

COASTSIDE COUNTY WATER DISTRICT

766 MAIN STREET
HALF MOON BAY, CA 94019

SPECIAL BOARD WORKSHOP

Friday, January 26, 2007 - 11:30 A.M.

AGENDA

The Coastside County Water District does not discriminate against persons with disabilities. Upon request, the agenda and agenda packet can be provided in a format to accommodate special needs. If you require a copy of the agenda or related materials in an alternative format to accommodate a disability, or if you wish to attend this public meeting and will require special assistance or other special equipment, please call the District at (650) 726-4405 at least five days in advance and we will make every reasonable attempt to provide such an accommodation.

The Board of the Coastside County Water District reserves the right to take action on any item included on this agenda.

- 1) **Roll Call**
- 2) **Pledge of Allegiance**
- 3) **Public Announcements**
Any person may address the Board of Directors at the commencement of the meeting on any matter within the jurisdiction of the Board that is not on the agenda for this meeting. Any person may address the Board on an agenda item when that item is called. The chair requests that each person addressing the Board limits their presentation to three minutes and complete and submit a Speaker Slip.
- 4) **Presentation by District Legal Counsel on legal framework for potential adoption of new rate structure**
- 5) **Presentation by District Rates & Fees Committee members, President Larimer and Director Feldman on rate and fee modeling results and discussion of principles and guidelines for the potential development of a new rate system ([attachment](#))**
- 6) **Discussion and possible direction to staff to place the potential development of a new rate system on the February 13, 2007 Board of Directors meeting agenda. ([attachment](#))**
- 7) **Adjournment**

Interim Report of the Rate Sub Committee
Directors: Jim Larimer & Bob Feldman
Staff: Ed Schmidt & Gina Brazil with Craig Lunow's assistance

Introduction: The subcommittee met on Wednesday November 1, 2006 to review progress on modeling the current rate scheme against new alternative rate schemes. A straw man model was compared to the current pricing model using District data from reporting periods 8 & 9 (August and September, 2006).

There are three categories of connections, residential, commercial and fire defined by the current pricing model. Fire connections are accounts that consist of a separate water service and meter to a home or business for the purpose of fire safety and prevention. These services are connected to fire extinguishing plumbing that is built into residences and businesses and that are only used in the case of fire or periodically as demanded by fire safety codes and standards to test the fire extinguishing system to assure that it is functional. The latter tests are required of commercial installations such as hotels and restaurants in the community.

The commercial and residential designations are self-explanatory. Each of these categories of services is charged at rates designed to satisfy a variety of district policy goals. These policy goals include incentives to encourage conservation, and volume use discounts for large customers. Other goals to be satisfied by the pricing models are recapture of: (1) the costs of plant depreciation and maintenance, (2) costs associated for the purchase of water, (3) costs to harvest water from local sources, (4) processing water costs, and (5) the cost of distribution and delivery of water to users. The final goal of the pricing scheme is to equitably distribute these costs to our customers in proportion to their rate of consumption and service capacity.

Service capacity and consumption rate are not always directly correlated. A user may use more or less water during any billing period taxing all or part of their service capacity during that period. Some of their charges for any given period reflect a cost of service capacity and some will reflect a cost of processed water and the infrastructure to provide either.

Rates and Charges: The existing pricing model was applied to all current customers within the district during the months of August and September of this year. It was assumed that each customer was charged for the full two-month period in which any charge was incurred.

The current billing system bills individuals every other month and staggers users to alternating odd and even months. The full period assumption used in this preliminary rate study differs from actual practice. A new customer or to a customer who terminates their service within a billing period are billed on a pro-rated scale and that detail is not captured in this analysis. The number of transition customers with this status is always a small fraction of the total and therefore this simplification will have no significant impact on outcomes or any subsequent conclusions based upon the modeling effort.

The rates charged for each connection size for a two-month billing period are shown in Table 1. The base rate is a fixed cost for connecting to the water treatment and distribution system. The underlying assumptions for these charges are not called out within any district policy document. Resolution 2003-13 loosely relates rates to the meter size and its flow rate limits, so current base rates are determined by potential capacity utilization. Depreciation and maintenance are not specifically called out as a component of this charge. Future models will investigate partitioning real costs for maintenance and depreciation as part of these base charges.

