: EBMUD PAYMENT CENTER  
 PO BOX 1000  
 OAKLAND CA 94649-0001

TOTAL PREVIOUS 0.00  
 TOTAL CURRENT 236.22

Please Pay This Amount Now Due **236.22**

# Other Agency Charges Affects How Bill is Perceived



Current **EBMUD** Charges (Bimonthly):  
 18 hundred cubic feet (CCF)  
 (9 CCF/mo, about 225 gpd)

Water \$112.46  
 Wastewater \$48.62  
**EBMUD TOTAL CHARGES \$161.08**

**City of Oakland Sewer Service Charge**  
**\$75.14**

**EBMUD CHARGES \$161.08**  
**CITY OF OAKLAND CHARGES \$75.14**  
**TOTAL BILL \$236.22**



Next Read Date is 01/16/2018  
 Your Payment is Due by 12/04/2017  
 Enroll in paperless bills! Make your water bill payments in a flash, with zero fees and zero trees required. With our new secure payment service, you can schedule automatic payments from your bank account, pay by text message or log in online to pay wherever you are. Sign up at ebmud.com/Zero.

Florence Waters 1234 Pipeline St OAKLAND, CA 94605-1234		Bill Date: 11/17/17
		Billing Period
		From To
		9/14/17 11/13/17
For: 1234 Pipeline St Private Residence	AMOUNT	TOTAL
<b>PREVIOUS CHARGES AND CREDITS</b>		
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<b>CITY OF OAKLAND SEWER SERVICE</b>	<b>75.14</b>
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 TOTAL CURRENT 236.22

Please Pay This Amount Now Due **236.22**

# Monthly Billing Considerations



- Moving to true monthly billing doubles
  - Meter reading
  - Cost of billing
- 67% of water utilities nationally have monthly bills
- 25% of local water utilities have monthly billing



# Exploring Monthly Billing – Monthly Meter Reading



Description & Authority	Implementation Cost & Timeline	Considerations
<ul style="list-style-type: none"><li>• Read meter monthly rather than bimonthly and send monthly bills</li><li>• Board approval only</li></ul>	<ul style="list-style-type: none"><li>• ~2 years</li><li>• Double meter reading staff</li><li>• Additional printing, mailing, and customer service costs</li><li>• Total ~10M/year or 2% on rates</li></ul>	<ul style="list-style-type: none"><li>+ More manageable bills</li><li>+ Addresses how bills are perceived</li><li>- Higher staffing, printing and mailing costs</li><li>- Higher expenses = higher overall charges</li></ul>

**Viable/Not Recommended** – AMI pilot results should be considered as part of continued assessment of monthly billing

# Exploring Monthly Billing – Monthly Bill from Bimonthly Reads



Description & Authority	Implementation Cost & Timeline	Considerations
<ul style="list-style-type: none"> <li>• Monthly bill with every other bill off-cycle estimated from past use</li> <li>• On-cycle meter read will true up estimated off-cycle bill</li> <li>• Board approval only</li> </ul>	<ul style="list-style-type: none"> <li>• ~2 years</li> <li>• No additional meter reading costs but additional printing, mailing and customer service costs</li> <li>• Programming costs</li> <li>• Additional CUS and field services staff</li> <li>• Total ~\$7M or 1.5% on rates</li> </ul>	<ul style="list-style-type: none"> <li>+ More manageable bills</li> <li>+ Addresses how bills are perceived</li> <li>- Higher printing and mailing costs</li> <li>- Possible additional customer service costs</li> <li>- Likely complaints about estimated billing</li> <li>- Higher expenses = slightly higher overall charges</li> </ul>

