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Implementing Water Budget Rates for Revenue Stability and Customer Equity

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Western Municipal Water District:

The Road to Revenue Stability and Water Use Efficiency

- **527-sq. mi. of western Riverside County**
- **Population 850,000**
- **Wholesale and retail water provider**
- **125,000 AF annually or 34 billion gallons**

- **70% of water use is outside**
- Agency used common rate structure design over the past 50 years
- **Typical rate structure design could NOT accommodate today's reality of "required" water use efficiency**
- Western saw fixed revenue recovery decline due to the rate structure design and the advent of more aggressive conservation programs
- **Western needed to stop fixed revenue loss**
- Staff goal was to reduce pressures on elected officials to continue to raise rates to meet dwindling revenues
- **Elected officials needed a "fair" system to allocate and price water for a varied customer base**

WMWD's Road to Revenue Stability and Water Use Efficiency

Internal Process:

- **Educated the board (2007)**
- **Hired new Efficiency Manager (2008)**
- **Water Use Efficiency Master Plan (needed rate structure) (2008)**
- **Conducted internal review and departmental needs for implementing a successful water budget rate structure (2009/10)**
- **Kept board up-to-date, enacted foundational changes/system upgrades (2010)**
- **Developed a road map for implementation** (a moving target based on external events)

External Process:

- **Hired water budget rate structure expert**
- **Hired an experienced** (w/ water budget rates) **financial consultant**
- **Conducted a customer survey** (baseline perceptions of Western, rates and conservation)
- **Will utilize a Public Relations firm to assist with strategic outreach plan**
- **Continually evaluate an adoption and go-forward strategy and date** (set for Spring 2011)

WMWD's Road to Revenue Stability and Water Use Efficiency

Water Use Efficiency Mgr. Tasks

- Outline the Internal / External process Western has taken to implement a sound and successful water budget tiered rate structure
- Determine timing and turn of events that have driven the project
- Show the estimates of what we expect and intend to see from the implementation of the rates in 2011

Water Rate Advisor

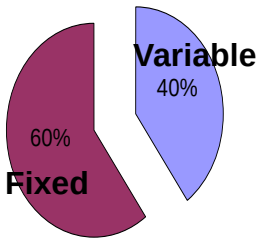
- Western board educated
- Advise the overall game plan
- Use experiences of other agencies helped Western navigate this road with confidence

Typical Agency Rate Structure

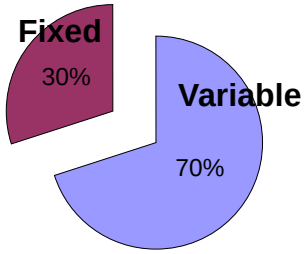
Common Agency Rate Structure:

- Rates kept low by using property tax dollars to subsidize fixed costs to customers
- Only 30% of fixed costs recovered on bill as a fixed fee
- 70% of fixed costs were bundled into variable rate
- Typical agency costs are the opposite (higher fixed and lower variable costs)
- Conservation is "required" but causes a revenue "hemmorage" without a "change" in the rate structure design

Typical Costs

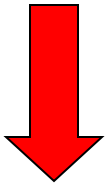


Typical Cost Allocation



Add Drought and Economic Times:

- Water restrictions enacted across the region
- Wholesale water rate increases of approximately 7% per year
- Riverside County hit hard by recession and unemployment
- Highest foreclosure rate in the US



WMWD Needed to:

1. Reduce demand
2. Recover necessary revenue
3. Create "fair" rate structure for all customers

Board Education

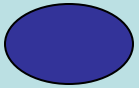
- **Why do agencies need a water budget tiered rate structure?**
  - Need stable revenue (fixed)
  - Need customer water use efficiency
  - Need satisfied customers
- **What is a water budget tiered rate structure?**
  - Method to accurately price the fixed and variable costs of water to customers
  - Objective method to allocate water to each customer
  - Expects the same standard of efficiency for each customer
  - Identifies and "signals" water efficiency or waste each billing period
  - Funding source for conservation programs (paid only by those who waste water)
  - "Equitable" method to treat customers

Acct. #1
- 2 Residents
- 1,500 sf of landscape

Water Budget/month = 7 units

- **What was the Board's response?**

Acct. #2
- 5 Residents
- 4,500 sq feet of landscape
- pool (500 sq feet)

