Treatment Charges Presentation

October 2, 2007

RFC
RAFTELIS FINANCIAL CONSULTANTS, INC.

Discussion Outline

A. Treatment Surcharge Background Issues

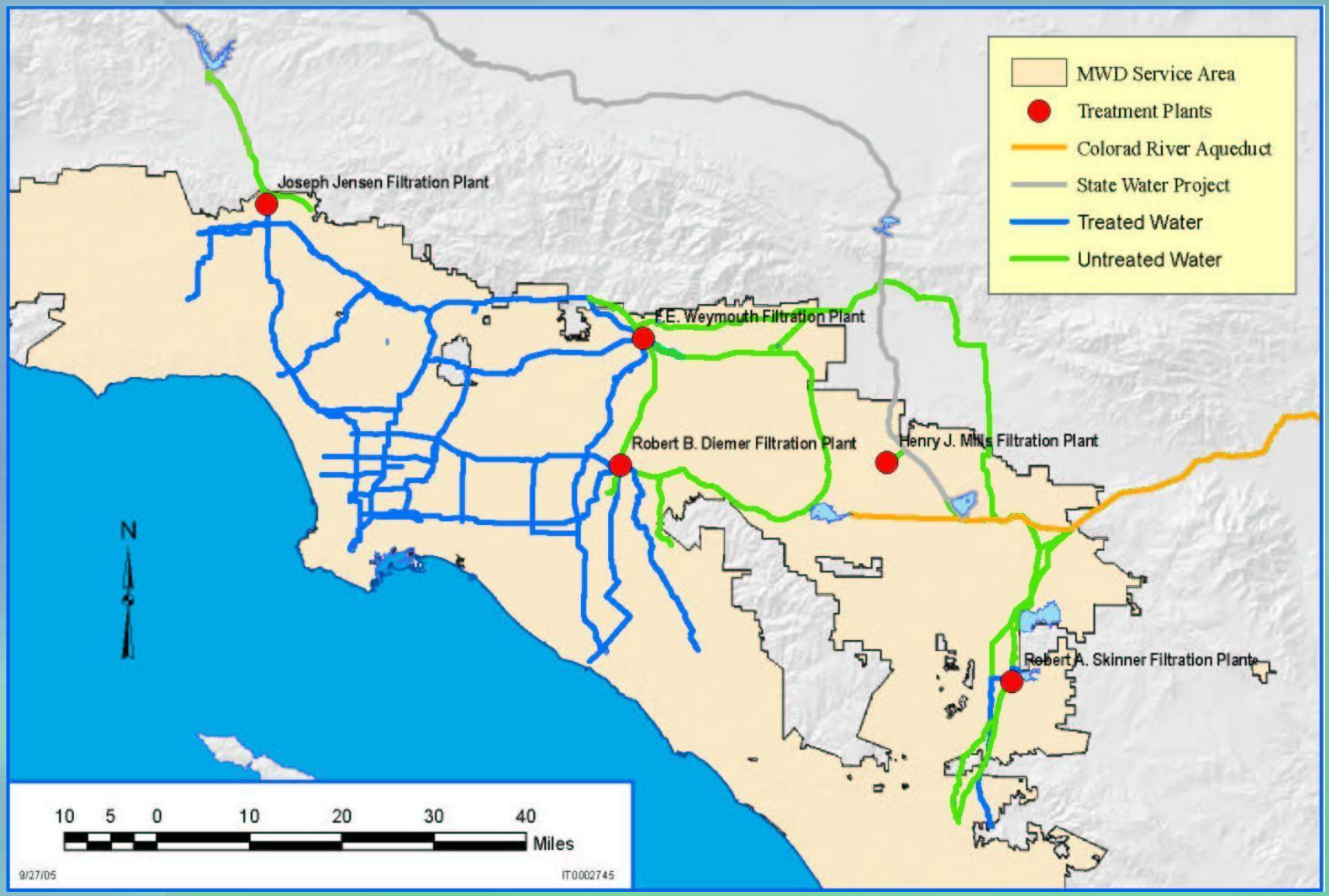
B. Existing Treatment Surcharge

C. Rate Structure Alternatives

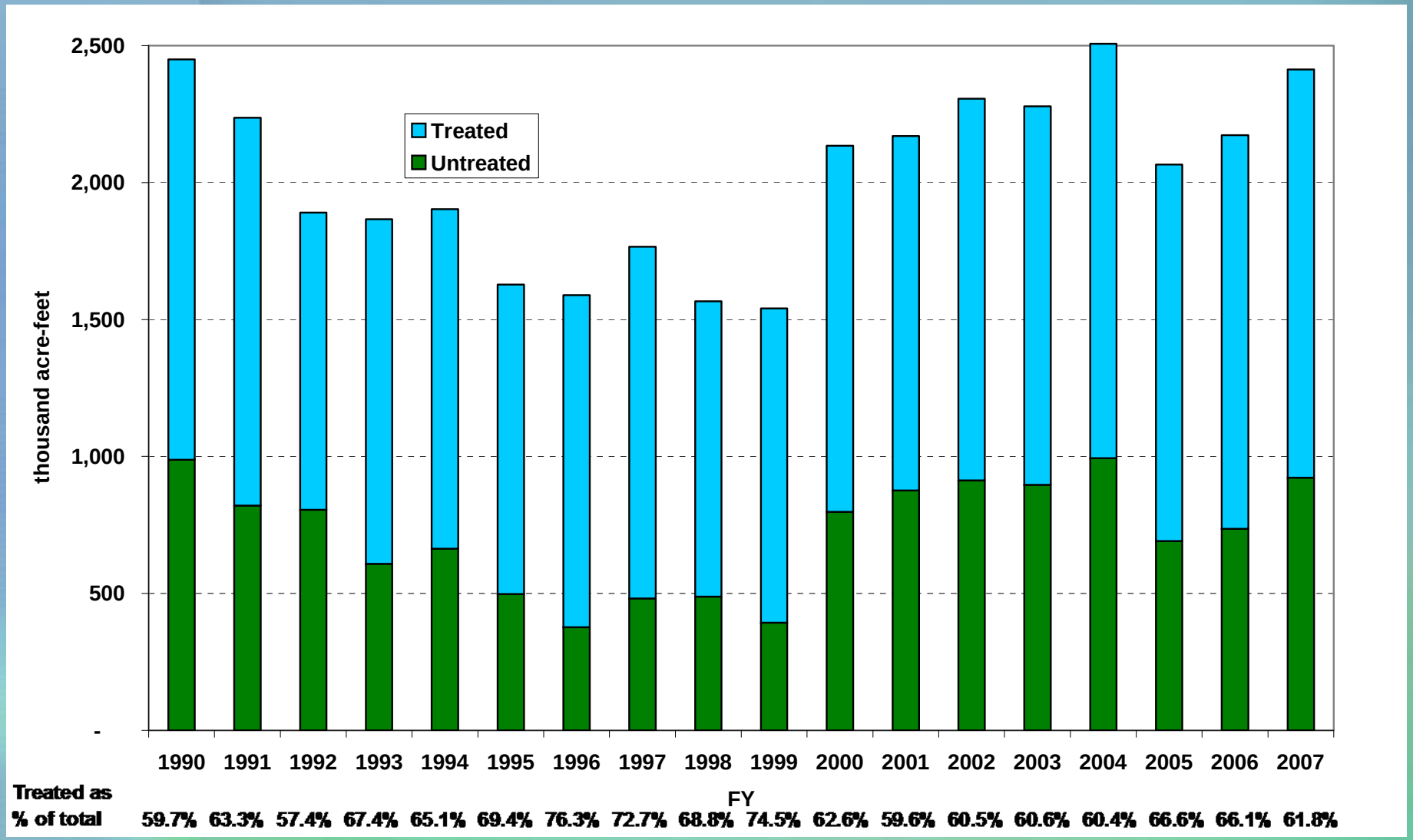
D. Evaluation of Rate Alternatives

A. Treatment Surcharge Background Issues

MWD Treatment Plants and the Imported Water Distribution System



Treated and Untreated Water Deliveries



Water Treatment Plant Usage and Peaking

Calendar year 2005 through Sept 17, 2007

Facility	Design Capacity (cfs)	Average Demand (cfs)	Peak Day* (cfs)	Capacity Factor	Peaking Factor
Diemer	803	409	778	51%	**1.90**
Jensen	1163	601	1002	52%	**1.67**
Mills	505	132	281	26%	**2.13**
Skinner	930	547	835	59%	**1.53**
Weymouth	803	371	726	46%	**1.96**
Total	4,204				

