

CITY OF THOUSAND OAKS

WATER CIP FINANCIAL PLAN UPDATE AND RATE STUDY

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BARTLE WELLS ASSOCIATES
Independent Public Finance Advisors
1889 Alcatraz Avenue
Berkeley CA 94703

Tel. 510/653-3399

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EXECUTIVE SUMMARY

The City of Thousand Oaks Water System is in sound financial shape with no outstanding debt and combined operating and capital unrestricted reserves of over \$7.8 million at the beginning of FY2009. To properly maintain and protect the system's assets, the City is undertaking a recommended capital improvement program for its water system. The City is planning to spend approximately \$11 million over the next five years.

To finance the \$11 million in capital projects, the City will need to increase its capital replacements charge. This component of the quantity rate is the largest single source of funding for water capital projects. The proposed capital replacements charge for the next two fiscal years is \$0.30/hcf, an increase of \$0.05/hcf over the current rate.

The water system's Plant Investment Fee (PIF) is tied to an escalation factor so that it will keep pace with increasing construction costs and insure that "growth pays for growth" and new users pay all expansion-related capital costs. The estimated plant investment fee for FY2010 for a typical 3/4" meter is \$4,346. These capital needs and the method of funding them are consistent with the City's transition from a developing to a maintenance city.

Even more pressing than the water system's need for capital revenue, however, is the fact that the daily operating expenses of the water system are increasing at a considerable rate, specifically the price of purchased water from CMWD. The projected increase in water purchase costs from FY2009 to FY2011 is 32%. Purchased water expenses are the largest item in the City's Operations Budget, comprising approximately 65% of operating expenses in FY2010, so any increase in the price of purchased water has a substantial impact on the City's operating budget. As a result of these increasing water costs, the operations and maintenance component of the quantity rate and the fixed monthly base rate per meter size both need to be substantially increased over the next two fiscal years. Additionally, the City needs to reduce its water consumption as much as possible to try and limit the impact of rising wholesale water costs.

To encourage water conservation, a new tiered-rate water structure quantity charge is proposed. The new three-tiered system will apply to single-family residential (SFR) water users with non-residential users still paying a uniform rate per hundred cubic feet (hcf) as they do currently. Additionally, the proposed lift rate is increased from \$0.13 to \$0.15/hcf/lift to meet increased lift expenses related to rising SCE electricity rates and operational costs. Electricity expenses comprise approximately 63% of the total lift charge budget.

These increases will cover all capital costs and operating expenses for the next two fiscal years. This assumes that the City is successful in reducing its overall water consumption by a minimum of 5%. The City will face a penalty from CMWD if anything less than a 5% reduction in water purchases takes place. This report has assumed an estimated 10% decrease in overall water consumption and water purchases from FY2009 to FY2010. However, it is important to note that while the new residential tiered-rate structure, the increase in rates, and the City's conservation efforts are all anticipated to be successful in decreasing consumption, the weather plays a substantial role in determining water use and its behavior cannot be accurately predicted.

FINDINGS AND RECOMMENDATIONS

- The City is continuing with a recommended water capital improvement program (CIP). The City is forecasting \$11 million of CIP projects over the next five years.
- The current service charge consists of a monthly base rate determined by meter size and a quantity rate per hundred cubic feet (hcf) based upon metered water use. The base rate is \$10.06 for a 3/4" meter while the quantity rate of \$2.60/hcf is comprised of three components: \$2.08 for operations and maintenance (O&M); \$0.25 for capital replacements; and \$0.27 for CMWD Pass-through Charge.
- The Water Capital Projects Fund (Developer Fees) has forecasted CIP costs of approximately \$4.1 million over the next five years. This Fund revenue comes from new users paying a connection fee known as a Plant Investment Fee (PIF). The PIF is indexed to an inflation factor to maintain equity based on the timing of new connections. The current PIF is \$4,100 for a 3/4" meter single family home. The estimated PIF for FY2010 is \$4,346. The actual proposed PIF will be presented in September, 2009.
- CIP costs are allocated between current and future users. Connection charge revenue funds the future users' share of costs. Current users pay their share of costs from a capital component of the quantity rates. Of the \$11 million of planned CIP projects over the next five years, 38% of the costs are allocated to future users with existing users responsible for the rest.
- The Capital Replacements Fund (Existing Users) has estimated CIP costs over the next five years of approximately \$6.9 million. The capital replacements component of the monthly quantity rate will finance these CIP projects with a proposed \$0.05/hcf increase to the charge. The new proposed capital replacement charge is \$0.30/hcf for FYs 2010 and 2011.
- As the City nears build-out, connection charge revenue will decrease and the capital replacements component of the quantity rate will become more important and future increases in this charge are likely.
- Current City Council policy establishes an operating reserve target of between 5 to 15 percent of operating expenses. This policy should be modified and it is recommended that the City's long-term operating reserve target be at least 3 months (25%) of annual operating expenses. The City's forecasted operating fund balance at the end of FY2010 is 7% and it is projected to be 13% by the end of FY2011. Long-term, the City should seek an Operations Fund reserve balance of 20% in FY2012 and 25% in FY2013.
- The monthly base rate for a 3/4" meter is increased to \$14.46 in FY2010 and \$15.53 in FY2011. The rates for the larger meter sizes are increased by the same percentage.

- The current lift rate per hcf per lift is \$0.13 and is increased to \$0.15 per hcf per lift in FY2010 and \$0.17 per hcf/lift in FY2011.
- To encourage water conservation, BWA recommends restructuring the City's residential water rates from its current uniform block rate structure, with all water sold at the same price per unit, to a system of inclining rate tiers, where the price of water increases as consumption rises. BWA recommends the City transition to a three-tiered inclining commodity rate structure for its single family residential (SFR) customers. Inclining rate tiers can help keep water consumption charges relatively low for residential customers with low water use and provide increased financial incentive for conservation and efficient water use as customers use more and more water.
- The City's non-SFR accounts should continue to use the uniform block rate structure with the quantity charge per hundred cubic feet (hcf) set between Tier 1 and Tier 2 of the SFR rate structure. The non-SFR uniform rate per hcf is set at a price point to maintain approximately the same share of overall water revenues as exist under the current structure. The proposed non-SFR O&M quantity charge for FY2010 is \$2.75/hcf and \$3.25/hcf for FY2011.
- The new proposed SFR tiered-rate structure is based on a cost-of-service approach and is revenue neutral resulting in no additional funds.
- With the increased water rates, the proposed three-tiered rate structure for SFR customers, and the City's aggressive water conservation efforts, the overall water conservation goal is to decrease water consumption by 10% in FY2010. The biggest consumption decrease is projected for the highest SFR water users who use the highest priced, third-tier water.
- The proposed rate adjustments are recommended for implementation effective November 16, 2009. This will allow sufficient time for the Prop 218 process to proceed and the billing system to be adjusted, but will enable the City to receive the necessary increase in revenues as soon as possible.
- Given the proposed new rate structure; the increase in rates; and the unknown weather variable; future water consumption levels, and therefore future water revenues, are uncertain and it would be prudent to reexamine the financing plan sooner rather than later. The City should be prepared for water revenue variability and should closely examine consumption levels and the corresponding water revenue totals after implementation of the new rates. This water revenue uncertainty is why it is important to have increased operating reserve levels and to increase the percentage of fixed revenues derived from the monthly base charge. It is recommended that City Council review the financing plan every two years concurrent with the City's biennial budget process.
- The percentage of operating revenue from fixed revenue sources (base charge) is increased from approximately 16% in FY2009 to 19% in FY2010 and 20% in FY2011.

