



EASTERN MUNICIPAL WATER DISTRICT

Allocation-Based Tiered Rate Structures in the Wake of the San Juan Case

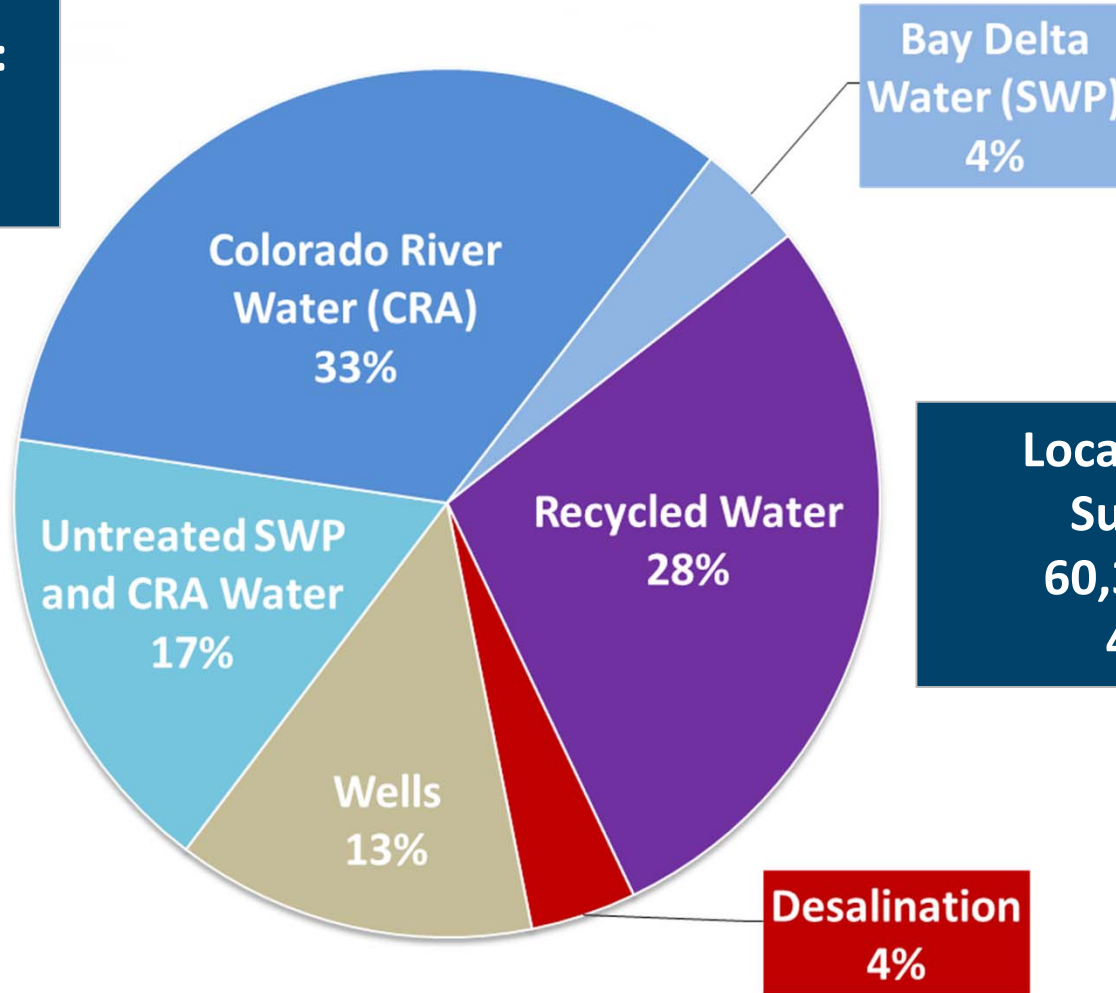
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June 24, 2015

EMWD Water Supply Portfolio (FY 2014)



**Imported Water
Supply from MWD:
71,628 AF
54%**



**Local Water
Supply:
60,367 AF
46%**

**Desalination
4%**

Foundation of EMWD Water Use Efficiency - the Allocation-based Rate Structure



- Commonly Used Names:

- “Allocation-based Rate Structure”
- “Water Budget Rate Structure”
- “Conservation-based Rate Structure”
- “Tiered Rate Structure”

Same Basic Rate Structure

- Creates an “Allocation” or “Water Budget” for each customer account based upon reasonable indoor and outdoor needs and efficient use.