*Peak day average flow

Treated Water Usage

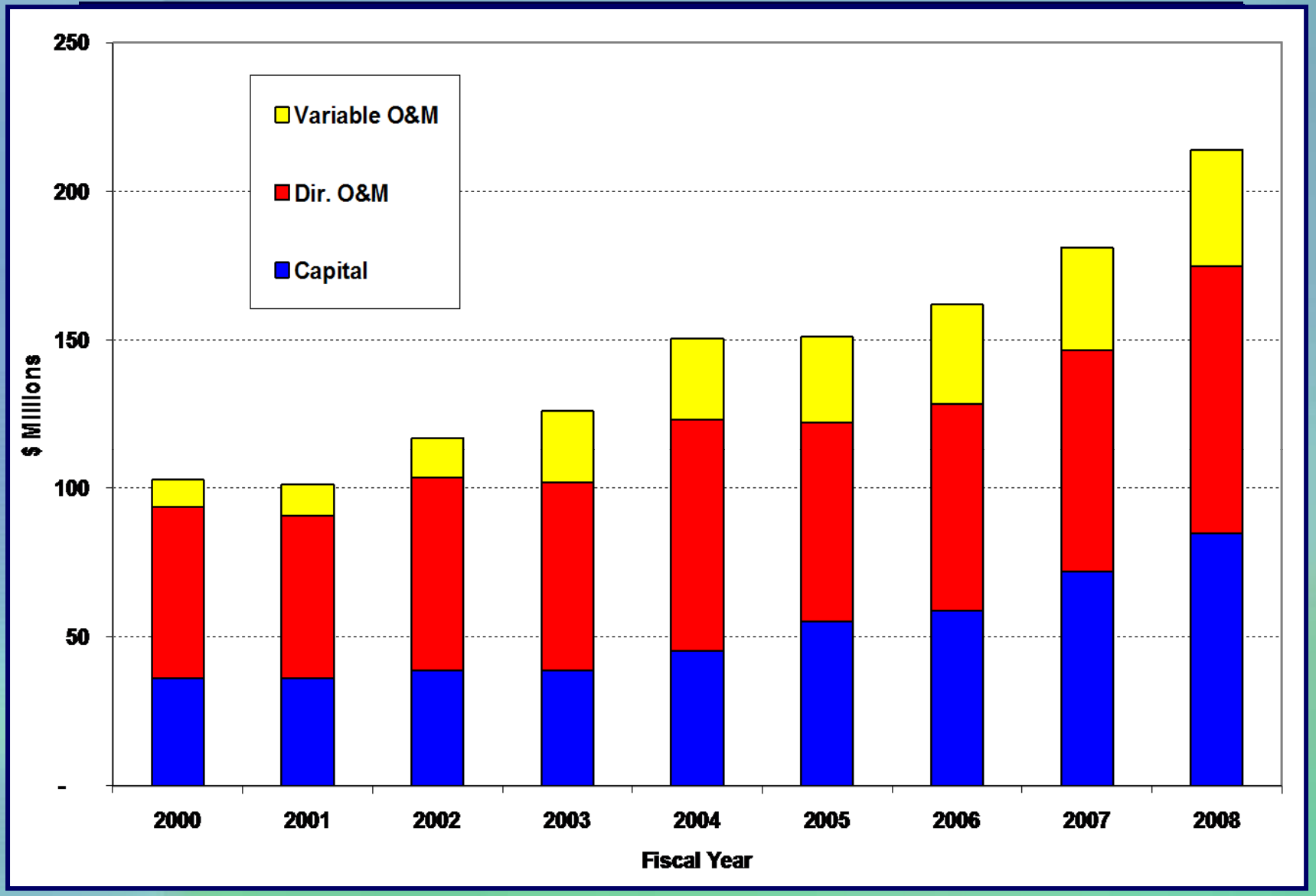
Member Agency	FY 1990-2007 (acre-feet) Average Annual	Maximum Annual	Minimum Annual	CY 2005-2007 (cfs) Average Day	Max Day	Peak factor	Peak day
Anaheim	14,202	31,611	4,641	14	40	2.9	27-Sep-2005
Beverly Hills	13,109	14,867	11,918	20	34	1.7	5-Sep-2007
Burbank	14,888	22,839	8,154	22	36	1.7	23-Aug-2005
Calleguas	112,084	136,565	86,263	216	264	1.2	31-May-2005
Central Basin	73,802	99,814	61,033	101	131	1.3	24-Jul-2006
Compton	3,962	5,620	2,892	5	8	1.5	24-Jul-2005
Eastern	68,503	99,347	43,234	181	256	1.4	1-Sep-2007
Foothill	10,756	14,831	8,394	17	25	1.5	1-Sep-2007
Fullerton	10,937	17,795	5,713	20	37	1.9	14-Sep-2007
Glendale	25,715	29,135	21,948	37	57	1.5	26-Jul-2006
Inland Empire	0	0	0	0	0	0.0	
Las Virgenes	20,567	25,373	15,293	38	45	1.2	9-May-2007