- The table below summarizes the various components of the service charge, the specifics of the new tiered rate structure, and the proposed PIF charge:

Base Rate Meter Size	Current Rates	11/16/09	7/1/10
Single Units			
3/4"	\$10.06	\$14.46	\$15.53
1"	\$18.31	\$26.31	\$28.26
1-1/2"	\$34.72	\$49.90	\$53.58
2"	\$56.74	\$81.54	\$87.57
3"	\$110.62	\$158.97	\$170.72
4"	\$184.72	\$265.46	\$285.08
6"	\$371.69	\$534.16	\$573.63
Multiple Units			
3/4"	\$21.01	\$30.19	\$32.42
1"	\$27.47	\$39.48	\$42.39
Above 1"	see single unit rate		
SFR Quantity Rate O&M Component (per hcf)			
Operations and Maintenance	\$2.08		
Tier 1 (0 - 15 hcf)	n/a	\$2.40	\$2.74
Tier 2 (16 - 35 hcf)	n/a	\$3.00	\$3.42
Tier 3 (36+ hcf)	n/a	\$3.80	\$4.33
Non-SFR Quantity O&M Charge (per hcf)	\$2.08	\$2.75	\$3.25
CMWD Pass-Through (per hcf)	\$0.27	\$0.00	\$0.00
Capital Replacement (per hcf)	\$0.25	\$0.30	\$0.30
Total SFR Quantity Charge	\$2.60		
Tier 1 (0 - 15 hcf)		\$2.70	\$3.04
Tier 2 (16 - 35 hcf)		\$3.30	\$3.72
Tier 3 (36+ hcf)		\$4.10	\$4.63
Total Non-SFR Quantity Charge	\$2.60	\$3.05	\$3.55
Lift Rate/hcf/lift	\$0.13	\$0.15	\$0.17
PIF - Single Family	\$4,100	\$4,346	\$4,607

- Under Proposition 218, the Council is required to mail a notice to property owners of the proposed increases and hold a public hearing at which property owners may protest against the increases, no sooner than 45 days after notice is sent out. If written protests are submitted by a majority of property owners, then the Council may not increase the rates. In the absence of a majority protest, the Council may vote to pass the rate increases. Property ownership is defined to include tenancies of real property where the tenants are directly liable to pay the charge. Essentially, the party responsible for paying the bill, whether property owner or tenant, should receive a notice and that individual has the right to file a written protest (one protest/one bill). The notice and the rate hearing should include two years of proposed rate adjustments; otherwise the City will need to follow the mailed notice provision each time a rate adjustment is needed.

INTRODUCTION

As a water purveyor, the City of Thousand Oaks is committed to providing high quality service to its customers. The age of the City's water system, constantly changing technology, new mandates and regulations, and an increased customer base due to growing City population, required an in-depth evaluation of the City's water system and related facilities as build-out approaches. It was necessary to review available information, examine and analyze the infrastructure conditions, identify potential problem areas and future needs, develop a Water Master Plan, and prepare a phased Capital Improvement Program (CIP) reflective of all the findings.

In April of 2003, a Water Master Plan study that evaluated the performance of the City's water distribution system, including pumping and storage facilities, under current and build-out conditions was started. The study included development of a proposed CIP that would reflect the water system's current and future needs for new improvements, upgrades, and operational changes. The Water Master Plan was completed and accepted by the City Council in December 2005 and serves as the framework for this biennial financial plan update.

The City's water system serves about 16,800 customer accounts. With the exception of a few small areas outside the City limits, the City distributes water to 37% of the area within its incorporated boundaries. The City receives its water from the Calleguas Municipal Water District (CMWD) through ten different turnout stations located throughout the City.

The major components of the existing City's water system include:

- 16 reservoirs with combined storage capacity of about 35 million gallons;
- 11 pump stations;
- 4 hydropneumatic pump stations;
- 10 CMWD turnouts;
- 1950 fire hydrants;
- 225 miles of pipeline; and
- 6 pressure regulating stations.

The City's water system operates in four different pressure zones (three gravity and one hydro-pneumatic).

The City is transitioning from a developing city to a maintenance city. The Water Master Plan has been a part of this transition as it provides a detailed analysis and short and long-term

operations and maintenance strategies. The Water Master Plan and the latest FY2010 & FY2011 CIP Budget identify ways to improve the safety and reliability of the system and assures the system's compliance with all applicable regulations resulting in more efficient and cost effective operations and maintenance, and continued high level of customer satisfaction through the City's build-out stage.

The CIP provides a prioritized list of repairs, replacements, and new improvements to the existing City's water system, based on the facilities' existing deficiencies and the system's future needs through the City's build out stage and beyond.

Bartle Wells Associates (BWA) was retained to prepare a Water Financial Plan and Rate Study to assist the City in evaluating its existing water rate fees and rate structure and to map out a financial plan. The key objectives of our study were to:

- Provide sound financial analysis to support establishment of appropriate water rates for operation and capital improvements
- Provide stable, sustainable rates through financial planning and forecasting
- Fund the necessary CIP projects
- Begin to build up the Water Operations Reserve Fund to an appropriate level (ultimate goal being at least 25% of annual O&M expenses)
- Devise an easy to understand and implement tiered-rate structure using standard fee methodologies that generates appropriate revenues while encouraging water conservation and that is fair and equitable to all City customers and classes

The water system's capital expenditure for FY2010 and FY2011 is expected to total nearly \$6.5 million. A total of approximately \$11 million of CIP project costs are scheduled from FY2010 through FY2014. The City's water system has managed to finance its CIP costs thus far on a pay-as-you-go basis and has not needed any debt financing. BWA projects that the City can continue to finance its operations and capital projects without debt, but to cover its rapidly increasing water costs it will need to raise operating fees and rates as well as increase the capital facilities replacement charge.

WATER FINANCING POLICY

Thousand Oaks has well-established policies that serve as a guide for all water financing plans. These policies have been established over the years by City Council action and also by considerable citizen input in the form of the Franchise Advisory Board review during the 1980s and the Community Budget Task Force.

Key City financial policies include the following:

- Projects that serve future development will be funded entirely by future users.
- To the extent possible, water capital project costs will be funded on a pay-as-you-go basis. This means that the use of debt financing will be minimized.
- Annual ongoing costs for operation and maintenance will be funded from current revenue in the form of service charges to those receiving the service.
- Service charges and connection charges will be developed on an equitable basis to insure that individual users and customer classes are paying only for their share of water system costs.
- Prepare a comprehensive review of all aspects of the water system financial plan, conducted by the City Council or a committee thereof on a two-year basis, concurrent with the biennial budget process.