**Viable/Not Recommended** – Estimated bills are unpopular and result in a higher level of customer dissatisfaction

# Exploring Monthly Billing – Bimonthly Bill with 2 Payment Stubs



Description & Authority	Implementation Cost & Timeline	Considerations
<ul style="list-style-type: none"> <li>Bimonthly bill will include 2 payment stubs with 60 day deadline</li> <li>Board approval only</li> </ul>	<ul style="list-style-type: none"> <li>~1 year</li> <li>Reprogramming of billing system</li> <li>Total ~\$1M or 0.2% on rates</li> </ul>	<ul style="list-style-type: none"> <li>+ More manageable bills if customer chooses to pay monthly</li> <li>- Customer confusion about payments</li> <li>- Some increased customer service costs</li> </ul>

**Viable/Not Recommended** – May be confusing to customers; possibility to pay monthly already exists – could advertise this

# Exploring Billing – Moving Service Charge to Property Tax



Description & Authority	Implementation Cost & Timeline	Considerations
<ul style="list-style-type: none"> <li>Remove fixed charges from bill and place on annual property tax bill</li> <li>MUD Act requires every property owner to be customer of record</li> <li>Board approval</li> <li>Coordination with Alameda and Contra Costa Counties</li> </ul>	<ul style="list-style-type: none"> <li>~2 years</li> <li>Extensive preparatory work to finalize parcel and account data</li> <li>Transfer all tenant accounts to owners</li> <li>Ongoing County billing costs ~\$1.4M or 0.3% on rates</li> </ul>	<ul style="list-style-type: none"> <li>+ Reduces bimonthly bill</li> <li>- Increases fees on property tax bill</li> <li>- Landlord responsible for entire bill</li> <li>- Reduces conservation incentive</li> </ul>

**Viable/Not Recommended** – MUD Act implications, conservation implications, and changes landlord-tenant relationship

# Exploring Billing – Revise Bill Presentment on Bimonthly Bills



Description & Authority	Implementation Cost & Timeline	Considerations
<ul style="list-style-type: none"> <li>• Revise how bill is presented                             <ul style="list-style-type: none"> <li>• Clearly show this is a 2 month bill</li> <li>• Clearly identify total EBMUD charge</li> <li>• More clear separate out agency collection charges</li> </ul> </li> <li>• Board approval only</li> </ul>	<ul style="list-style-type: none"> <li>• ~2 years</li> <li>• Effort to decide on bill changes</li> <li>• Some reprogramming of billing system</li> </ul>	<ul style="list-style-type: none"> <li>+ Potentially easier to read</li> <li>+ Could help change how bills are perceived</li> <li>- Does not actually change affordability</li> <li>• Potential roll out with other billing initiatives</li> </ul>

**Recommended** – Low cost potential to clarify bill and change how bills are perceived

# Agency Billing



- A major portion of District bill is not District charges:
  - City of Oakland Sewer Collection Charge                      \$37.57/month
    - \$75.14 on every bi-monthly bill
  - City of Berkeley Sewer Collection Charge                      \$5.65/CCF
    - \$16.92 for 3 CCF, \$50.76 for 9 CCF/month
  - City of Emeryville Sewer Collection Charge                      \$8.72/month
    - \$17.44 on every bi-monthly bill
- In Summary:
  - In Oakland, 32% to 41% of SFR bill is non-District charges
  - In Berkeley, 25% to 39% of SFR bill is non-District charges
  - Roughly 38% of all customers live within one of the three cities

# Exploring Agency Sewer Collection System Charges



- EBMUD collects sewer collection charges for:
  - Berkeley, Oakland, Emeryville; commercial Oro Loma, San Leandro and DSRSD
- Agencies sign agreements with EBMUD collect their charges on our bill (set to expire in 2023)
- None of these agencies offer a CAP
- EBMUD collects fees of \$2.5M annually for these services
- Agencies prefer EBMUD collections to property tax bill collections for timing of revenue receipt and ease