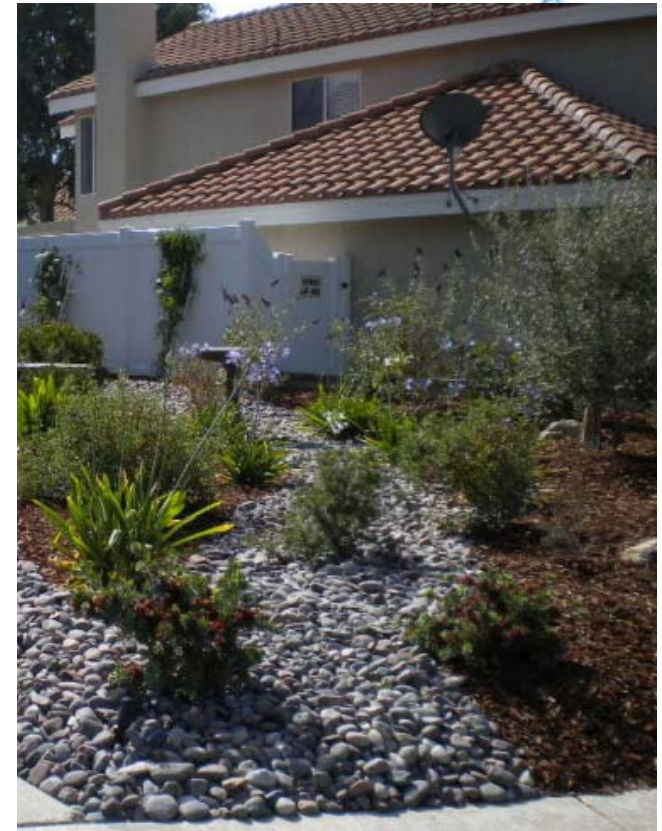
- Uses Economic Incentives: Water is priced to customer *lower for use within allocation* – much *higher for use over allocation*



Unique Features of an Allocation-based Rate Structure



- **Individualized:** based on land-use specific uses (indoor needs) and landscape needs (weather adjusted).
- **Encouraged efficient use pattern:** within allocation through a sharply tiered pricing system
 - Rewards efficiency
 - Communicates cost of water over-use
- **Uses fair premise:** those who over-use pay more, those who use only what they need, pay much less



Unique Features of an Allocation-based Rate Structure



- **Identifies over-use customers:** water bill functions as a “report card” – focus staff resources
- **Provides appropriate nexus:** revenue from over-use tiers reinvested in water use efficiency programs
- **Proven concept:** cited by State Water Resources Control Board as a model structure, University of California Riverside conducting long-term study on impact to efficiency

Identifies excessive and wasteful water use

Provides target for efficiency

Summary of Charges

Balance Forward	0.00
Water Charges	210.79
Sewer Charges	22.37
ACTUAL ACCOUNT BALANCE	233.16

Meter Information

Meter No.	Previous Read	Current Read
01221044	1920	1970

Water Usage History

Read Date	# Days	Billing Units	Usage in Gal. *	Average CPD
Mar 25	28	50	37400	1338
Feb 25	29	11	8228	284
Jan 27	20	11	8220	411

Water Usage Information

INDOOR ALLOCATION	7,853
RESIDENTIAL HOUSEHOLD SPACE	1,000
OUTDOOR ALLOCATION	11,553
LANDSCAPE AREA	6,000

Water Charges

Category	Period/Quantity	Rate/Unit	Amount (\$)
Water Service	20 Day(s)	346/day	9388
Indoor Use	7 billing units	1,301.00/unit	9111
Outdoor Use	18 billing units	2,381.00/unit	42866
Excessive	18 billing units	4,267.00/unit	56477
Wasteful	12 billing units	7,505.00/unit	93866
Total Water Charges	50 billing units		210.79

Current Sewer Charges

Category	Period/Quantity	Rate/Unit	Amount (\$)
Sewer Service	20 Day(s)	7999/day	22377

Summary

Total Current Charges	233.16
ACTUAL ACCOUNT BALANCE	233.16

BILL # 1 – NO VARIANCE

Special Information:
Water Use Efficiency Ordinance 72.23 is now effective!
Penalties may be applied for repeated water waste (runoff).
Water-wise landscaping for new development is now required.
See www.usmwaterwisely.org for more information.