WATER SYSTEM

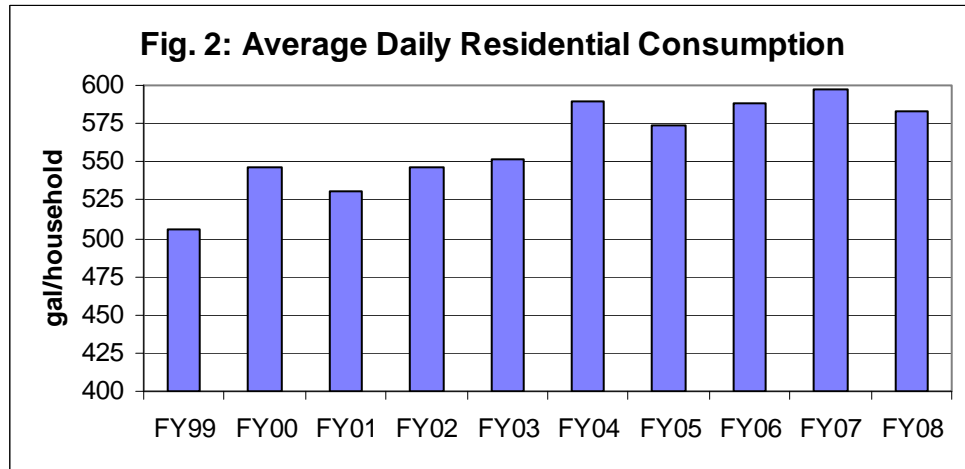
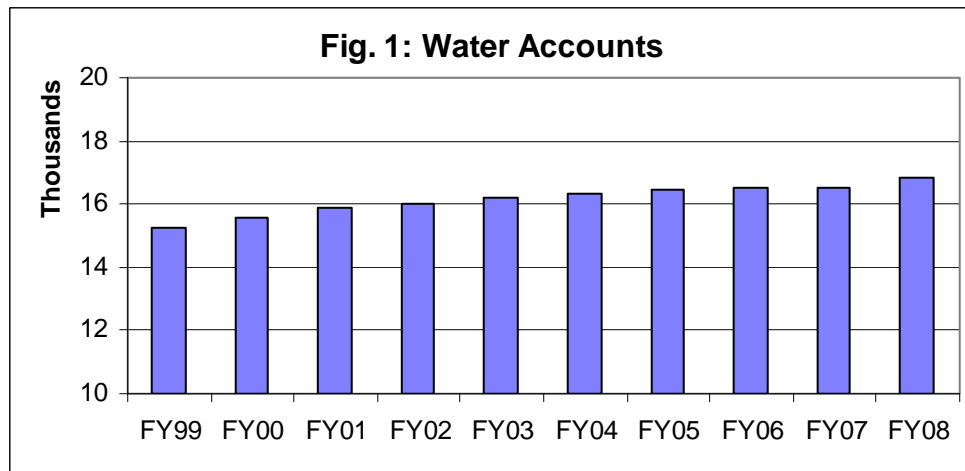
Organization

The City's Public Works Department is staffed by more than 200 employees and is responsible for the planning, administration, operation, and maintenance of the public infrastructure within the City. The City's water system has 31 FTE employees and is a part of this infrastructure and supplies over 13 million gallons of water per day to nearly 17,000 residential and commercial customers.

The City's water supply source is State Project water imported from Northern California. This State project water is treated, filtered and disinfected at Metropolitan Water District's Jensen Filtration Plant in Granada Hills. The supplied water is then delivered directly to the City through the Calleguas Municipal Water District's (CMWD) transmission facilities.

The City provides water service to less than half of its residents. The remaining residents are served primarily by California-American Water Company or California Water Service Company. Figures 1

shows the number of water accounts over the past 10 years while Figure 2 shows the average daily residential consumption over this same time period.



System Users

Table 1 shows the number of water customers by meter size in each of three customer categories – residential, commercial and irrigation. The City’s typical water customer is a single unit residential

customer with a 5/8 X 3/4” meter. Approximately 88% of the City’s 16,825 total customers fall into that category and residential users make up 94% of all water accounts.

Meter Size	Residential	Commercial	Irrigation	Total	% of Total
5/8"	180	3	1	184	1.1%
5/8" X 3/4"	14,528	174	59	14,761	87.7%
3/4"	90	0	4	94	0.6%
1"	746	150	68	964	5.7%
1-1/2"	51	152	127	330	2.0%
2"	60	116	132	308	1.8%
3"	9	30	10	49	0.3%
4"	4	13	4	21	0.1%
6"	5	2	1	8	0.0%
Unknown	<u>105</u>	<u>1</u>	<u>0</u>	<u>106</u>	<u>0.6%</u>
Total	15,778	641	406	16,825	100%
	94%	4%	2%	100%	

Note: As of May, 2009.

Table 2 shows a summary of usage by meter size from calendar year 2008. As expected, residential users account for a majority of the City’s water consumption – approximately 74% with the remaining consumption split fairly evenly between commercial and irrigation use.

Table 2
City of Thousand Oaks Water System
Summary of Water Usage (hcf) by Meter Size

Meter Size	Residential (1)	Commercial	Irrigation	Total	% of Total
5/8"	52,800	700	200	53,700	0.9%
5/8" X 3/4"	3,754,600	41,400	21,300	3,817,300	62.7%
3/4"	25,400	0	2,000	27,400	0.5%
1"	377,900	79,100	47,800	504,800	8.3%
1-1/2"	42,100	161,400	237,000	440,500	7.2%
2"	99,200	257,300	332,700	689,200	11.3%
3"	54,600	94,100	63,100	211,800	3.5%
4"	19,700	105,800	99,100	224,600	3.7%
6"	43,700	41,700	13,400	98,800	1.6%
Unknown	<u>16,200</u>	<u>1,200</u>	<u>0</u>	<u>17,400</u>	<u>0.3%</u>
Total	4,486,200	782,700	816,600	6,085,500	100%
% of Total	74%	13%	13%	100%	

1 - Includes Single Family Residential and Multi-Family Residential.

Note: Usage from 1/08 to 12/08.

Given the stability of the number of water accounts in recent years shown in Figure 1 and the two-year time frame of this water financial plan and rate study, no population growth or increasing water use was assumed when projecting future water revenues and expenses. In fact, water use levels are projected to decline based on increased conservation due to the implementation of a new tiered rate structure and aggressive City efforts promoting conservation. While increased conservation will lower the City's purchased water expenses, any costs savings are more than offset by the increased wholesale prices charged by CMWD. Reduced water sales means that the City's fixed operating costs are spread out over fewer units of water, so the cost per hcf goes up. Essentially, the City still needs to meet increasing capital and operating expenses, which are increasing, but has to do so with reduced water sales resulting in an increased price per unit of water. The estimated water conservation projections based on a new proposed residential rate structure and increased fees are discussed in detail later in this report.

WATER FINANCES

Service Charges

Water rates and fees are set by City ordinance. Table 3 shows the current base and quantity rates that are billed bimonthly. The City's rates consist of three components: (1) a fixed monthly service charge billed regardless of water use, (2) a quantity water commodity charge billed per hcf of metered water use, and (3) a lift rate that is also based upon water usage per hcf that is applicable to some water accounts based upon location. One hcf is equivalent to approximately 748 gallons of water. The quantity rate per hcf has three components: an O&M component, a capital replacements component, and a CMWD pass-through charge.

Table 3
City of Thousand Oaks Water System
Current Service Charges

Base Rate (1)	
Single Units	
3/4"	\$10.06
1"	18.31
1-1/2"	34.72
2"	56.74
3"	110.62
4"	184.72
6"	371.69
Multiple Units	
3/4"	21.01
1"	27.47
Above 1"	see single unit rate
Conejo Oaks Monthly Surcharge (2)	4.64
Quantity Rate Component (per hcf)	
Operations and Maintenance	2.08
Capital Replacements	0.25
CMWD Pass-through	<u>0.27</u>
Total Quantity Rate/hcf	2.60
Lift Rate/hcf/lift	0.13

1 - Monthly rate - most customers are billed bimonthly.

2 - Represents additional infrastructure provided by TO to the Conejo Oaks area.

Monthly surcharge will be in place from 12/31/08 to 12/31/18.

Source: Ordinance No. 1518-NS, May 5, 2009.

The City's current single unit fixed monthly base rate is \$10.06. The fixed monthly service charge can be thought of as a "readiness to serve" charge that provides a customer with access to water at all times, whether or not the water is actually used. It is a fair way of recovering fixed costs related to the number of customers and size of meter installed rather than costs related to water use. The fixed monthly charge recognizes the City's obligation to serve a customer's potential water use and the fact that the City must be prepared to meet that demand for water availability at all times. The monthly charge provides a steady, predictable revenue stream to the City and recognizes the fixed nature of a portion of O&M costs that exist regardless of the amount of water sold. Fixed service charges vary by meter size with larger meters paying higher fixed charges based on meter capacity ratios. The meter capacity ratios are based on American Water Works Association (AWWA) standards reflecting average safe operating capacity.