# Exploring Agency Sewer Collection Charges – Require Flow Based Rates



Description & Authority	Implementation Cost & Timeline	Considerations
<ul style="list-style-type: none"><li>• Require agency collection charge to be flow based (like Berkeley)</li><li>• Requires agreement by agencies</li><li>• Agencies would need entire new COS studies and public process</li></ul>	<ul style="list-style-type: none"><li>• Several years</li><li>• May require programming changes</li><li>• Can re-open contracts with 1 year notice but there are significant agency implementation impacts</li></ul>	<ul style="list-style-type: none"><li>+ Benefits low water users</li><li>- Higher outdoor water users could pay higher bills while not actually contributing flows depending on structure</li></ul>

**Not recommended** – EBMUD would be mandating other agencies' rate structures

# Exploring Agency Sewer Collection Charges – Require Distance Based Rates



Description & Authority	Implementation Cost & Timeline	Considerations
<ul style="list-style-type: none"> <li>Require agency collection charge to be based on distance from EBMUD interceptor</li> <li>Requires agreement by cities</li> <li>Agencies would need entire new COS studies and public process</li> </ul>	<ul style="list-style-type: none"> <li>Several years</li> <li>Requires programming changes</li> <li>District can re-open contracts with 1 year notice but there are significant agency implementation impacts</li> </ul>	<ul style="list-style-type: none"> <li>+ Benefits customers close to the interceptors</li> <li>- Increases bills for customers in the hills</li> </ul>

**Not recommended** – EBMUD would be mandating other agencies' rate structures

# Exploring Agency Sewer Collection Charges – Stop Collecting Other Charges



Description & Authority	Implementation Cost & Timeline	Considerations
<ul style="list-style-type: none"> <li>• Terminate contracts when they come due (2023) or with notice</li> <li>• Board authority</li> </ul>	<ul style="list-style-type: none"> <li>• Contracts don't expire right away</li> <li>• District can re-open contracts with 1 year notice but there are significant agency implementation impacts</li> </ul>	<ul style="list-style-type: none"> <li>+ Reduces EBMUD bills for all affected customers</li> <li>- Higher costs ultimately for customers of separate billing/customer service</li> <li>- EBMUD impact ~0.5% on rates</li> </ul>

**Viable/Not Recommended** – Would impact EBMUD relationships with local agencies; could cause them significant cost and effort

# Exploring Agency Sewer Collection Charges – Require EBMUD CAP



Description & Authority	Implementation Cost & Timeline	Considerations
<ul style="list-style-type: none"> <li>Require contracting agencies, who have legal authority to offer financial relief from the payment of sewer rates, to implement a program mirroring the District's CAP, as a condition of contracting for sewer billing services</li> <li>Modify agreements to include sewer billing services and administration of agency's CAP on agency's bill</li> </ul>	<ul style="list-style-type: none"> <li>~2 years</li> <li>District can re-open contracts with 1 year notice</li> <li>Agency implementation impacts</li> </ul>	<ul style="list-style-type: none"> <li>+ Reduces agency sewer collection charges for low income customers</li> <li>- Increases costs to agencies</li> <li>- Will require more process from agencies to implement but likely less than having to replicate full billing and customer service</li> <li>• Agencies' CAP programs may have to differ from the District's in eligibility criteria and the type of assistance provided</li> </ul>

**Recommended** – Effectively mandates CAP as a condition of EBMUD billing; helps low income customers

# Rate Structure Considerations



- Basic water needs affordability
  - As low as \$1.08 per day for water only and \$1.66 per day for W and WW for family of 3
  - CAP eligible customers pay \$0.54 and \$0.92 per day
- Average and high use customers pay more
  - Average use pay 60% more than basic and high use pay 80% more than average



- Current rate structure generates significant rate revenue from all three rate tiers
  - Those who use more pay more
  - Changes to one tier will result in changes to other tiers
  - Any change requires COS analysis

# Current Water Rate Structure



- Fixed charge based on meter size
  - \$22.60 per month for standard SFR
- Tiered volume charge per CCF
  - Tier 1-\$3.45: 7 CCF per month (172 gpd)
  - Tier 2-\$4.74: 16 CCF per month (393 gpd)
  - Tier 3-\$6.27: 16+ CCF per month (393+gpd)