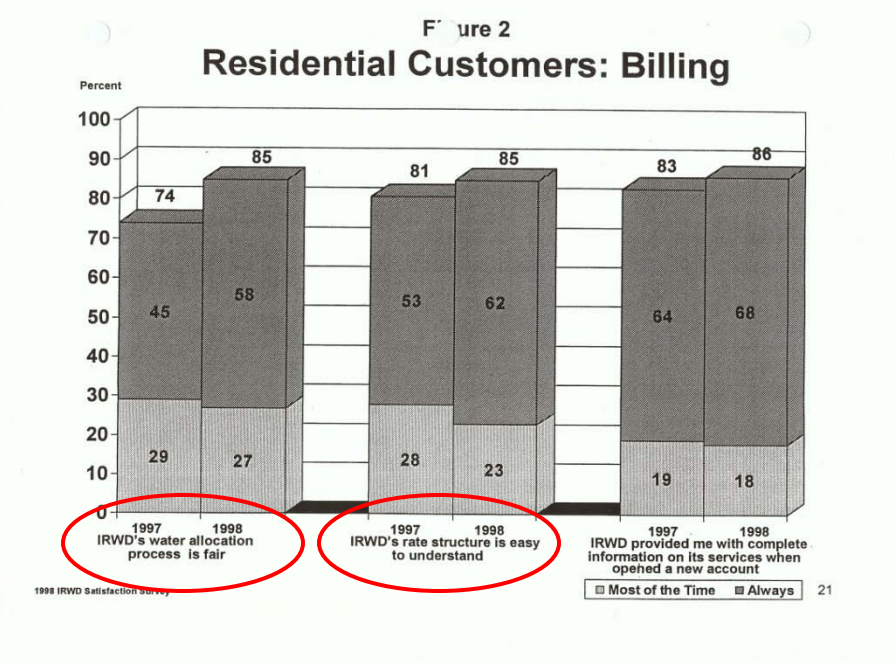


Water Budget/month = 21 units

The Foundation for Western MWD Water Budget Rates

- **The Irvine Ranch Water District rate structure model (1991)**
  - Stable revenue despite selling less water per customer
  - Efficiency standards achieved
  - High customer satisfaction
- **The State legislation that drives the use of water budgets to achieve conservation goals**
  - AB 1881, SBX-7, AB 2882
- **The ability to address a wide range of issues within one program**
  - Water efficiency
  - Water runoff reduction
  - Peak Demand reduction
  - Funding of Conservation programs
  - Increased Customer Service

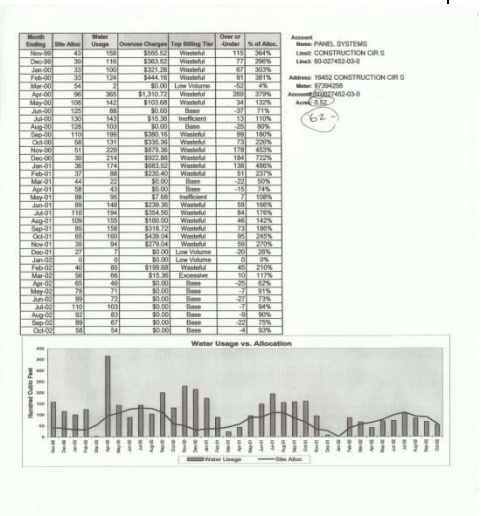
- **Customers "get" the inherent equity in an individualized water budget tiered rate structure**
- **WMWD Surveys validated the same perception** (61% believe water budget rates is a good idea and is important)