The O&M component of the quantity rate is \$2.08/hcf; the capital replacements rate is \$0.25/hcf; and the CMWD pass-through charge is \$0.27/hcf for a total quantity rate of \$2.60/hcf. The City currently charges a uniform block rate for all water use which means that there is no change in the cost of water per hcf regardless of the amount used. The current total rate of \$2.60 per hcf is equal to roughly \$0.0035 per gallon. The customer's quantity charge cost is directly proportional to their water consumption.

Table 4 shows how the 16,835 water accounts are distributed across the five zones of the city. Depending upon what zone a water account is in, a lift charge may be applicable. The lift rate is set per hcf per lift and is currently \$0.13.

Table 4
City of Thousand Oaks Water System

Zone	No. Lifts	Number Accounts	% of Total	Total Water Usage	% of Total	Estimated Lift Charge Revenue (1)
P1	0	6,231	37.01%	2,016,600	33.14%	\$0
P2	1	4,813	28.59%	1,719,400	28.25%	\$223,500
P3	1	3,306	19.64%	1,284,600	21.11%	\$167,000
P4	2	2,372	14.09%	1,021,100	16.78%	\$265,500
P5	3	<u>113</u>	<u>0.67%</u>	<u>44,100</u>	<u>0.72%</u>	<u>\$17,200</u>
Total		16,835	100%	6,085,800	100%	673,200

1 - At current lift charge of \$0.13 per hcf per lift.

Note: Water statistics from 1/08 through 12/08.

Conejo Oaks Surcharge

In 2007, the City acquired a small water service area previously served by the California-American Water Company (Cal-Am). Thus, about 300 former Cal-Am water customers in the Conejo Oaks area became City of Thousand Oaks water customers. The acquisition required the City to construct system integration improvements. As customers of a private water company, the Conejo Oaks users had never paid a connection charge.

As Table 3 shows, the City has established a \$4.64 Conejo Oaks monthly surcharge. This surcharge will be in place for ten years. This surcharge allows these residents to “catch-up” with other City water customers and helps fund the required integration improvements.

Connection Charges

The City collects a Plant Investment Fee (PIF) on new connections to the water system to finance capital facilities serving new growth. Revenue from connection charges is not used to pay operating and maintenance expenses. The City’s PIF revenue has been decreasing in recent years as the City nears build-out and it is expected to continue to comprise a smaller and smaller amount of the City’s capital revenue in future years. Table 5 shows current connection charges.

The PIF for a single-family detached home or detached condominium is \$4,100. The PIFs for other residential units, such as attached condos, townhouses, mobile homes, duplexes, apartments, and so forth, are set at 75% of the single-family detached unit PIF. Motels, hotels, and congregate care units with kitchen are charged 50% per unit of the single family PIF. Table 5 shows the complete listing of customer categories for the PIFs. If a customer category does not fit a particular user, the PIF is based on the equivalent meter size of estimated water demand.

The City has three surcharge zones where the average water system capital costs significantly exceed the PIF. These three special facilities surcharge zones are shown in Table 6 along with the additional surcharge rates for each particular zone.

The City’s water system also has a surcharge rate based upon the required fire flow per minute. Table 7 shows the fire flow surcharge rates that apply to the differing levels of required fire flow. There is no surcharge at all from 0-1250 gallons per minute (gpm).

Table 5
 City of Thousand Oaks Water System
 Plant Investment Fee

Customer Type (1)	Ratio (2)	Charge
Single family detached home	1.00	\$4,100
Single family detached condominium	1.00	4,100
Residential condominium, townhouse, mobile home	0.75	3,076
Apartment, duplex, granny flat, secondary unit (per unit)	0.75	3,076
Motel, hotel, congregate care units (with kitchens per unit)	0.50	2,050
Commercial (3) & low water use (4)	0.50	2,050
All others by meter size		
Meter Size		
5/8"x3/4" or 3/4"	1.00	4,100
1"	2.00	8,200
1-1/2"	4.00	16,400
2"	6.40	26,240
3"	13.00	53,301
4"	22.00	90,201
6"	45.00	184,503

- 1 - If customer category does not fit, charged based on equivalent meter size of estimated water demand.
 2 - Approximate ratio.
 3 - If 10 or less fixture units.
 4 - 10 hcf/month or less.

Note: Plant Investment Fee charges are increased in December of each year based on the change from the preceding July to July period of the ENR CCI for Los Angeles. July 2008 ENR CCI of 9335.69 will be the base for future adjustments.

Source: Ordinance No. 1518-NS, May 5, 2009.

Table 6
 City of Thousand Oaks Water System
 Special Facilities Surcharge Fees

	Special Surcharge Zone (1)		
	Rolling Oaks	Kelley/Ventu	Wilder/Grissom
Single Family Detached (per unit)	\$11,457	\$3,148	\$4,292
Condo, Townhouse, Mobile Homes (per unit)	8,593	2,361	3,219
Apartments, Duplex (per unit)	8,593	2,361	3,219
Motel, Hotel, Congregate Care (per room/suite)	5,729	1,574	2,146
Commercial Projects with 10 or less fixture units	5,729	1,574	2,146
All Others (2)			

- 1 - Due to high capital costs, the average capital cost for a new customer significantly exceeds the PIF.
 2 - Uses the following formula with the minimum charge equal to Single Family Dwelling (SFD) charge per site/project.

$$\text{SFD charge} * [(\text{Required Fire Flow}/1000 * 0.5) + (\text{Fixture Units}/20 * 0.25) + (\text{Sq Ft}/3000 * 0.25)].$$

Note: Special Facilities Surcharge Fee charges are increased in December of each year based on the change from the preceding July to July period of the ENR CCI for Los Angeles. July 2008 ENR CCI of 9335.69 will be the base for future adjustments.

Source: Ordinance No. 1518-NS, May 5, 2009.

Table 7
 City of Thousand Oaks Water System
 Fire Flow Surcharge

Required Fire Flow (gpm)	Residential	All Others (1)
0-1250	0	0
1251-1750	10% of PIF	\$4,971 or 10% of PIF
1751-2250	20% of PIF	\$9,924 or 20% of PIF
over 2250	30% of PIF	\$14,896 or 30% of PIF

1 - Whichever is greater.

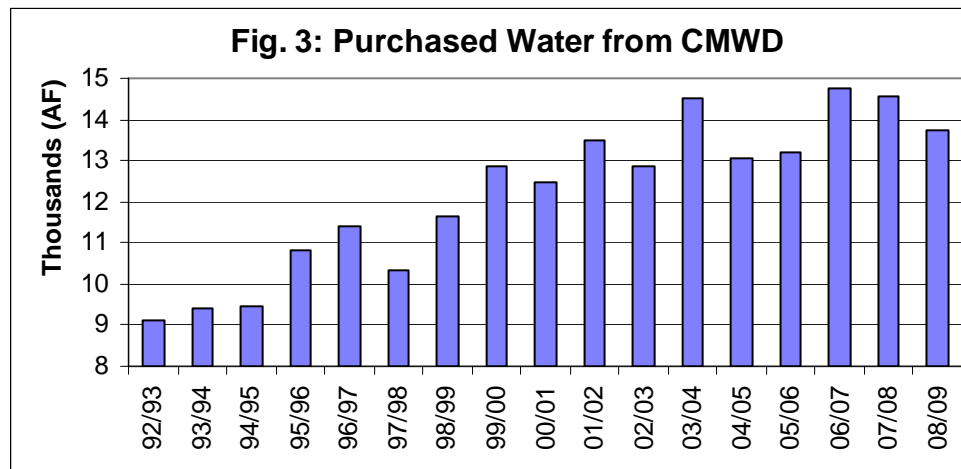
Note: Fire Flow Surcharge Fee charges are increased in December of each year based on the change from the preceding July to July period of the ENR CCI for Los Angeles. July 2008 ENR CCI of 9335.69 will be the base for future adjustments.