The district has a system wide cost analysis from CDM Engineering that suggests that the fixed cost of depreciation and maintenance for each service is approximately \$28 per month if only current customers bare these costs and \$23 per month if all owners of service capacity were to equally share these costs. Our current base charges do not cover these costs so our current cost model places most the burden for the depreciation and maintenance costs on the use fees. This distribution of costs is one of the primary goals of the rate modeling effort. Our subcommittee is charged with examining these assumptions and exploring alternative rate models.

There are two rate systems used to charge customers for the water they use during a billing period. Charges for Residential customers are based upon a tiered system where the rates increase as quantity thresholds are exceeded. Commercial users are billed at a fixed rate. The rationale for this distinction is to promote conservation. A tiered cost model rewards residential users for not overusing water and punishes them for excessive use. The large volume commercial user, agribusiness, hotels and restaurants, have few options to limit their consumption so minimizing total quality used is an effective incentive to generate and foster conservation practices for commercial customers.

The water consumption fees for three different cost models, the current model and two illustrative straw men rate models are shown in Table 1. The last row of this table is a base charge that is applied only to customers who own service capacity but who have not had that capacity activated. These customers own the right to be served but are not currently being served. The base charges for current residential, fire and commercial users are shown in Table 2. All three models share the same base rate structure. In future modeling exercises all of these rates will also be varied to investigate how changing the cost distribution impacts revenues.

These models illustrate the value of the modeling analysis approach for developing equitable pricing models for district services. The ultimate goal is to develop a water rate model that distributes costs to all users in proportion to their individual benefits measured in terms of water consumed based upon services provided by the water district. Each customer should be burdened by a cost that reflects the costs of providing water and maintaining the capacity to provide water at the address served.

Table 1: The tier pricing for current rate model and two “straw men” alternatives is shown in this table. The bottom row is the base fee paid by sold but not in service customers.

		Current Rate Model	Straw Man Rate Model #1	Straw Man Rate Model #2
	Tier Use Category Boundaries	Price Per HCF		
Residential	$0 \leq \text{HCF} \leq 8$	\$3.08	\$2.80	\$2.50
	$8 < \text{HCF} \leq 25$	\$3.39	\$3.10	\$3.00
	$25 < \text{HCF} \leq 40$	\$4.41	\$4.55	\$4.80
	$40 < \text{HCF}$	\$5.45	\$5.65	\$6.00
Commercial	$0 \leq \text{HCF}$	\$4.19	\$4.19	\$4.19
Base Fee For Not in Service Owners		\$0.00	\$20.00	\$24.00

Water conservation can provide lower costs to all users by reducing the fixed capital investments that must be made to provide water. For this reason individual incentives to conserve water will benefit all users. Therefore rate incentives provided to efficient users are not borne disproportionately by less efficient users who benefit to the extent that the district is not required to make additional capital investments to meet demand.

Revenue Projections Based Upon the Three Models: Because actual consumption data representing 1/6th of the years water utilization is used to model the consequences of different rate models multiplying the revenue generated during this period by 6 is an estimator of real revenue production for the year. For this illustrative exercise two alternative models are analyzed in addition to the current rate system.

The first model, #1, imposes a base fee of \$20 per month on sold but not-in-service connections. The second model increases this base fee to \$24 per month, the CDM estimate of the true cost of infrastructure borne by all district stakeholders including those who own service capacity but have yet to place it in use. In addition to imposing these new fees the residential rates have been varied to increase the incentive reward structure for conservation as defined by reduced usage. For model #1 a modest reduction in the lowest tier rate is coupled with a slight increase or disincentive for residential users who consume quantities of water well beyond the average. In the second alternative model the incentives and disincentives are further reduced and increased respectively to encourage conservation.

Table 3: Revenue yields estimated by three rate models are shown in this table.

