“Fairness & Equity” in Water and Recycled Water Rates: What’s Behind the Curtain?
OR

“The Yellow Brick Road to the Water Rate Land of Oz”
OVERVIEW OF PRESENTATION

The Cast of Characters:

1. Greg Clumpner/Director
   NBS Government Finance Group
   *(The Rate Guy)*

2. Kelly Salt/Partner
   Best Best & Krieger
   *(The Lawyer … & Star of the Movie “Salt”)*

3. Kevin Mascaro/Finance Director
   Western Municipal Water District
   *(The Agency Guy)*
The Rate Guy’s Perspective…

Part 1. Some Basic Water Rate Questions:

- Are My Rate Defensible?
- Are My Cost Allocations “Reasonable”?
- How Broad Can My Customer Classes Be?
- Can I Use Ad Valorem Taxes or Non-Rate Revenue to Subsidize One Area vs. Another?
- What Can My Board/Council do to Ensure Rates are “Fair & Equitable”?
Part 2. – Industry Practices and Standards

✓ How Should Tiered Rates Be Set?
✓ What are Acceptable Differences in Rate Impacts on Individual Customers?

Part 3. – Taking a Peak “Behind the Curtain”

✓ If “Justice is Blind” is Fairness & Equity in Water Rates “Blind”? Should it Be?
✓ What/How Inequities Might Occur?
Part 1. Some Basic Water Rate Questions

Are My Rates Defensible? (…What makes rates “defensible”?)

1. Following Industry Standards:
   - AWWA Principles of Water Rates, Fees, and Charges (Manual M1)\(^1\)
   - Principles of Public Utility Rates (Bonbright)\(^2\)

2. Considering Recent Court Decisions:
   - City of Palmdale vs. Palmdale WD
   - Griffith vs. Pajaro Valley WD
   - SJC Taxpayers vs. San Juan Capistrano
   - Morgan vs. Imperial Irrigation District
   - Yolo Ratepayers vs. City of Davis

3. Preparing a Comprehensive Rate Study

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Part 1. Some Basic Water Rate Questions (cont.)

What is a “Comprehensive Rate Study”? 

1. Financial Plan/Revenue Requirement Analysis

Step 1: Financial Plan/Revenue Requirements
Compares current sources and uses of funds and determines the revenue needed from rates and project rate adjustments.

2. Cost-of-Service Analysis

Step 2: Cost-of-Service Analysis
Allocates the revenue requirements to the customer classes in a “fair and equitable” manner that complies with Prop 218.

3. Rate Design Analysis

Step 3: Rate Design
Considers what rate structure alternatives will best meet the Utility’s need to collect rate revenue from each customer class.
Part 1. Some Basic Water Rate Questions (cont.)

Are My Rates Defensible? – Industry Standards:

AWWA’s Manual M1 presents a simplified list of the attributes of a sound rate structure, which apply to both water and sewer rates:

• …easy to understand from the customer’s perspective.
• …easy to administer from the utility’s perspective.
• …promote the efficient allocation of the resource.
• …be equitable and non-discriminating (i.e., cost based).
• …have continuity in the rate making philosophy over time.
• …consider other utility policies (e.g., conservation).
• …should consider the customer’s ability to pay.
• …should provide month-to-month and year-to-year revenue stability.
Part 1. Some Basic Water Rate Questions (cont.)

Are My Rates Defensible?

AWWA’s Manual M1 states¹:

“...the costs of water rates and charges should be recovered from classes of customers in proportion to the cost of serving those customers. However ... other considerations may be equally or more important in determining rates and charges and may better reflect emerging objectives of the utility or the community it serves.”

and

“...pricing policies may support a community’s social, economic, political, and environmental concerns.”

Part 1. Some Basic Water Rate Questions (cont.)

Are My Cost Allocations Reasonable?

Different Types of Cost Allocations:

1. Between Customer Classes (*C.O.S. Issue*)
2. Between Fix vs. Variable Costs (*C.O.S. Issue*)
3. Between Individual Customers (i.e., within a customer class) (*Rate Design Issue*)
Part 1. Some Basic Water Rate Questions (cont.)

Are My Cost Allocations Reasonable?