Source: Ordinance No. 1518-NS, May 5, 2009.

Operations Revenue and Expense

The largest component of the City’s Water Operations Fund budget is water purchases from CMWD. In FY2010, water purchases are projected to make up 65% of the City’s total operating costs. Figure 3 shows the City’s historical water purchases in acre-feet from CMWD over the past two decades.

Metropolitan Water District (MWD) and CMWD have both announced substantial price increases on the wholesale water that Thousand Oaks purchases to serve its water



customers. Table 8 shows the current rates, the rates effective 1/1/10, and the projected rates on 1/1/11. The projected increase in the combined MWD and CMWD Tier 1 rate over two years is 52%. The Readiness-To-Serve (RTS) rate, which is a fixed cost, is projected to increase 82% over two years. Note that in recent years, the City has seen additional CMWD mid-year rate increases above and beyond what had previously been announced and this might very well happen again. The current CMWD pass-through charge of \$0.27/hcf was a result of such an unanticipated wholesale water price increase.

Table 9 shows the City's projected FY purchase costs based on the CY rates shown in Table 8. A 10% decrease in consumption is estimated for FY2010, but water purchase costs are still higher than the approximately \$10.7 million in purchase costs shown for FY2009 in Table 10.

	Effective 1//1/09	Effective 1/1/10	Projected 1/1/11 (1)	Two-Year Total % Increase
MWD Rates				
Tier 1 Supply Rate (\$/af)	\$109	\$101	\$122	
Delta Supply Surcharge (\$/af)	\$0	\$69	\$84	
Tier 2 Supply Rate (\$/af)	\$250	\$280	\$343	
Water Supply Surcharge (Tier 1 only)	\$25	\$0	\$0	
System Access Rate (\$/af)	\$143	\$154	\$187	
System Power Rate (\$/af)	\$110	\$119	\$144	
Water Stewardship Rate (\$/af)	\$25	\$41	\$50	
Treatment Surcharge (\$/af full-service)	<u>\$167</u>	<u>\$217</u>	<u>\$264</u>	
MWD Tier 1	\$579	\$701	\$850	47%
MWD Tier 2	\$695	\$811	\$988	42%
CMWD Rates				
O&M Surcharge (\$/af)	\$53	\$54	\$90	
Capital Construction Surcharge (\$/af)	\$137	\$145	\$232	
2009 Rate Deferral Surcharge	\$0	\$38	\$0	
Total Calleguas	\$190	\$237	\$322	69%
Combined Rates				
Tier 1 Rate (\$/af)	\$769	\$938	\$1,172	52%
Tier 2 Rate (\$/af)	\$885	\$1,048	\$1,310	48%
CMWD Annual Capacity Charge	\$516,750	\$516,750	\$516,750	0%
CMWD Annual Readiness-To-Serve Charge	\$337,523	\$523,043	\$615,119	82%
1 - Metropolitan WD projected rate increase on 1/1/11 is 21.5%.				

Table 10 shows the Water Operations Fund actual revenue and expense for the last three fiscal years, the estimated prorated revenue for FY2009 based on YTD revenue through June 18, 2009, and the Operations Fund budget for FYs 2010 and 2011. Operating revenue for FY2008 was approximately \$15.7 million with operating expense also at \$15.7 million for a small net annual deficit of approximately \$6,000. In the two prior years, FY2006 and FY2007, the

	FY10	FY11
CMWD Purchased Water (AF) (1)	12,366	12,366
Quantity Charge	10,579,876	13,074,064
Capacity Charge	516,750	516,750
Readiness-To-Serve Charge	<u>430,283</u>	<u>569,081</u>
Total Water Purchase Costs	11,526,909	14,159,895
1 - Represents 90% of FY09 CMWD purchase which was 13,740 AF.		

annual net revenue was positive. The estimate for FY2009 forecast a deficit of approximately \$361,000 highlighting the need for the City to increase its revenue through increased rates.

Table 10
City of Thousand Oaks Water System
Water Operations Summary - Fund 611

	Actual FY06	Actual FY07	Actual FY08	Estimated FY09	Budget FY10	Budget FY11
Revenue						
Base Charges	\$ 2,367,400	\$ 2,232,200	\$ 2,616,000	\$ 2,567,000	\$ 3,269,200	\$ 3,961,500
Metered Water Sales	9,853,200	11,308,000	11,593,400	13,268,000	13,938,800	16,010,400
Lift Charges	601,000	672,300	671,900	644,100	685,000	685,000
Interest Income	150,000	245,200	230,200	57,500	163,100	167,200
Stand-By (Fire Detectors)	41,600	44,200	45,400	47,900	44,200	44,200
Backflow Prevention	11,700	12,900	17,400	12,700	30,000	30,000
Plan Checking/Filing Fee	11,600	5,200	7,200	-	-	-
Inspection Fees	11,300	8,800	8,400	400	-	-
Rental of City Facilities	24,000	24,000	24,000	24,000	24,000	24,000
Misc Revenue (1)	174,100	577,000	497,800	63,900	60,700	58,900
Total Operations Revenue	13,245,900	15,129,800	15,711,700	16,685,500	18,215,000	20,981,200
Expense						
Salaries	1,613,500	1,817,600	1,907,200	1,930,300	2,144,400	2,213,700
Fringe Benefits	802,400	1,204,000	972,200	984,000	1,035,000	956,500
Maintenance and Operations	2,233,500	2,206,800	2,708,500	3,462,700	3,123,300	3,360,600
CMWD Purchase Costs	8,222,600	9,515,000	10,154,600	10,695,000	11,526,900	14,159,900
Chargeback	(18,800)	(15,600)	(25,000)	(25,300)	30,200	(19,800)
Capital Outlay	-	42,000	-	-	6,000	-
Total Operations Expenses	12,853,200	14,769,800	15,717,500	17,046,700	17,865,800	20,670,900
Operations Fund Net Revenue	392,700	360,000	(5,800)	(361,200)	349,200	310,300

1 - Federal grants, construction water, private capital contribution, sale of salvaged equipment, reimbursements, and misc revenue.

Perhaps the most significant item to note in Table 10 is the increase in water purchase costs from CMWD. The City's water purchases comprise the bulk of its operating expenses. As a result, the operations and maintenance component of the quantity rate and the fixed monthly base rate per meter size both need to be increased over the next two fiscal years.

Capital Revenue and Expense

The water system's capital program consists of two different funds, Fund 612 Capital Projects - Developer Fees and a Fund 613 Capital Replacements. The Developer Fees Fund collects the revenue from the PIFs and the Special Facilities and Fire Flow Surcharges. These funds are used to pay the CIP costs related to future users. The Capital Replacements Fund collects revenue from the capital replacement component of the quantity rate. CIP costs related to existing users are paid for from this fund.

Table 11 shows a summary of the Water Capital Funds actual revenue and expense for the past three fiscal years, the estimated prorated revenue for FY2009 based on YTD revenue through June 18, 2009, and the budget figures for FYs 2010 and 2011. Given the overall economic slowdown and the fact that the City's growth opportunities are limited as it approaches build-out, it is not surprising to see the PIF and the other connection surcharge revenue decrease. The revenue from metered water sales, the capital replacement component of the quantity charge, comprises the bulk of the overall

water capital revenue. Table 11 shows the City had annual net deficits for FYs 2007 and 2008, and a sizable net deficit of nearly \$2.2 million is forecast for FY2010. The net result of this is that the existing Water Capital Fund balances, particularly Fund 612, have been significantly reduced.