# Proposals to Modify Rate Structure for Affordability



- Reduce Tier 1 volume charge
- Reduce fixed charge and increase volume charge
- Change Tier 1 volume breakpoint based on household size

# Exploring Rate Proposals- Reduce Tier 1 Volume Rate



Description & Authority	Implementation Cost & Timeline	Considerations
<ul style="list-style-type: none"> <li>• Further reduce Tier 1 rate                             <ul style="list-style-type: none"> <li>• Tier 1 use is about 60% of total use and about 50% of total volume revenue</li> <li>• Lower Tier 1 volume rate would require increase to other Tiers</li> </ul> </li> <li>• Requires update to COS analysis</li> </ul>	<ul style="list-style-type: none"> <li>• Could be addressed in next COS update (FY22)</li> <li>• Low implementation cost</li> </ul>	<ul style="list-style-type: none"> <li>+ Low use customers will see a minimal benefit because fixed charge dominates</li> <li>+ Moderate water users likely to benefit the most</li> <li>- High use customers will pay more</li> <li>- Would lose more revenue during droughts</li> </ul>

**Viable/Not Recommended** – Impacts revenue stability particularly during drought; SFR tiers steepened in last COS

# Exploring Rate Proposals – Reduce Fixed/Increase Variable Charges



Description & Authority	Implementation Cost & Timeline	Considerations
<ul style="list-style-type: none"> <li>• Reduce portion of revenues collected on fixed charge                             <ul style="list-style-type: none"> <li>• \$90M SFR fixed revenue</li> <li>• Volume charges will need to be increased</li> </ul> </li> <li>• Requires a new COS analysis and rate structure</li> </ul>	<ul style="list-style-type: none"> <li>• Could be addressed in next COS update (FY22)</li> <li>• Low implementation cost</li> </ul>	<ul style="list-style-type: none"> <li>+ Low use customers will benefit                             <ul style="list-style-type: none"> <li>• Significant portion of the bill for low water users</li> </ul> </li> <li>+ Higher use customers will likely pay more</li> <li>- Impacts revenue stability</li> <li>- Increases need for RSF</li> </ul>

**Viable/Not Recommended Near Term** – Impacts revenue stability particularly during drought; can consider as part of next COS

# Exploring Rate Proposals – Adjust Tier 1 Breakpoint by Household Size



Description & Authority	Implementation Cost & Timeline	Considerations
<ul style="list-style-type: none"> <li>• Adjust Tier 1 for household size</li> <li>• Requires COS justification</li> </ul>	<ul style="list-style-type: none"> <li>• Could be addressed in next COS update (FY22)</li> <li>• Update billing system to create new Tier 1 breakpoints for each household size</li> <li>• Development of a process to determine household size</li> <li>• Relatively low cost</li> </ul>	<ul style="list-style-type: none"> <li>+ Could benefit very large households</li> <li>- No benefit to very low water users</li> <li>- Smaller households with high water use would likely pay more</li> </ul>

**Viable/Not Recommended in Near Term** – Should be reviewed with AMI consideration along with budget based rate structure

- Reviewed new Water System Long-Term Financial Planning Tool
  - Can implement W CIP at current projection levels with increases of 4%-7% barring multiple sequential drought or inflation and make progress on increasing debt coverage and increasing cash funding of CIP
  - Will create an analogous model for WW
- Reviewed SCC
  - SCC update will follow demand study to conclude in 2019
  - Recommend proceeding with proposed Micro Unit pilot

# In Conclusion (cont.)



- EBMUD provides affordable W and WW service but bills can be perceived as high mainly due to bimonthly billing and agency charges
- In near-term recommend
  - Working with agencies on CAP for sewer collection charges
  - Working on billing statement redesign to better highlight charges
  - Continue to look for other cost effective billing alternatives as customers move to online bill receipt
  - Continue with AMI pilot – links to monthly meter reading
  - Continue looking for opportunities to better serve low income customers