1. Cost Allocations Between Customer Classes:
   - Residential
   - Multi-Family
   - Commercial/Industrial
   - Irrigation

Peaking Patterns by Class

100% 120% 140% 160% 180% 200% 220% 240%
Jan Feb Mar April May June July Aug Sept Oct Nov Dec
% of Lowest Month

Behind the Curtain of Water Rates
Are My Cost Allocations “Reasonable”?  
2. Allocations Between Fixed and Variable Costs (cont.): 

\[
\begin{align*}
\text{Fixed Costs} & \quad \text{+} \quad \text{Variable Costs} \\
\text{Capital Improvements, Debt Service, Salaries & Benefits} & \quad \text{=} \quad \text{Total Revenue Requirements} \\
\text{Energy, Purchased Water, Treatment Chemicals} &
\end{align*}
\]
Part 1. Some Basic Water Rate Questions (cont.)

How Allocations Between Fixed & Variable Costs Should be Done:

\[
\text{Total Revenue Requirements} = \text{Fixed Costs} + \text{Variable Costs}
\]

\[
\text{Revenue Stability} = \text{Fixed Charges} + \text{Volumetric Charges}
\]
Part 1. Some Basic Water Rate Questions (cont.)

Are My Cost Allocations Reasonable?

3. Between Individual Customers Within a Customer Class (e.g., Residential)

30% Variable/70% Fixed

70% Variable/30% Fixed

If 100% Fixed Rates were used

Avg. ANNUAL Single-Family Residential (1" meter) Consumption is 41 HCF/bi-monthly

Behind the Curtain of Water Rates
Part 1. Some Basic Water Rate Questions (cont.)

How Broad Can My Customer Classes Be?

• Do they reflect groups of similar types of customers?
  ✓ Single-Family Residential
  ✓ Multi-Family Residential
  ✓ Commercial/Industrial

• Do they reflect groups of customers with similar consumption patterns:
  ✓ Peak Demands (i.e., use of system capacity)
  ✓ Total Annual Water Use

• Special Types of Customer Classes:
  ✓ “Inside” vs. “Outside” Customers
  ✓ Wholesale vs. Retail Water
  ✓ Potable vs. Recycled Water
  ✓ Elevation Zones (Energy Surcharges)
  ✓ Public vs. Private Fire Protection Meters

Meter Sizes Can Also be Used as Customer Classes
Can I Use Ad Valorem Taxes and/or Unrestricted Revenue for Subsidies?

• What Types of Subsidies Can We Consider?
  ✓ Senior/Low Income Subsidies
  ✓ Water vs. Sewer Customer Rate Reductions
  ✓ Low-Income vs. High-Income Service Areas

• Qualified Answer: Yes…
  ✓ “Unrestricted Revenues” can fund certain types of subsidies (e.g., senior/low income subsidies)
  ✓ Often other programs are basis for qualifying (e.g., PG&E or SoCal Edison low-income programs)
  ✓ Ad Valorem Taxes – are unrestricted funds (example: El Dorado Irrigation District)
What Can My Board/Council do to Ensure Rates are “Fair & Equitable”?

1. *(Follow the Preceding Slides)*

2. **Prepare a Comprehensive Rate Study**
   *(It documents your methodology and cost-basis/Administrative Record if needed)*
   - Financial Plan/Net Revenue Requirements
   - Cost-of-Service Analysis
   - Rate Design Analysis

3. **Seek Qualified Legal Opinions if You Are Not Sure of Some Issues!**
Part 2.
Industry Standards & Practices
Part 2. Industry Standards & Practices

How Should Tiered Rate Be Set (Residential)?

- **Traditional Guidelines for Tiered Rates:**
  - Tier 1 = Average Domestic/Indoor Water Use (often established as the average winter use)
  - Tier 2 = Outdoor/Irrigation Needs (e.g., average annual water use)
  - Tier 3 = Summer Average Water Use
  - Tier 4 = Exceeds Summer Average Use
Part 2. Industry Standards & Practices (cont.)

How Should Tiered Rate Be Set (Residential)?

- Guidelines for \textit{WATER BUDGET-BASED} Rates:
  - Tier 1 = Average Domestic/Indoor Water Use (often established as the average winter use)
  - Tier 2 = Outdoor/Irrigation Needs (e.g., average annual water use)
  - Tier 3 = Inefficient
  - Tier 4 = Wasteful
  - Tier 5 = Penalty Tier

\textit{(Remember the Tiers are different for every customer based on their water budget)}
Part 2. Industry Standards & Practices

What are Acceptable Differences in Rate Impacts on Individual Customers?