Table 11
City of Thousand Oaks Water System
Water Capital Program Summary - Funds 612 and 613

	Actual FY06	Actual FY07	Actual FY08	Estimated FY09	Budget FY10	Budget FY11
Revenue						
Plant Investment Fees	\$ 226,200	\$ 98,800	\$ 223,000	\$ 49,700	\$ 24,200	\$ 25,200
Metered Water Sales	323,800	357,300	985,100	1,376,100	1,610,000	1,880,000
Fire Flow Surcharge	46,500	31,000	23,500	22,000	200	200
Special Facilities Surcharge	52,400	5,600	46,500	9,500	3,000	3,000
Meter/Hydrant Installations	93,000	94,100	108,800	107,000	83,300	83,300
Miscellaneous Revenue	1,800	3,300	3,500	40,000	21,900	21,900
Interest Income	380,500	506,700	401,200	107,200	307,200	308,800
Total Revenues	1,124,200	1,096,800	1,791,600	1,711,500	2,049,800	2,322,400
Expense						
Capital Projects (1)	750,800	9,741,600	2,036,300	596,000	4,240,300	2,230,000
Capital Equipment	18,100	430,600	83,900	454,300	-	-
Total Expenses	768,900	10,172,200	2,120,200	1,050,300	4,240,300	2,230,000
Capital Program Net Revenue	355,300	(9,075,400)	(328,600)	661,200	(2,190,500)	92,400

1 - Includes Maintenance and Operations, Capital Improvements, and Maintenance Improvements expenses which are all included in the CIP budget.

WATER CAPITAL IMPROVEMENT PROGRAM

The City's updated water CIP includes water service line upgrades, the Wilder No. 2 Reservoir and Pump Station project, the Automated Meter Reading program, the water system looping program, the La Granada Pump Station project, Ventu Park Hydro Line replacement, and

Table 12
City of Thousand Oaks Water System
Capital Improvement Program
Fund 612 Capital Projects - Developer Fees

Project	FY10	FY11	FY12	FY13	FY14	Total
Ventu Park Hydro Line Replacement	300,000	-	-	-	-	300,000
Wilder No. 2 Reservoir and Pump Station	975,000	-	-	-	-	975,000
Water System Unscheduled Improvements	157,000	157,000	157,000	157,000	157,000	785,000
Reservoir Security Enhancement	105,000	35,000	-	-	-	140,000
Automated Chlorine Analyzer	-	-	90,000	-	-	90,000
Reservoir Seismic Study/Structural Retrofit	-	385,000	-	-	-	385,000
Water Facilities Misc. Replacement/Upgrade	63,000	63,000	63,000	63,000	63,000	315,000
Water System Looping Program - Various Locations	98,000	-	98,000	-	98,000	294,000
Calleguas MWD Turnout Improvements	35,000	-	-	-	-	35,000
Pump Station and Misc. Reservoir Improvements	49,000	140,000	-	-	-	189,000
La Granada Pump Station	300,000	-	-	-	-	300,000
Reservoir Site Development - Ventu Park	40,000	-	-	-	-	40,000
Reservoir Mixing Improvements	28,000	-	-	-	-	28,000
MSC Expansion	259,300	-	-	-	-	259,300
Total (in present dollars)	2,409,300	780,000	408,000	220,000	318,000	4,135,300
Total (escalated @ 6% - average ENR CCI for LA, 12/03-08)	2,409,300	827,000	458,000	262,000	401,000	4,357,300

Source: FY 2009-2010/2010-2011 CIP Budget.

numerous other system upgrades and improvements. Project phasing and costs have been developed by Public Works Department staff and consulting engineers. The CIP also includes ongoing replacement and repair projects for existing facilities. The program is a long-range projection of project requirements, phasing, and cost estimates through FY2014. The water CIP costs over the next five years should equal approximately \$11 million in current dollars. The CIP costs are financed by PIFs (Capital Projects Fund) and the capital replacements component of the quantity rate (Capital Replacements Fund). Table 12 shows the Capital Projects CIP projects, which total \$4.1 million through FY2014, and Table 13 shows the Capital Replacements CIP projects, totaling almost \$6.9 million over the next five fiscal years. Table 14 shows the combined CIP costs for both funds. Most of the CIP projects are driven by both the needs of existing users and the anticipated requirements of future users. As a result, the majority of the CIP projects are financed by both funds.

Table 13
City of Thousand Oaks Water System
Capital Improvement Program
Fund 613 Capital Replacements - Existing Users

Project	FY10	FY11	FY12	FY13	FY14	Total
Ventu Park Hydro Line Replacement	550,000	-	-	-	-	550,000
Wilder No. 2 Reservoir and Pump Station	-	-	-	500,000	1,000,000	1,500,000
Water System Unscheduled Improvements	293,000	293,000	293,000	293,000	293,000	1,465,000
Reservoir Security Enhancement	195,000	65,000	-	-	-	260,000
Automated Chlorine Analyzer	-	-	210,000	-	-	210,000
Reservoir Seismic Study/Structural Retrofit	-	715,000	-	-	-	715,000
Automated Meter Reading (AMR) Program	150,000	-	150,000	-	150,000	450,000
Water Facilities Misc. Replacement/Upgrade	117,000	117,000	-	117,000	117,000	585,000
Water System Looping Program - Various Locations	182,000	-	182,000	-	182,000	546,000
Calleguas MWD Turnout Improvements	65,000	-	-	-	-	65,000
Pump Station and Misc. Reservoir Improvements	91,000	260,000	-	-	-	351,000
Reservoir Mixing Improvements	52,000	-	-	-	-	52,000
MSC Expansion	136,000	-	-	-	-	136,000
Total (in present dollars)	1,831,000	1,450,000	952,000	910,000	1,742,000	6,885,000
Total (escalated @ 6% - average ENR CCI for LA, 12/03-08)	1,831,000	1,537,000	1,070,000	1,084,000	2,199,000	7,721,000

Source: FY 2009-2010/2010-2011 CIP Budget.

Table 14
City of Thousand Oaks Water System
Capital Improvement Program - Funds 612 and 613

Project	FY10	FY11	FY12	FY13	FY14	Total
Ventu Park Hydro Line Replacement	850,000	-	-	-	-	850,000
Wilder No. 2 Reservoir and Pump Station	975,000	-	-	500,000	1,000,000	2,475,000
Water System Unscheduled Improvements	450,000	450,000	450,000	450,000	450,000	2,250,000
Reservoir Security Enhancement	300,000	100,000	-	-	-	400,000
Automated Chlorine Analyzer	-	-	300,000	-	-	300,000
Reservoir Seismic Study/Structural Retrofit	-	1,100,000	-	-	-	1,100,000
Automated Meter Reading (AMR) Program	150,000	-	150,000	-	150,000	450,000
Water Facilities Misc. Replacement/Upgrade	180,000	180,000	180,000	180,000	180,000	900,000
Water System Looping Program - Various Locations	280,000	-	280,000	-	280,000	840,000
Calleguas MWD Turnout Improvements	100,000	-	-	-	-	100,000
Pump Station and Misc. Reservoir Improvements	140,000	400,000	-	-	-	540,000
La Granada Pump Station	300,000	-	-	-	-	300,000
Reservoir Site Development - Ventu Park	40,000	-	-	-	-	40,000
Reservoir Mixing Improvements	80,000	-	-	-	-	80,000
MSC Expansion	395,300	-	-	-	-	395,300
Total (in present dollars)	4,240,300	2,230,000	1,360,000	1,130,000	2,060,000	11,020,300
Total (escalated @ 6% - average ENR CCI for LA, 12/03-08)	4,240,300	2,364,000	1,528,000	1,346,000	2,600,000	12,078,300

Source: FY 2009-2010/2010-2011 CIP Budget.