How it Works - EMWD's Individualized Allocations



$$\text{Customer Allocation} = \text{Indoor Needs} + \text{Outdoor Needs (seasonal)} + \text{Variances}$$

• Indoor Water Allocation:

- 60 gallons per capita per day (GPCD)
- Single family residential default = 3 person per household
- Multi-family residential default = 2 person per household
- Additional allocation for **Variances**
 - Persons per household
 - Licensed Care facility
 - Medical needs
 - Other

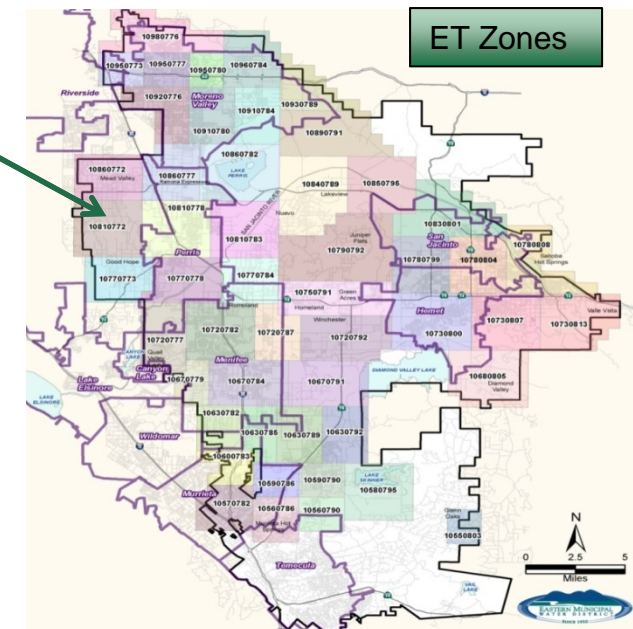
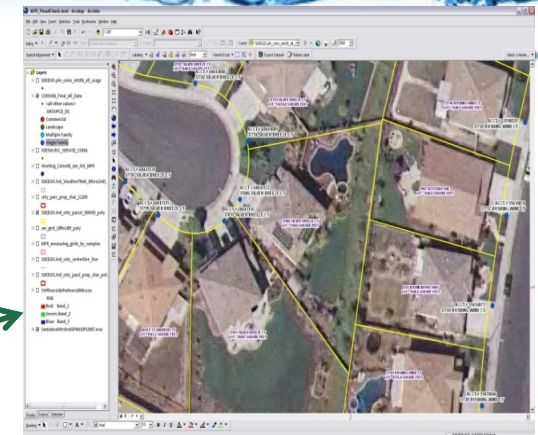


Individualized Allocations (cont'd.)



Outdoor Water Allocation (seasonal):

- Irrigated area and Evapotranspiration (ET)
- Irrigated area is:
 - Area from GIS parcel information
 - Measured using infrared aerial photography
 - Verified in the field where necessary
- Evapotranspiration for 50 separate zones
- Account Adjustment (Conservation) Factor:
 - 1.00 - before September 2008
 - 0.80 - September 2008 and January 2010
 - 0.70 - after January 2010
 - **0.50 - July 6, 2015 (new landscape standards)**



EMWD Sends a Clear Pricing Signal



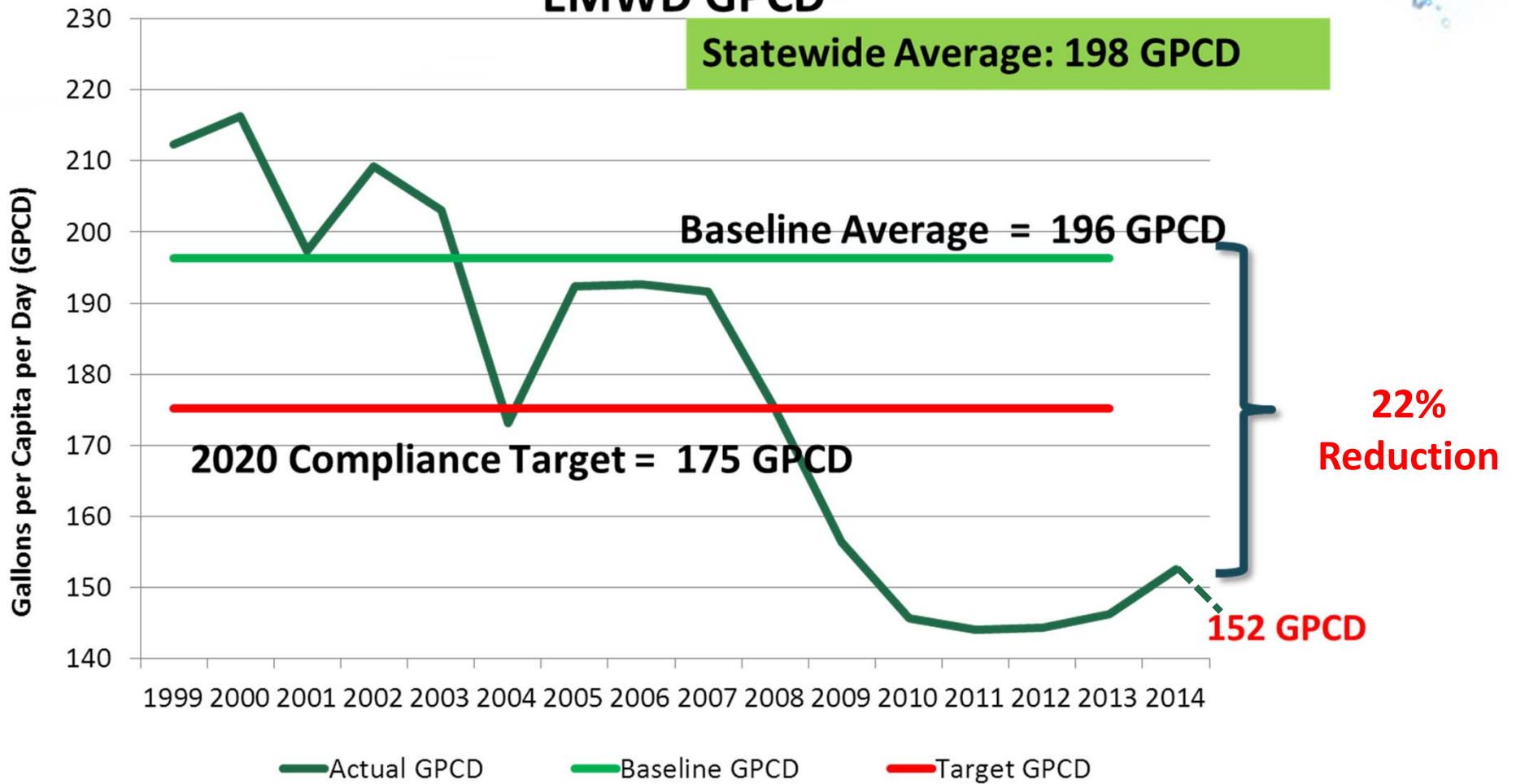
		<u>Price/CCF</u>
Within Allocation	Indoor Usage Budget Persons x 60 GPD	Tier 1: \$1.793
	Outdoor Usage Budget Irrigated Area x ET Factor	Tier 2: \$3.280
Over Allocation	Excessive Use Up to 50% over budget	Tier 3: \$5.879
	Wasteful Use More than 50% over budget	Tier 4: \$10.755