Establishing the WMWD Rate Structure Model: A Blend of Science and *Art*

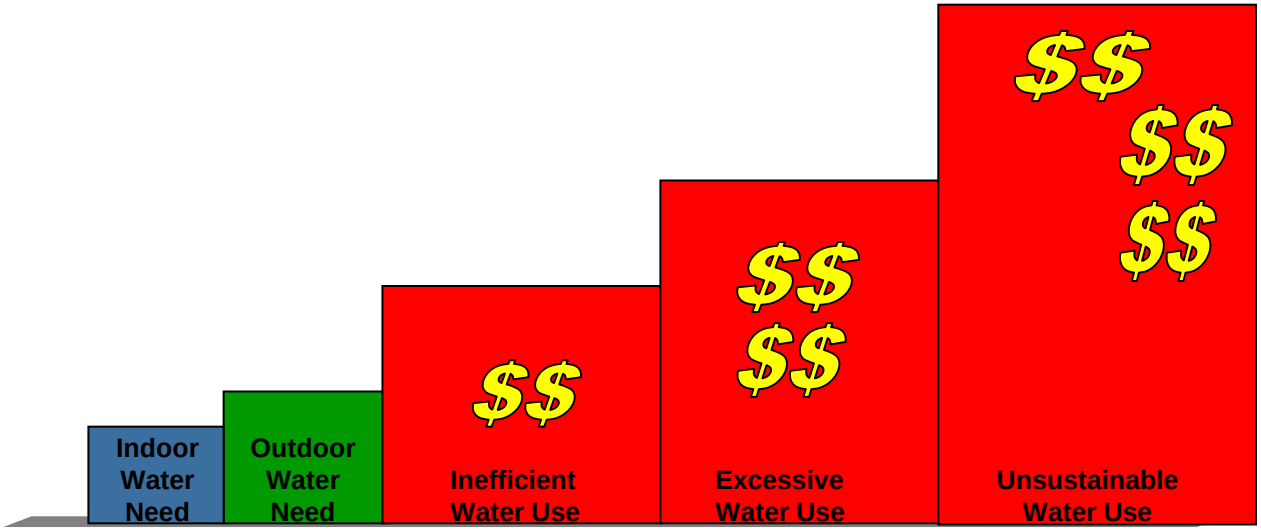
- **Set customer allocations**
  - Based on industry standards, university research
  - Based on State legislation
- **Overlay tiers**
  - How many, how wide
- **Plan for conservation**
  - **"Customer Support"**
- **Conduct financial modeling**
  - Establish fixed and variable charges
- **Consider internal agency needs**
  - Billing system, staffing, data collection, public education

- **How allocations, true water costs, policy flexibility, adjustments and credits and political needs fit together…**
  - The agency WANTS customers to have the lowest bill possible
- **How to communicate a water budget rate structure to board, staff and customers**
  - Only those who waste water pay high (tiered rates)



WMWD Water Budget Rate Structure

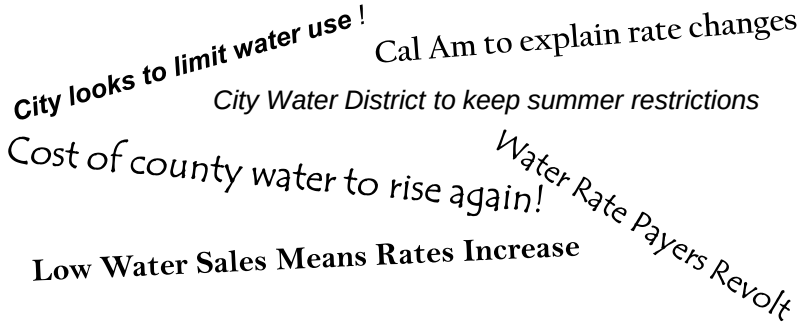
- **All customer groups will have the same rate structure**
- **Allocations and tier widths will vary across groups**
- **Fixed costs (service charges) will gradually increase over time** (60/40 split)
- **Excess revenues will fund conservation programs**
- **Customer support will increase**
- **Public Education will have an appropriate context**
- **Western will not lose necessary revenue when customers save water**



WMWD is Integrating the "Future" of Rates and Conservation

Agency Alternative:

- **Live in an uncertain & risky world**
  - Financial risk
  - Environmental uncertainty
  - Political upheaval
- **What is the alternative?**



WMWD Choice: Innovate

- **Individualized water budget allocations**
- **Daily ET for every address to calculate accurate allocations**
- **Coordinate/Expand Customer Services and Water Efficiency**
- **Finance the cost of conservation directly on the water bill**