Capital Improvement Program Cost Allocation

CIP costs are attributable to several factors:

- Capacity expansion
- Permit compliance
- Required reliability
- Facilities replacements

Capacity Expansion. Capacity expansion projects are those required to serve projected growth and increased water flows from future water system users.

Permit Compliance. Projects required for permit compliance are those necessary to meet more strict requirements of the California Department of Health Services and other oversight regulatory agencies.

Required Reliability. Projects for required reliability are needed to meet operational or peaking requirements of the system.

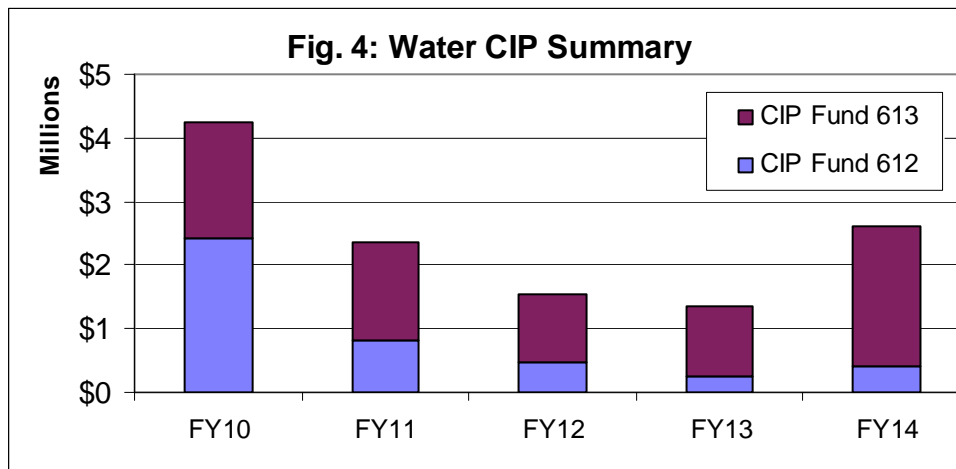
Facilities Replacements. Facilities replacement projects are necessary to replace worn out or obsolete facilities.

Certain existing facilities and assets are available for future users. Many of the water system's assets such as land, pipelines, and pump stations are available to benefit future users. Current users have financed a considerable amount of current excess capacity which facilitates operations. Consistent with City policy, future users must pay the costs of facilities required for future flows. Future users must also fund enough reliability capacity to allow continued efficient operations.

Table 15 shows how the total project costs seen on Table 14 are shared between the Capital Projects Fund and the Capital Replacements Fund. It is based upon the City's allocation of project costs between existing and future users. Figure 4 graphically summarizes the Water CIP costs over the next five years.

Table 15
 City of Thousand Oaks Water System
 Capital Cost Allocation

Project	CIP Budget	Cost Allocation	
		Future (Fund 612)	Existing (Fund 613)
Ventu Park Hydro Line Replacement	850,000	300,000	550,000
Wilder No. 2 Reservoir and Pump Station	2,475,000	975,000	1,500,000
Water System Unscheduled Improvements	2,250,000	785,000	1,465,000
Reservoir Security Enhancement	400,000	140,000	260,000
Automated Chlorine Analyzer	300,000	90,000	210,000
Reservoir Seismic Study/Structural Retrofit	1,100,000	385,000	715,000
Automated Meter Reading (AMR) Program	450,000	-	450,000
Water Facilities Misc. Replacement/Upgrade	900,000	315,000	585,000
Water System Looping Program - Various Locations	840,000	294,000	546,000
Calleguas MWD Turnout Improvements	100,000	35,000	65,000
Pump Station and Misc. Reservoir Improvements	540,000	189,000	351,000
La Granada Pump Station	300,000	300,000	52,000
Reservoir Site Development - Ventu Park	40,000	40,000	136,000
Reservoir Mixing Improvements	80,000	28,000	-
MSC Expansion	395,300	259,300	6,885,000
Total (current dollars)	11,020,300	4,135,300	6,885,000
		38%	62%



PROPOSED CHARGES

The City’s Proposed Operating Budget, passed in June, 2009, established revenue targets for FYs 2010 and 2011 for water operations base charges, metered water sales, and lift charges. These figures were all included in Table 10. The budgeted increase in base charge revenue is 27% (FY2010) and 21% (FY2011). For metered water revenue it is 5% and 15% respectively, and for lift charges it is 6% and 0%. The 5% increase in overall metered water revenue for FY2010 needs to occur while water sales are projected to decrease 10% due to conservation. As highlighted earlier, this means that a smaller number of units (hcf) of water need to generate an increased amount of revenue. This results in a need to increase the unit cost per hcf. Lower

water consumption means a higher unit cost of water is necessary to simply reach the same level of revenue, not even accounting for the fact that a higher level of revenue is needed due to the increased wholesale water costs levied by CMWD.

The City is estimating a 10% decrease in consumption in FY2010 compared to FY2009. Consumption in FY2011 is expected to be the same as FY2010. If the City's water consumption does not decrease, it will face penalty fees levied by CMWD. The City must decrease its consumption at least 5% in FY2010 or it will face penalties fees. This report assumes the City will successfully surpass this 5% consumption reduction threshold and will not be faced with the additional expense of penalty fees, but these potential penalty fees highlight the importance of the City adopting a rate structure that strongly encourages conservation.

Monthly Base Charge

Table 16 shows the base charge revenue target from Table 10 and the recommended 3/4" base charge to enact for November 2009 (\$14.46) and July 2011 (\$15.53). The base charges for the larger meter sizes are based on the same AWWA meter ratios that are applied to the existing base charges. Base charge revenue represents the City's largest stream of fixed revenue. In FY2009, fixed revenues comprised 16% of total revenues. The fact that the City has such a large proportion of its operating revenue from variable sources entails more risk for the City. It is recommended that, over time, the City increase the share of water revenue that it derives from fixed revenue to approximately 30%. This 30%/70% ratio of fixed to variable revenue is the California Urban Water Conservation Council's recommended ratio (Best Management Practice #11). The proposed increases in the base charge for FY2010 and FY2011 raise the fixed revenue share to 19% in FY2010 and 20% in FY2011.

Table 16
City of Thousand Oaks Water System
Proposed Base Charges

	FY09	July 1, 2009 - Nov 15, 2009	Nov 16, 2009 - June 30, 2010	Total FY10	FY11
Base Charge Revenue Target (1)	\$2,567,000	\$963,000	\$2,306,000	\$3,269,000	\$3,962,000
Proposed Monthly Base Charge (3/4" meter)	\$10.06	\$10.06	\$14.46		\$15.53
Number of Water SUs (equivalent 3/4" meters)	21,264	21,264	21,264		21,264
Projected Base Charge Revenue	\$2,567,000	\$963,000	\$2,306,000	\$3,269,000	\$3,962,000

1 - FY09 is actual. FYs 10 & 11 are budgeted figures.

Lift Charge

Table 17 outlines the proposed increase in the lift charge from the current rate of \$0.13/hcf/lift to \$0.15/hcf/lift in FY2010 and \$0.17/hcf/lift in FY2011. The increased revenue target from FY2009 to FY2010 is based largely on the need to cover increased SCE electricity costs.