Long Beach	46,796	57,560	34,700	41	73	1.8	28-Aug-2005
Los Angeles	96,806	232,272	46,390	94	186	2.0	24-Jul-2006
MWDOC	236,597	289,625	157,654	368	454	1.2	25-Jul-2006
Pasadena	22,036	33,603	15,508	45	67	1.5	26-Jul-2006
San Diego CWA	229,833	288,911	159,961	470	587	1.2	24-Jul-2006
San Fernando	451	1,049	0	5	7	1.4	10-May-2007
San Marino	1,210	1,998	442	4	8	2.1	24-Jul-2006
Santa Ana	16,010	22,007	7,135	20	31	1.5	31-Jul-2006
Santa Monica	10,280	14,444	4,689	20	28	1.4	27-Jun-2006
Three Valleys	47,965	65,424	35,155	88	134	1.5	17-Aug-2007
Torrance	21,031	23,804	16,386	33	42	1.3	22-Jun-2005
Upper San Gabr	12,013	27,675	5,967	25	42	1.7	18-Jul-2006
West Basin	153,292	184,679	140,064	226	276	1.2	20-Jul-2005
Western MWD	44,707	87,968	19,909	153	235	1.5	15-Jul-2006
Total				2,263	3,103	1.4	
Data include Replenishment deliveries.				Peak flows net of Replenishment service.			

