EASTERN MUNICIPAL WATER DISTRICT

Budget-Based Rate Structure Implementation and Outreach Efforts

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July 2014
Presentation Topics

- EMWD Overview
- About Budget-Based Rate Structures
- Goals for Rate Structure
- Development & Deployment Steps
- Outreach Efforts
- Customer Response & Results
- Ongoing Efforts
- Additional Benefits

EASTERN MUNICIPAL WATER DISTRICT

Mission Statement

Our mission is to provide safe and reliable water and wastewater services to our community in an economical, efficient, and responsible manner, now and in the future.
What is a Budget-based Rate Structure?

- **Commonly Used Names:**
  - “Allocation-based Rate Structure”
  - “Water Budget Rate Structure”
  - “Conservation-based Rate Structure”
  - “Sustainable Rate Structure”

  *Same Basic Rate Structure*

- **Individualized:** based on indoor needs and landscape needs (weather adjusted)

- **Encourages Efficient Use Pattern:** Sharply tiered pricing system
  - Rewards efficiency
  - Communicates high cost of water over-use

- **Uses Fair Premise:** those who over-use pay more, those who use only what they need, pay much less

- **Are there other types of rate structures that encourage conservation??** Yes, but Allocation-based structures met EMWD’s goals.
Unique Features of Budget-based Rate Structure

- Identifies Over-use Customers: Water bill functions as a “report card”
- Provides Appropriate Nexus: Revenue from over-use tiers reinvested in water use efficiency programs
- Enforces Water Shortage Contingency Plan: Reduces outdoor - and possibly indoor - budgets based on drought status
EMWD Goals for Rate Structure

- **Reduce demand per capita**
  - Potential for rapid development in EMWD’s large service area
  - Uncertainty of imported water supplies
  - Alternate water supplies vary widely in cost

- **Previous attempt to change flat rate structure to block rate structure in the early 1990’s failed**
  - Implemented in summer
  - Block rates unfair to customers with large properties, even if they are efficient

- **Budget-based tiered rates charge wasteful customers more and water-efficient customers less**
Indoor Budgets

• Default Household Sizes
  • 3 persons per household for single family
  • 2 persons per household for multi-family
    • Based on Census data

• 60 gallons per person, per day
  • Based on industry standards – high end

• Variances available for additional occupants, special circumstances, etc.
  • Documentation required for:
    • Licensed care facilities, medical needs, etc.

• No indoor budget for landscape customers
Outdoor Budgets

- **Irrigated area and Evapotranspiration (ET) data** for 50 separate zones from CIMIS
  - Irrigated area estimated using County parcel data
  - Irrigated area measured using aerial photography or manually in the field
- **Variances available** for revised landscape areas, new landscapes, pools, large animals, and other needs
  - Documentation required for new landscapes
- **Conservation Factor** applied based on when home was built to accommodate for increased water use efficiency technologies
Four Pricing Tiers

Rate consultant helped determine what each tier would be set at based on the number of customers expected to be within each tier with the goal to remain revenue neutral.

- 80% of the customers were estimated to stay within their water budgets.

**Tier 1: Indoor Use**
- Budget = Number of Persons \( \times \) 60 Gallons Per Day
- Rate is less than existing flat rate.
- Rate: $1.73/billing unit*

**Within allocation**

**Tier 2: Outdoor Use**
- Budget = Landscaped Area and ET data
- Rate: $3.16/billing unit

**Tier 3: Excessive**
- Up to 50% use in excess of Indoor and Outdoor budgets
- Rate: $5.66/billing unit

**Over-allocation**

**Tier 4: Wasteful**
- Over 50% in excess of Indoor and Outdoor budgets
- Rate: $10.36/billing unit

One billing unit equals 100 cubic feet or 748 gallons
Development and Deployment Steps

• **Hired rate consultant** (Red Oak) to provide assistance in developing rate structure and water budget parameters to be revenue neutral

• **Targeted Residential and Landscape Customers**
  • Approximately 136,000 total customers in 2009
    • 95% were residential and 2% were landscape
  • Approx. 132,000 total customers targeted
  • Account for 90% of retail sales

• **One-year implementation process**
  • Billing engine changes
  • Generic to customized budget strategy
  • Added 10 customer service staff
  • Outreach efforts, website updates
  • Engaged customers once rate structure and rates had been developed

• **Budget of $1.5 million** ($11 per account one-time cost)
  • Actual cost: $3 million ($22 per account)
Outreach Timeline

• Communication efforts began in May 2008

• Proposition 218 Public Hearing held January 2009
  • Notice to customers required 45 days prior to Public Hearing
  • “Shadow bills” delivered to all customers in February and March 2009 with bills
    • Included customized information to all customers about how the new rate structure would specifically affect them if implemented with that billing statement

• First bill sent out April 10, 2009
Gave the ability for each customer to understand how the new rate structure would impact them specifically.
Outreach Materials

- Newsletters
- Bill messages
- Website posts
  - Online bill estimator
- Prop 218 Notice
- Press releases
- Community Workshops
- Imprinted Billing Envelopes