	Current Rate Model	Model #1	Model #2
Total Revenue	\$1,075,612.92	\$1,104,222.58	\$1,109,124.33
Change over Current Rates	NA	\$28,609.66	\$33,511.41
12 Month Revenue Change	NA	\$171,657.96	\$201,068.46
Estimated Yearly Revenue Change	\$6,453,677.52	\$6,625,335.48	\$6,654,745.98
Percent Change to Current Base	100%	102.66%	103.12%

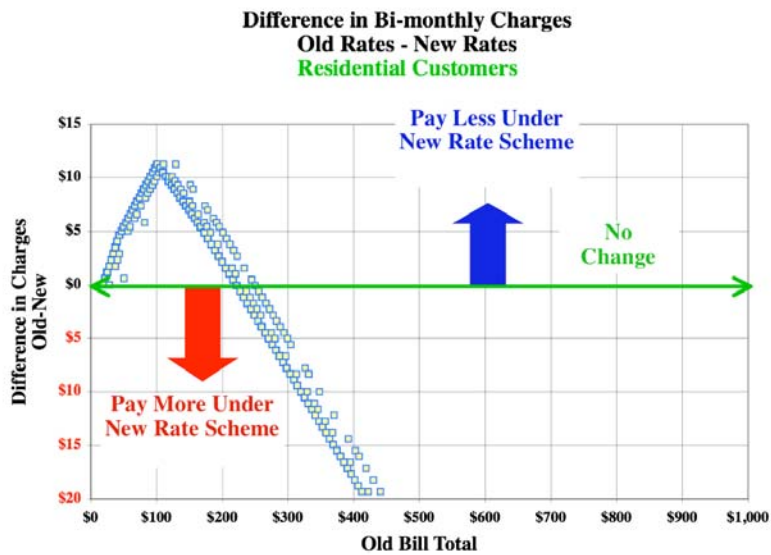
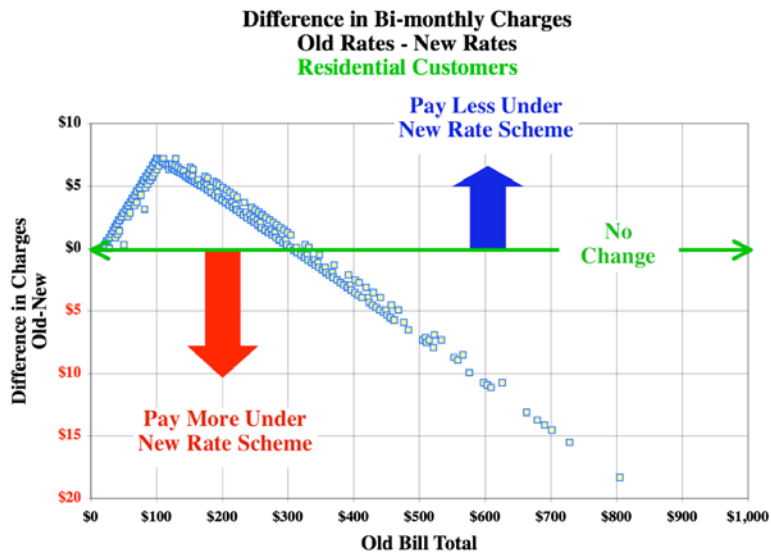
Revenues projections for three rate models based upon actual water use data for August and September of this year are shown in Table 3. Both rate models #1 & #2 increase yearly revenues generated by water service sales. The percentage change over the current rate model and the absolute dollar changes projected are shown in the entries within this table.

Table 2: Base Rates for the Current Rate Model and Used in the Straw man model.