Revenue Requirements by Service Function

(FY 2007/08 in millions $)

Source of Supply	$ 112.2	
Conveyance & Aqueduct	$ 478.6	
Storage	$ 122.3	
Treatment	$ 214.9	
Distribution	$ 115.8	
Demand Management	$ 57.5	
Total Revenue Requirements	$ 1,101.3	100%
Less: Hydroelectric	$ (13.7)	
Net Revenue Requirements	**$ 1,087.6**	

Treated Water
Net Revenue Requirements



Treatment Surcharge Trend

	Effective January 1					
	2003	**2004**	**2005**	**2006**	**2007**	**2008**
Rate per acre foot	$ 82	$ 92	$112	$122	$147	$157
% Annual Change		12.2%	21.7%	8.9%	20.5%	6.8%

Treatment Cost Drivers

- Major Treatment Capital Investments (e.g. ozone retrofit)
- Rising O&M costs
  - Chemicals
  - Electric Power

Treatment Peaks and Rate Equity

- Infrastructure must be designed to meet peak demand.
- Relying on MWD for daily peaks drives capital costs higher.
- Current rate structure recovers peaking costs uniformly through a volume charge paid by all member agencies.

Existing Treatment Surcharge

MWD Cost of Service and Rate Process

Revenue Requirements

Functional Categories
Supply
Conveyance & Aqueduct
Storage
Treatment
Transmission
Demand Management
Administrative & General
Hydroelectric

Classifications
Fixed Demand
Fixed Commodity
Variable Commodity
Fixed Standby
Hydroelectric

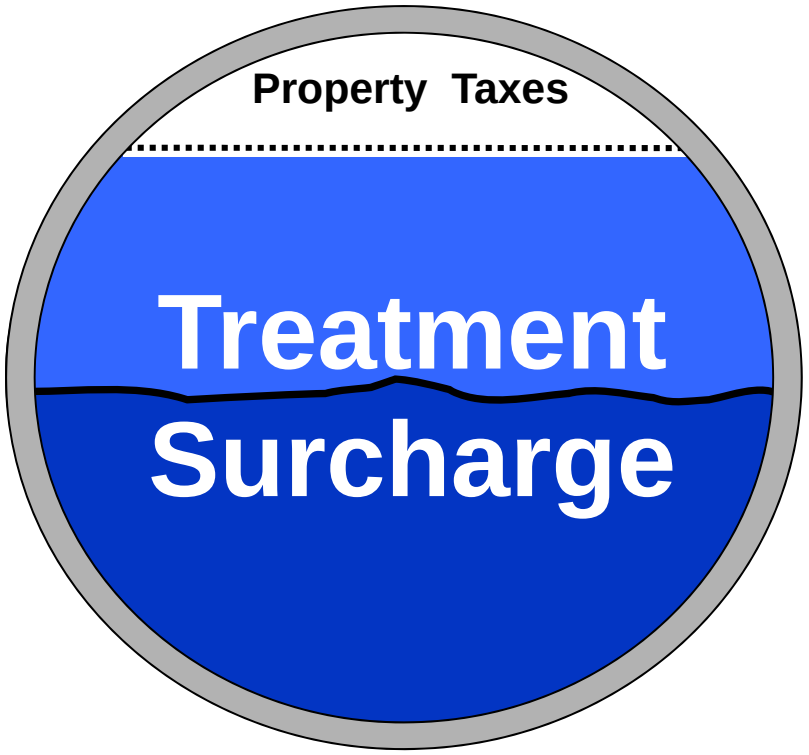
Customer Rates
Supply Rates (T1/T2)
System Access Rate
Water Stewardship Rate
System Power Rates
Full-Service Untreated Bundled
Replenishment Rate, Untreated
IAWP, Untreated
Treatment Surcharge
Full Service, Treated Bundled
Treated Replenishment
Treated IAWP
Readiness To Serve Charge
Capacity Charge

Features of the Current Charge

- Uniform Rate
- $157 per acre foot
- Constant charge throughout the year (peaking cost impact not assessed)
- Cost Classifications Recovered
  - Fixed Demand ($44M)*
  - Fixed Commodity ($123.6M)*
  - O&M Variable Commodity ($47.4)*

*Costs are for FY 2008

Recovery of Treatment Costs



Standby Costs

Peak Demand Costs

Average Demand Costs

C. Rate Structure Alternatives

Rate Design Options

- Option 1: Peaking Charge
- Option 2: Treated Water Capacity Charge (TWCC)

Option 1: Peaking Charge

Standby Costs

Peak Demand Costs

Average Demand Costs

Treatment Peaking Charge Considerations

- Infrastructure must be built to accommodate peak demand.
- Higher peaks result in higher costs.
- These costs are currently shared by all users uniformly.
- Each user contributes differently to system peaks.
- A peaking charge would directly impact monthly bills.
- Equity principle implies that each member agency should pay costs of service.
- Charges should encourage more efficient use of system treatment resources.