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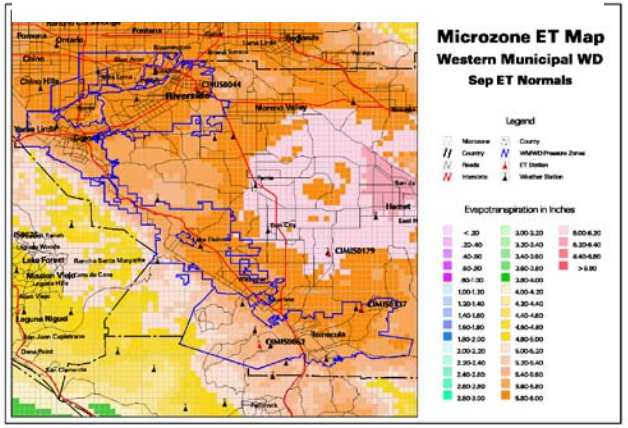
Implementing Water Budget Rates

- **Understand the end game/product**
  - Consultant experience
- **Design the basic rate structure**
  - Tiers, variance & adjustments
- **Hire financial consultant**
  - Rate structure modeling, financial analysis
- **Collect appropriate data**
  - Irrigated area of parcels, ET, etc.
- **Evaluate each agency department**
  - How will departments interact with the rate structure, upgrades, training, etc.
- **Complete system upgrades**
  - Billing system, financial accounting
- **Develop Conservation / Customer Service programs**
  - Pro-active, Flow of assistance, departmental cooperation (why staff training upfront is key)
- **Set the timeline**
  - Driven by external forces
- **Conduct customer education**
- **Adoption Spring 2011**
- **What will happen after adoption?**

$$IA(ccf) = \frac{GPCD * Size * Days}{\left(748 gallons / 1 ccf\right)}$$



Internal Expertise / Outside Consultants

Internal Abilities:

- Sq ft data calculation/collection
- Billing system upgrade

Consultants:

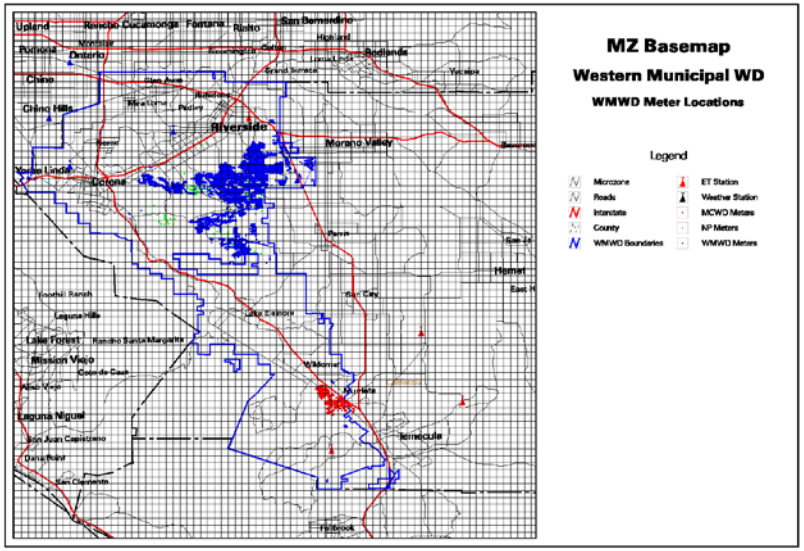
- Rates advising
- Financial modeling
- Customer baseline survey
- ET data for billing system
- Customer Service tools
- Public Relations outreach