Performance and Demand Reduction



EMWD GPCD

Statewide Average: 198 GPCD



EMWD's Water Shortage Contingency Plan



- Water Shortage Contingency Plan Prioritizes:
 - Public safety, health and welfare
 - Sustaining economic vitality
 - Quality of life
- Five “Stages” of plan tied to supply or regulatory shortages
 - Progressive actions initially focusing on curtailing outdoor use
 - Mandatory Reductions begin in Stage 3
 - Elimination of all outdoor use in Stage 5
- Addresses all customer groups with indoor residential and commercial/industrial given highest priority.



Primary Enforcement of WSCP is through
Allocation-based Rate Structure

EMWD Water Shortage Contingency Plan



Stage	Date Approved	Description	Actions
Stage 1	April 2011	Supply Watch	Voluntary reduction up to 10%
Stage 2	April 2014	Supply Alert	Voluntary reduction up to 25%
Stage 3	August 2014 (3a)	Mandatory Waste Reduction	<p>3a: No variance adjustments; observation based penalties</p> <p>3b: Tier 3 budgets decreased by 50%</p> <p>3c: Tier 3 budgets decreased by 100%</p>
Stage 4		Mandatory Outdoor Reduction	<p>Watering schedules limited (1-2 days/week)</p> <p>4a: Tier 2 budgets decreased by 10%</p> <p>4b: Tier 2 budgets decreased by 50%</p> <p>4c: Tier 2 budgets decreased by 100%</p>
Stage 5		Mandatory Indoor Reductions	<p>Catastrophic stage (50% reduction in demand)</p> <p>5a: Tier 1 budgets decreased by 10%</p> <p>5b: Tier 1 budgets decreased by 30%</p> <p>5c: Tier 1 budgets decreased by 50%</p>

Rating Agency Comments



Fitch Ratings

“The impact on credit quality will depend heavily on utilities’ rate-setting decisions ... **[EMWD] in Riverside County, California has significant fixed meter charges and water budget-based rate structures in which tier sizes can be adjusted to reflect drought stresses and supply availability.**”

“**...self-stabilizing rate structure...**”

April 8, 2015: California Water Restrictions May Sink Utility Revenue

Going Forward ...



EMWD's Allocation-based Rate Structure Works:

- Foundational to encourage efficient use, with demonstrated minimum savings of 15%
- Results in greater revenue stability during periods of demand curtailment
- Rating agencies cite it as a credit positive

New Cost of Service Study:

- Consultant engaged: 6-month process
- Revisit budget methodology
- Revisit cost allocations, especially for fixed cost recovery
- Interplay with WSCP





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