Treatment Peaking Charge Design

- Analyze historical demand patterns.
- Analyze how peaking affects treatment costs.
- Calculate costs related to serving peak demand.
- Calculate system-wide volume rates for both average demand usage and peaking charge for peak demand usage.
- Estimate the impact of new charges on member agencies.
- Phase in new charges as appropriate.

Peaking Charge Advantages

Advantages

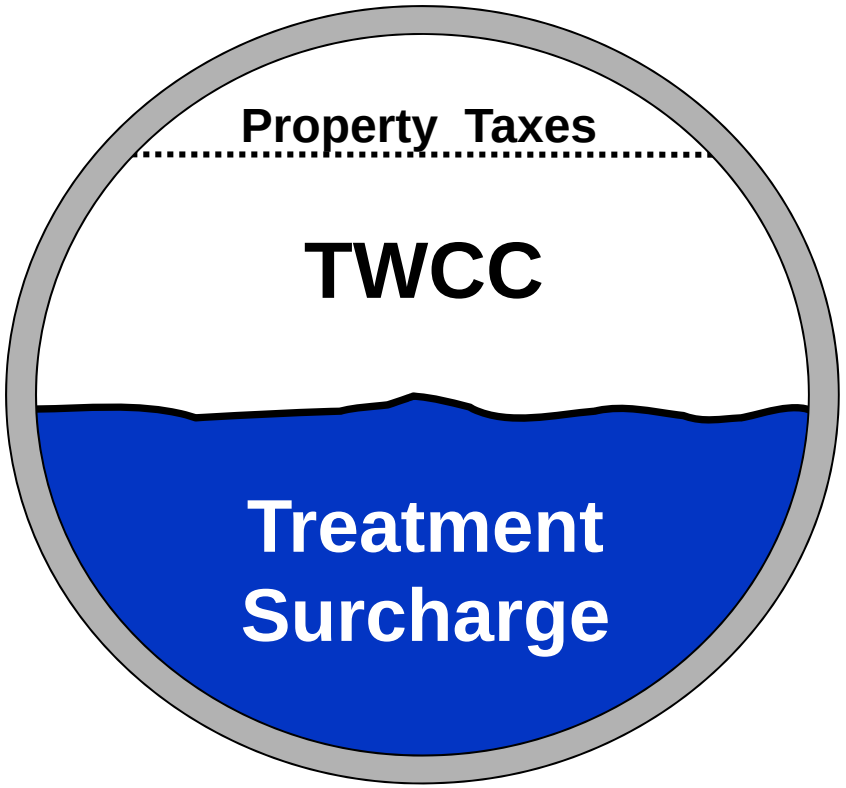
- Sends a strong signal to manage peaks
- Only applies to the extent that members exceed average demand
- More equitably allocates costs of service

Peaking Charge Disadvantages

Disadvantages

- Substantial rate impacts on some member agencies
- More volatility for charges and revenues

Option 2: Treated Water Capacity Charge



Standby Costs

Peak Demand Costs

Average Demand Costs

TWCC Considerations

- Most considerations are the same as under Option 1.
- Impacts on monthly bills are determined by historical data.

TWCC Design

- Review historical peaking patterns for each user.
- Determine three-year average seasonal peaks.
- Calculate costs related to serving peak demand.
- Develop a fixed capacity charge that will recover peaking costs.
- Estimate the impact of new charges on member agencies.
- Phase in new charges as appropriate.