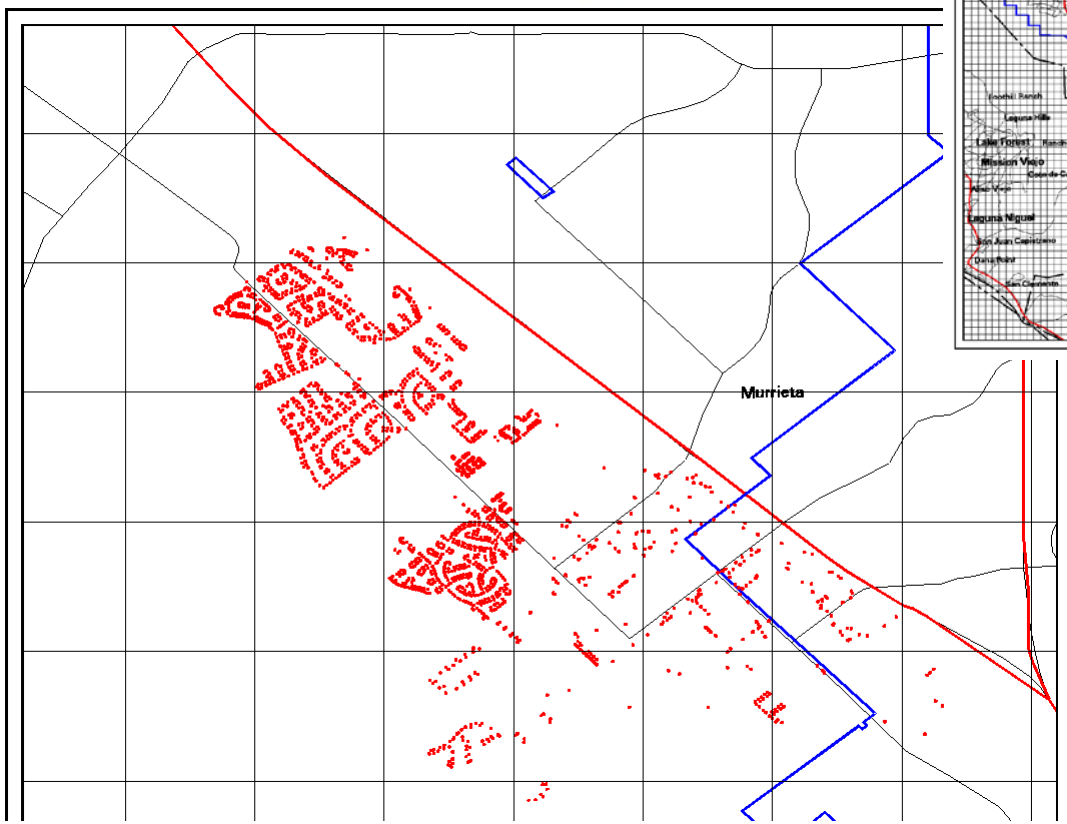
Baseline Survey:

- **61% believe rewarding efficiency and penalizing waste is important**
- 66% have high interest in efficiency
- **57% did not know what is efficient**
- 60% said they can't save more water
- **41% were unaware of conservation programs**
- 94% could not recite how much they pay for water
- **74% unaware of legislation restricting water supply**
- 77% said they would participate in programs if it kept water bills low