- Charges are Not More Than Actual Cost of Servicing that Customer/Parcel
- Cost-Based (Follow Industry Standard Cost-of-Service Cost Allocations)
- Non-Discriminatory (One Class is Not Subsidizing Another Class)

- Otherwise – There is a Pretty Large Range of “Acceptable Differences” (see recent court rulings)
Part 3. Industry Standards & Practices
The “Curtain of Water Rates”

“...and the next moment all of them were filled with wonder. For they saw, standing in just the spot the screen had hidden, a little old man, with a bald head and a wrinkled face ...”
Part 3. Taking a Peak “Behind the Curtain”

- If “Justice is Blind” Then is Fairness & Equity in Water Rates “Blind”? Should it Be?
  ✓ If Customers Using 5, 10, 20, or 30 Units of Water Showed Up to Pay Their Bill, Would They be Treated “Equally” Under Different Rate Structures (i.e., for the same quantity)?
  ✓ What if Water was a Gallon of Milk and a Loaf of Bread?
Part 3. Taking a Peak “Behind the Curtain” (cont.)

• What “Inequities” Might Occur? How?

(Let’s Define “Inequity” as Being Treated Differently for the Same Quantity of Water)

✓ Fixed & Variable Charges – How Cost are Allocated Between Them?
✓ Conservation-Oriented Tiers – How Aggressive Are They?
✓ Do You Have Traditional Tiered Rates or Water Budget Rates?
Part 3. Taking a Peak “Behind the Curtain” (cont.)

Aggressiveness of Conservation Tiers:

- 0% Increase Between Tiers
- 25% Increase Between Tiers
- 50% Increase Between Tiers
- 75% Increase Between Tiers
Part 3. Taking a Peak “Behind the Curtain” (cont.)

Aggressiveness of Conservation Tiers:

% Differences Between 0% and 75% Increase Between Tiers

Tier 1 (0-13 ccf)
Tier 2 (14-32 ccf)
Tier 3 (33-48 ccf)
Tier 4 (48+ ccf)
Part 3. Taking a Peak “Behind the Curtain” (cont.)

Illustration: Tier Rates vs. Water Budget Rates

- Two Residential Customers:
  - Average User
  - Large User (Same Indoor Use, but Outdoor use is 3-times larger than the Average Use)

### Water Budget Tiers

<table>
<thead>
<tr>
<th></th>
<th>Rate ($/ccf)</th>
<th>Use as % of Normal</th>
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</thead>
<tbody>
<tr>
<td>Low Volume</td>
<td>$0.90</td>
<td>40%</td>
</tr>
<tr>
<td>Conservation Base Rates</td>
<td>$1.25</td>
<td>100%</td>
</tr>
<tr>
<td>Inefficient</td>
<td>$2.50</td>
<td>150%</td>
</tr>
<tr>
<td>Excessive</td>
<td>$4.30</td>
<td>200%</td>
</tr>
<tr>
<td>Wasteful</td>
<td>$9.50</td>
<td>201%</td>
</tr>
</tbody>
</table>

### Traditional Tiered Rates

<table>
<thead>
<tr>
<th></th>
<th>Rate ($/ccf)</th>
<th>Tiers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tier 1</td>
<td>$0.90</td>
<td>0-10 ccf</td>
</tr>
<tr>
<td>Tier 2</td>
<td>$1.25</td>
<td>10-20 ccf</td>
</tr>
<tr>
<td>Tier 3</td>
<td>$2.50</td>
<td>20+ ccf</td>
</tr>
</tbody>
</table>

Behind the Curtain of Water Rates
Illustration: Tier Rates vs. Water Budget Rates

- Monthly Bills Assuming “Efficient” Water Use:
  
  1. Based on Irvine Ranch Water District rates (water budgets) and typical outdoor consumption levels.

  **Difference in Monthly Water Bills (w/ **Efficient** Consumption)**

  - **Traditional Increasing Block Rates**
    - **Avg. User**
    - **Large User**
      - Large User's bill is 462% higher than Avg. User's

  - **Water-Budget Rates**
    - **Avg. User**
    - **Large User**
      - Large User's bill is 200% higher than Avg. User's

  1. *Based on Irvine Ranch Water District rates (water budgets) and typical outdoor consumption levels.*
Illustration: Tier Rates vs. Water Budget Rates

• Monthly Bills w/ “Inefficient” Water Use (150% of normal):
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And now...

“We’re off to see the (legal) Wizard!!”