TWCC Advantages/Disadvantages

Advantages

- Patterned after the existing capacity charge.
- Better revenue stability.
- Reduced rate volatility and rate shock.
- More equitably allocates costs of service.

Disadvantages

- Does not send as strong a signal to manage peaks.
- Total treatment charge not influenced as strongly by short-term changes in demand.

How Other Utilities Handle Wholesale Peaking Costs

- System-wide wholesale peaking charges
  - San Antonio, Texas
  - Seattle, Washington
  - Tacoma Water Division *(dual rate schedules)*
- Other peaking approaches
  - Dallas Water Utilities *(peak-driven minimum charge)*
  - Jordan Valley Water Conservancy District *(peaking cost allocations and seasonal surcharge)*
  - Detroit Water and Sewer Department *(peaking cost allocations)*
  - Eugene Water & Electric Board *(seasonal surcharge)*
  - Metropolitan Utilities District *(peak-driven minimum charge)*

How Other Utilities Handle Wholesale Peaking Costs

San Antonio Water System

- 5-step incremental surcharge for above-average demand each month
- Monthly base usage level equals 90% of customer's annual average usage
- Unit charges increase as peaking increases

How Other Utilities Handle Wholesale Peaking Costs

Seattle, Washington

- Contracts explicitly state that water is provided to meet average day demand.
- Contracts include surcharges for peaking.
- Also volumetric surcharge during summer months.
  - Summer rate in effect May 16 - Sept. 15
  - Summer rate premium ~ 54%

How Other Utilities Handle Wholesale Peaking Costs

Tacoma Water Division, Washington

- Two wholesale rate schedules.
- A customer's rate schedule depends on their summer/winter demand ratio.
- A ratio > 2.5 results in summer rates almost 90% higher than the winter rate.
- Summer rates for lower peaking customers are only 25% higher than winter rates.

Evaluation of Rate Alternatives

Evaluation Matrix

	0	+	+
	0	0	+
	0	0	+
	0	+	+
	+	+	+

Rating Key

0 Meets requirements

+ Exceeds requirements

- Does not meet requirements

Evaluation Matrix

(Continued)

	0	+	+
	-	+	+
	0	+	+
	0	+	+
	0	0	0

Rating Key

0 Meets requirements

+ Exceeds requirements

- Does not meet requirements

Discussion

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Appendices

Additional Survey Results

How Other Utilities Handle Wholesale Peaking Costs

- Dallas Water Utilities
  - Physical meter limitations on wholesale peaking.
  - If a customer exceeds agreed-upon peaks, Dallas can change the contract to reflect higher peaks.
  - New contract terms would enforce a higher minimum charge good for five years.

How Other Utilities Handle Wholesale Peaking Costs

- Jordan Valley Water Conservancy District, Utah
  - Costs are calculated and allocated using peak day and peak hour demand data.
  - Each member agency is charged a different water rate based on demand patterns and pressure zones.
  - Also: a summer conservation rate premium of 25%.

How Other Utilities Handle Wholesale Peaking Costs

- Detroit Water and Sewer Department
  - Peaking is used to allocate costs among wholesale customers.
  - Customers with higher peaks get higher rates.

How Other Utilities Handle Wholesale Peaking Costs

- Eugene Water & Electric Board
  - Seasonal wholesale volumetric surcharge.
  - Surcharge months are May through October.
  - Summer surcharge is approximately 20%

How Other Utilities Handle Wholesale Peaking Costs

- Metropolitan Utilities District, Omaha, Nebraska
  - Peak-driven “floating ratchet” minimum charge.
  - Billed demand is calculated as if the month’s max day was in effect the entire month.
  - Each monthly bill is based on the peak day over the last 11 months, multiplied x 365/12

How Other Utilities Handle Wholesale Peaking Costs

- Austin Water Utility, Texas
  - Peaking affects allocation of costs among wholesale customers.
  - Customers with higher peaks get higher rates.
  - New COS study may add conservation incentive to wholesale rates.