Getting Accurate Daily ET Data for Allocation Calculations

- Diverse topography
- Customers demand accuracy

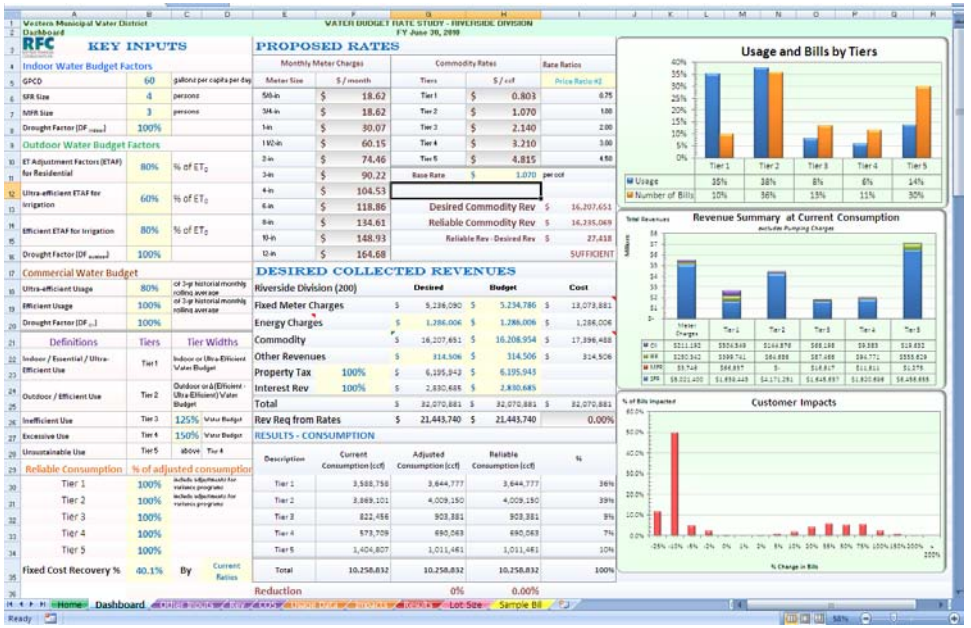


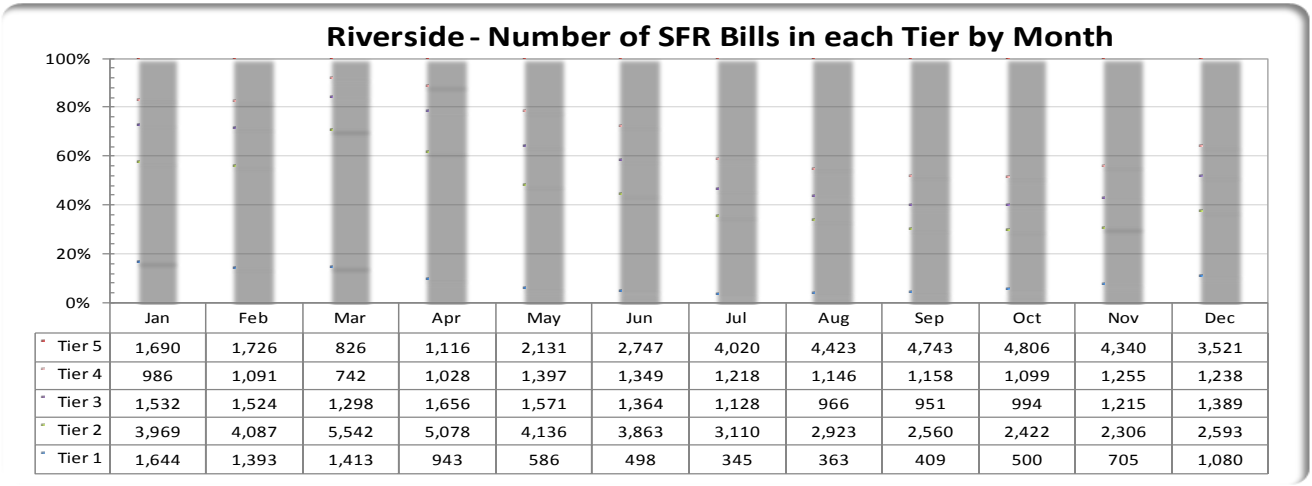


- 288 Microzones
- Daily ET for less cost than installing 2 ET stations in the service area

Financial Modeling

- **Key to finalizing rate structure details**
  - Tier height, width
  - Customer impacts of water budget allocations, bills
  - Potential revenue projections
- **Ability to test any scenario**
- **Use for future rates testing**