Base Rate Charges (fixed cost billed every two months)			
Service Meter Size	Service Type	Service Notes	Base Rate
5/8"	Commercial	Standard	\$18.83
3/4"	Commercial	Standard	\$28.32
1"	Commercial	Standard	\$47.20
1-1/2"	Commercial	Standard	\$91.15
2"	Commercial	Standard	\$151.07
3"	Commercial	Standard	\$330.48
3"	Commercial	Interruptible	\$330.48
3"	Commercial	Special	\$0.00
4"	Commercial	Standard	\$1,133.19
5"	Commercial	Special	\$0.00
6"	Commercial	Standard	\$0.00
6"	Commercial	Special	\$0.00
8"	Commercial	Special	\$0.00
3/4"	Fire	Fire Safety	\$4.50
1"	Fire	Fire Safety	\$6.00
1-1/2"	Fire	Fire Safety	\$9.00
2"	Fire	Fire Safety	\$12.00
3"	Fire	Fire Safety	\$18.00
4"	Fire	Fire Safety	\$24.00
5"	Fire	Fire Safety	\$30.00
6"	Fire	Fire Safety	\$36.00
7"	Fire	Fire Safety	\$42.00
8"	Fire	Fire Safety	\$48.00
10"	Fire	Fire Safety	\$60.00
5/8"	Residential	5/8" for 2 units	\$18.83
5/8"	Residential		\$18.83
3/4"	Residential	3/4" for 2 units	\$28.32
3/4"	Residential		\$28.32
1"	Residential		\$47.20
1-1/2"	Residential		\$91.15
2"	Residential		\$151.07
3"	Residential		\$330.48
4"	Residential		\$1,133.19

The new rate models also changed the incentives for water use for all residential users. The new incentive rates generate rate reductions for some users and increases for others. These changes are illustrated for this billing period in Figure 1. The top panel in Figure 1 shows the change in residential charges for users as a function of old base charge.

Fig. 1. Residential billing changes as a function of the current billing system versus the change. Top panel is for rate model #1 and the bottom panel is for rate model #2.



Section 6 Stand-By Charges

Coastside Water District does not currently charge a fee to customers who have purchased or leased connections but have not actually hooked up. However, Coastside does continually incur expenses and accrue depreciation to maintain the system ready for their connection at a constant level of service at any time. At present, the only means to recover these costs are through the base and quantity charges paid only by active customers. Because the non-active “connections” are not paying such charges, they are not contributing monies needed to maintain the existing system and fund depreciation (i.e. funds set aside for future capital projects needed to repair or replace worn components of the existing system). This section discusses the concept of creating a stand-by charge or other means to recover the District’s accrued expenses and depreciation to continually maintain the system ready for connection at a constant level of service.

6.1 Magnitude of the Problem

The District must also maintain the existing system to be available for unidentified future customers (i.e., unsold and unleased connections), as do most water districts. At present such available capacity represents less than 1% of the total number of potential connections (see Table 6-3). It is common for existing users of a utility system to pay for system maintenance costs available for unidentified future users. However the sold and leased but un-active connections represent an additional and unusual burden for several reasons:

- They represent a high portion of the total system capacity,
- The District must have treatment and distribution capacity online now for these users,
- The District has been operating a considerable period of time without the benefit of base and quantity charges from them, and
- Because of growth management restrictions, there is no clear indication when these users will actually connect.

6.2 Stand-By Charge Analysis

6.2.1 Maintenance and Depreciation

At present, the FY05/06 budget cost of maintenance and depreciation of the District is approximately \$ \$2,021,342. Table 6-1 shows the detailed breakdown of the budget to operation and maintenance costs of the District. Field labor costs such as salary are allocated 73% to maintenance and 27% to operation, and field employment retirement are allocated 74 % to maintenance and 26% to operation. That operation vs. maintenance ratio is derived from the employment salary and retirement cost in the FY06/07 proposed budget for specific assigned personnel as shown in table 6-2.