EMWD Newsletter

Red Imprint on Billing Envelopes

Community Workshop Flier
Online Water Budget & Bill Estimator

• One of the most effective communication tools for customers to understand rate structure as well as impact of water use
• Enabled customer service staff to “walk” a customer through different water use scenarios
Community Workshops

- Held **3 workshops** in different locations within service area to inform customers of upcoming rate change
- Included Conservation and Customer Service staff
  - Access to billing system at EMWD location
- Minimal customer attendance
- Provided excellent opportunities for one-on-one customer service
  - Processed variances
- Customers rarely attend Board meetings
From December 2008 through April 2009, EMWD received:

- 111 letters of protest for public hearing
- More than 2,000 customer calls about new rates
- 4,300 variance requests

Today, EMWD receives:

- Approx. 1000 variance requests every month
- EMWD has approximately 430 account turnovers every month
- EMWD has approximately 137,000 customers on water budgets
“You’re not giving me enough water.”

“My grass will die.”

“Can we do this with sewer rates?”

- Customers with extravagant watering patterns had the greatest difficulty accepting the rate structure.
- Customers who remained in Tier 1 – mainly seniors – liked the rate structure best because Tier 1 (Indoor use) rate is lower than the existing flat rate.
- Primary customer complaints:
  - Over budget
  - Default household size incorrect
Budget Compliance and Revenues

- **Expected Budget Compliance: 80%**
  - Annual Average Since Implementation: 81.2%
  - Current Compliance Fiscal Year-to-Date (Jul 13 – Apr 14): 83.3%
    - Tier 1: 31.4%
    - Tier 2: 51.9%
    - Tier 3: 13.3%
    - Tier 4: 3.4%

- **Revenue by Tier (July 13 – April 14)**
  - Revenue from over-use tiers reinvested in water use efficiency programs
    - Tier 1: 8.3%
    - Tier 2: 51.7%
    - Tier 3: 24.9%
    - Tier 4: 15%
Ongoing Efforts: Implementing Smart Meter Technology

- EMWD is in the process of converting all customers to FlexNet meters
  - Provides enhanced leak detection service
  - Assists staff in troubleshooting water use issues with customers
- FlexNet data will be integrated into EMWD’s eBill system
  - Gives customers the ability to view real-time water use data and compare water use with previous cycles
Ongoing Efforts: Rate Changes

- Prop 218 Notice
- Newsletter format
- Explained reasons for increases in water and sewer charges
- Introduced new fixed charge components for capital projects
- Outlined EMWD’s cost-saving efforts
- Included drought and water shortage contingency plan information

- Revised Billing Statements
  - Includes line items for new fixed charges for capital improvement projects
  - Specifies what portion of charges are due to environmental compliance
- Looking at cost of service study
Outcome of outreach

• Fairness and equity of rate structure allowed us to implement the rate structure with customer buy-in
• Intuitive and interactive – gives customers opportunity to make adjustments based on personal information
• Increases awareness of water use, results in conservation and revenue neutrality
• Creates two-way dialogue with customers
EMWD Overview

- Established in 1950
- Agency serving:
  - Water / wastewater / recycled
- Wholesale and retail
- 542 square-mile service area
  - Population of 768,000
- Serving seven cities and unincorporated areas
- One of 26 MWD member agencies
- High-growth area
- 11.0” to 12.6” of rain per year
Southern California Sources of Water

- Local Supplies
  - Groundwater & Recycling
- State Water Project Supplies (SWP)
- LA Aqueduct
- Transfers & Storage
- Colorado River Aqueduct Supplies (CRA)
- Local Supplies
- Conservation

www.emwd.org
EMWD’s Water Supply Portfolio

Imported Water Supply from MWD: 71,200 AF 56%

Local Water Supply: 56,800 AF 44%
EMWD’s Potable Water Customer Types

Customers targeted for water budget based tiered rates; 90 percent of retail sales.

- Residential 95%
- Landscape 2%
- Commercial 2%
- Wholesale 0%
- Agricultural 1%
Results (2009-2012)

Demand per Meter - Before and After Implementation

- Prior to Allocated Tiered Rates
- Second Year of Allocated Tiered rates
- First Year of Allocated Tiered Rates
- Third Year of Allocated Tiered Rates
• Study based on three year history:
  • “Average prices rose less than 4% under water budgeting, but would have had to rise 34% under flat rate pricing to achieve the same demand effect.”
  • “Controlling for the effects of inflation and the recent economic downturn, EMWD’s Budget-based rate structure resulted in at least a 15% reduction in water use.”
Lessons Learned

• **Household sizes inflated**
  - Sewer block rate structure implemented

• **Time-intensive variance request process**
  - Implemented online forms in 2011

• **Customer water budget vs. water use disputes**
  - Converting to remote metering – customers will be able to monitor water use online
Challenges - Changing Outdoor “Norms”

**Indoor Efficiency**
- Easy to understand
- Devices now readily available
- Easy to quantify savings
- No behavior changes needed
- Enforced through plumbing codes

**Outdoor Efficiency**
- Requires extensive education
- Can be cost prohibitive for customer
- Behavior change required to achieve savings
- Culture of turf grass
- Difficult to enforce

Reaching Saturation  A “New Normal” Required