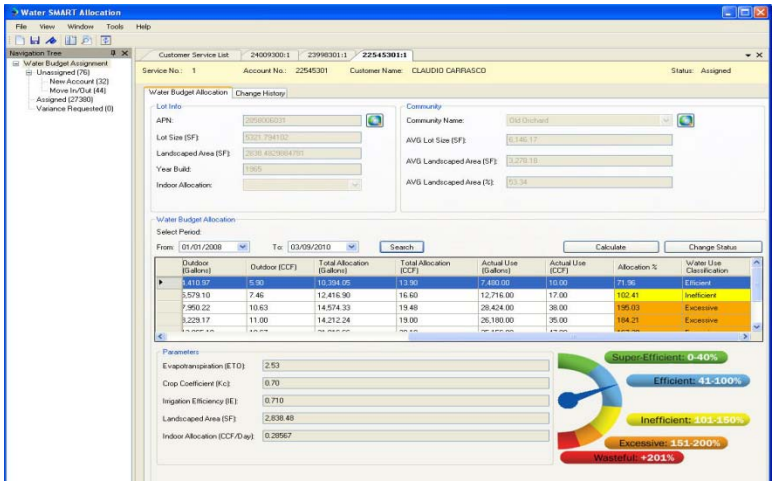


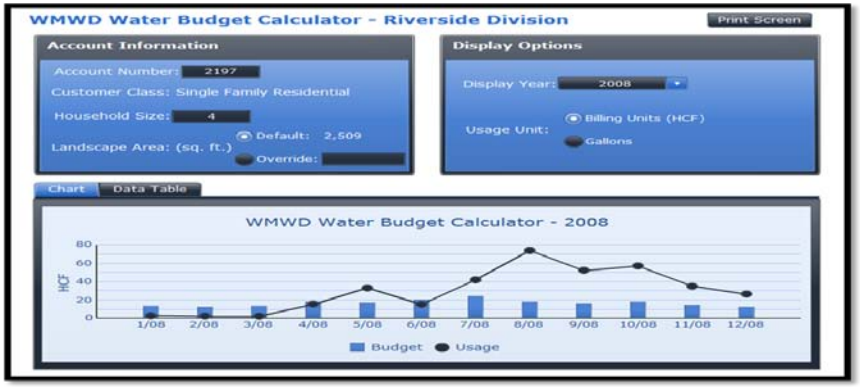


	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Tier 5	1,690	1,726	826	1,116	2,131	2,747	4,020	4,423	4,743	4,806	4,340	3,521
Tier 4	986	1,091	742	1,028	1,397	1,349	1,218	1,146	1,158	1,099	1,255	1,238
Tier 3	1,532	1,524	1,298	1,656	1,571	1,364	1,128	966	951	994	1,215	1,389
Tier 2	3,969	4,087	5,542	5,078	4,136	3,863	3,110	2,923	2,560	2,422	2,306	2,593
Tier 1	1,644	1,393	1,413	943	586	498	345	363	409	500	705	1,080

Customer Service Tools

- **Properly designed rate structure**
  - Variances for customer anomalies
  - Fixed charges that cover fixed costs
  - Bill adjustments for customers who “fix” their own water waste
- **Management of customer information**
  - Track calls
  - Track variances
  - Track site visits, rebates, credits, etc.
- **Water budget calculator**





Customer Service / Conservation Programs

- **All customer groups**
- **Targeting provided by rate structure**
- **All outreach will be tied to individualized water budget, if they see penalty tier use the customer is now "tuned in"…this is a new ability for an agency when compared to the traditional tiered rate structure or flat rates**
- **More customer service will be needed and provided**
  - Increased services
  - Increased contact w/ customers
  - More opportunity to educate customers on the water situation
  - More opportunity to make a positive impact on the customers' water bills
  - All translates into the opportunity to increase positive customer perception of Western MWD

Public Relations / Outreach

- **Combination of internal staff and consultant experts**
- Consider timing as it relates to a wide range of external issues
  - Rate pass-through increases
  - Elections
  - Billing system upgrade
- **For all customer groups, conducted separately for each type of customer group**
- Train all agency staff on the positive features of the water budget rate structure

- **Keep the message simple**
  - Allocations are based on the individual customer needs
  - "Only those who waste water pay increasing tier prices"
  - Landscape allocations vary w/ weather for the specific address
- **Seek customer input on "their" allocation variables**
  - Number of residents
  - Size of landscape
  - Business needs
- **Public Hearing strategy**

What Will Happen After Implementation?

Myths:

- **Customers won't understand the rate structure**
- **Save too much water** (lose money)
- **Overloaded w/ calls**
- **Revolt by customers**

Western's Preparation:

- **Used a proven model and advisor**
- **Structure is supported by State legislation and science (allocations)**
- **Site data is as good as can be expected going in**
- **System incorporates flexibility**
- **Belief in the system and the mission to help customers reduce bills is key**
  - Confidence
  - Motivated customers & staff
  - More tools to help than ever before

Combination of Science & Art

The New Agency Normal

- **Customers will have on-going motivation, assistance and incentives to be efficient**
- **Customers will better understand Western's water situation via their real time use/billing experience**
- **Western "fixes" the rates / conservation revenue conundrum**
- **Western has a new/local funding mechanism for conservation**
- **Western will reduce dependence on imported water and outside conservation funding**
- **Western can realistically meet their mission of fiscal responsibility, high-quality environmental stewardship and customer service … the customer and the agency both win**