**Table 6-1
Coastside County Water District Operations & Maintenance Budget
FY06/07 Budget**

Account Number	Description	Proposed Budget 06/07	Cost Allocated to Operation	Cost Allocated to Maintenance
5130	Water Purchased	\$1,089,879	\$1,089,879	
5230	Electrical Exp. Nunes WTP	\$13,000	\$13,000	
5231	Electrical Expenses, CSP	\$154,864	\$154,864	
5232	Electrical Expenses/Trans & Dist	\$24,800	\$24,800	
5233	Electrical Expenses/Pilarcitos Cyn	\$16,090	\$16,090	
5234	Electrical Expenses, Denn	\$77,993	\$77,993	
5235	Denn WTP Oper.	\$73,460	\$73,460	
5236	Denn WTP Maint.	\$30,000		\$30,000
5240	Nunes WTP Oper.	\$98,273	\$98,273	
5241	Nunes WTP Main.	\$54,300		\$54,300
5242	CSP - Operation	\$7,800	\$7,800	
5243	CSP - Maintenance	\$51,000		\$51,000
5318	Studies/Surveys/Consulting	\$0	\$0	
5321	Water Conservation	\$46,500	\$46,500	
5322	Community Outreach	\$14,270	\$14,270	
5411	Salaries - Field	\$792,401	\$217,178	\$575,223
5412	Maintenance Expenses	\$116,560		\$116,560
5414	Motor Vehicle Expenses	\$39,500		\$39,500
5415	Maintenance, Wells	\$31,400		\$31,400
5610	Salaries - Admin.	\$539,991	\$539,991	
5620	Office Expenses	\$104,130	\$104,130	
5621	Computer Services	\$34,800	\$34,800	
5625	Meetings/Training/Seminars	\$28,000	\$28,000	
5630	Insurance	\$458,250	\$458,250	
5640	Employee Retirement	\$375,340	\$214,538	\$160,802
5681	Legal	\$52,000	\$52,000	
5682	Engineering	\$30,000		\$30,000
5683	Auditing - Accounting	\$40,000	\$40,000	
5684	Payroll Taxes	\$98,578	\$56,019	\$42,558
5685	Board Meeting Expenses	\$38,465	\$38,465	
5687	Memberships & Subscriptions	\$0	\$0	
5688	Election Expense	\$0	\$0	
5690	Interest Expense	\$0	\$0	
5700	County Fees	\$10,500	\$10,500	
5701	Property Taxes	\$700	\$700	
5705	State Fees	\$24,000	\$24,000	
	SUBTOTAL	\$4,566,843	\$3,435,501	\$1,131,342
5710	Depreciation	\$1,050,000	\$160,000	\$890,000
	TOTAL			\$2,021,342

Table 6-2 Operations & Maintenance FY06/07 Budget		
	Employment Cost	Maint & Oper. %
Salary	\$792,401	
Maintenance	\$575,223	73%
Operation	\$217,178	27%
Retirement (Field)	\$218,233	
Maintenance	\$160,802	74%
Operation	\$57,431	26%

Coastside Water District is unique in that most of the available service connections were pre-sold in advance of customers actually hooking up. Table 6-3 provides a breakdown of the existing (mid 2005), spending, and remaining available connections totaling 7,786.5. At present, approximately 17% of the total sold or leased connections are not actually installed (1,335.5 altogether). A maximum 425 new connections (as 20 gpm rated each) can be sold in the future of which 10 are non-priority.

Table 6-3 Account Breakdown by Financial Status, Operational Activity and Planning Category							
Number of Connections	Financial Status			Operational Activity		Planning Category	
	For Sale	Sold	Leased	Active	Not Yet Installed	Priority	Non- Priority
6026		X		X			
1173		X			X		X
90.5		X			X	X	
72			X		X		X
415	X				X	X	
10	X				X		X
Subtotals	425	7289.5	72	6026	1760.5	505.5	1255

At present, the cost to the District per existing connected user for maintenance and depreciation is approximately 22% higher than it would be if the sold and leased but non-active connections also paid a pro-rated portion of these expenses. If the system was fully utilized, the maintenance and depreciation costs would be shared by an even larger number of customers bringing down the cost per user. Table 6-3 shows the monthly cost per account under various scenarios ranging from only active accounts, the current approach, to all active and future accounts.

**Table 6-3
Operations & Maintenance FY06/07 Budget**

FY 04/05 O&M + depreciation budget				\$2,021,342
Scenarios	Accounts	Cost Per Account	Cost Per Account Monthly	Difference Compared to Current Practice
1 If born by existing active users only	6,026	\$335.44	\$27.95	
2 If shared by existing active+pre-sold	7,289.5	\$277.30	\$23.11	\$4.85
3 If shared by existing active+pre-sold + leased accounts	7,361.5	\$274.58	\$22.88	\$5.07
4 If shared by all active+future users 100% utilized system	7,786.5	\$259.60	\$21.63	\$6.32