Electricity costs make up approximately 63% of the total pumping budget. The usage figures per zone are from Table 2. However, these water usage figures have been further modified to account for the planned 10% decrease in water consumption in FY2010 (as compared to FY2009 – projected water usage is down 15% when compared to FY2008). The bulk of the decreased consumption is assumed to occur after the proposed increase in rates on November 16, 2009 when water customers will presumably cut back their usage most dramatically. To achieve the overall 15% decrease (compared to the usage figures from Table 2), Table 17 assumes a 7% decrease in consumption from July to mid-November and a 20% decrease from mid-November through the end of FY2010 after the new rates and residential rate structure are presumably adopted.

Table 17
City of Thousand Oaks Water System
Proposed Lift Charges

Zone	No. Lifts	% of Total (2)	Projected Water Usage (hcf) (1)				
			FY09	July 1, 2009 - Nov 15, 2009	Nov 16, 2009 - June 30, 2010	Total FY10	FY11
P1	0	33.14%	2,016,700	703,300	1,008,400	1,711,700	1,711,700
P2	1	28.25%	1,719,200	599,500	859,600	1,459,100	1,459,100
P3	1	21.11%	1,284,600	448,000	642,300	1,090,300	1,090,400
P4	2	16.78%	1,021,100	356,100	510,600	866,700	866,700
P5	3	<u>0.72%</u>	<u>43,800</u>	<u>15,300</u>	<u>21,900</u>	<u>37,200</u>	<u>37,200</u>
Total		100%	6,085,500	2,122,300	3,042,800	5,165,100	5,165,100
Projected Lift Charge Revenue							
Lift Charge per hcf per lift.			\$0.13	\$0.13	\$0.15		\$0.17
Zone	No. Lifts						
P1	0		\$0	\$0	\$0	\$0	\$0
P2	1		\$223,500	\$77,900	\$128,900	\$206,800	\$248,000
P3	1		\$167,000	\$58,200	\$96,300	\$154,500	\$185,400
P4	2		\$265,500	\$92,600	\$153,200	\$245,800	\$294,700
P5	3		<u>\$17,100</u>	<u>\$6,000</u>	<u>\$9,900</u>	<u>\$15,900</u>	<u>\$19,000</u>
Total			\$673,100	\$234,700	\$388,300	\$623,000	\$747,100
Lift Charge Revenue Target (3)			\$644,100	\$256,900	\$428,100	\$685,000	\$685,000

1 - FY09 figure based on CY08 water use (see Table 2). Forecasting 15% reduction in overall consumption in FY10 as compared to FY08.

Assuming 7% decrease from July 1 to Nov 15, 2009 and 20% decrease from Nov 15 to June 30, 2010 after new tiered rate structure adopted which equals overall decrease of 15%. FY 11 consumption set equal to FY 10.

2 - See Table 4

3 - FY09 is actual. FYs 10 & 11 are budgeted figures.

Note: Water statistics from 1/08 through 12/08.

PROPOSED TIERED RATE WATER STRUCTURE

Given the increase in costs of wholesale water, BWA believes the City has no choice but to increase its water quantity rates. The City is also seeking to promote water conservation in light of its decreasing water allocation. In an effort to meet both of these goals, BWA recommends the City revise its existing rate structure at the same time it pursues a rate increase.

From an economic perspective, it is the marginal cost per unit of water that impacts a customer's decision to use an additional unit of water. All rate structures with a quantity charge, even uniform block rates, provide financial disincentive against "wasting" water, what this report terms "conservation incentive".

However, all things being equal, tiered rates provide more conservation incentive than a comparable uniform block rate structure because the tiered rate structure generates a higher marginal cost of water for higher levels of water use, where the greatest potential for conservation exists. Customers with low water use, say 10 hcf per month, typically have little room to conserve while customers with high water use presumably have more discretionary water use and much greater conservation potential. In addition to the actual tiered rates, the implementation of an inclining tier rate structure may also provide a psychological incentive to conserve. People are arguably more likely to conserve if they are aware of the general concept that rates increase with use. A tiered rate structure gives individuals greater ability to lower their own water bill by striving to keep their usage in the lowest priced tier.

Figure 5 shows the annual number of bills at each unit of water use for the City's FY2008 residential water consumption. Based on this residential consumption, BWA recommends the following three-tiered rate structure for all SFR accounts:

Tier 1 = 0-15 hcf (up to 387 gallons per day)

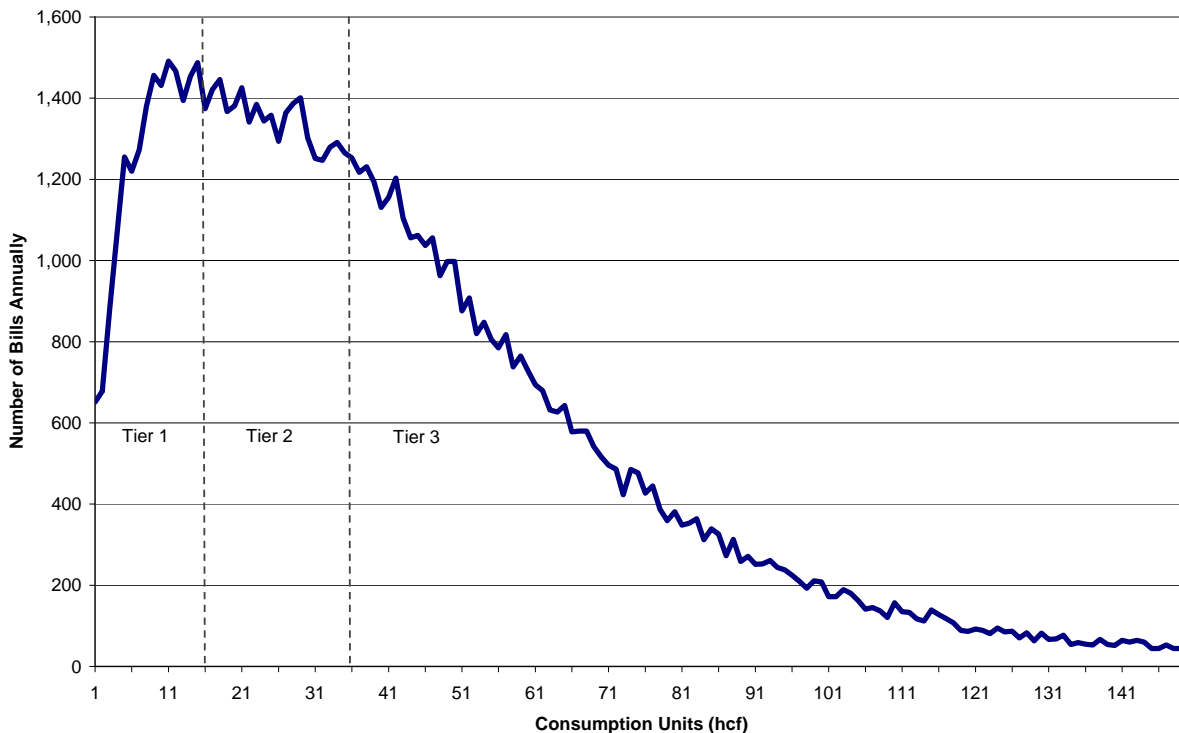
Tier 2 = 16-35 hcf (up to 902 gpd)

Tier 3 = 36+ hcf

Based on the FY2008 water billing information, the proposed tier breaks would result in approximately 31% of SFR water usage being billed in Tier 1, 29% in Tier 2, and 40% in Tier 3. The tiered rates continue to represent a fair and equitable distribution of costs and accurately reflect the cost-of-service for the City to deliver water. The tiered rates are revenue neutral to the City and will not result in additional funds.

Some cities and water agencies bill all customer classes and/or meter sizes according to the same tiered rate structure. BWA believes this is not equitable or desirable. Non-residential customers served by large meter sizes pay higher fixed monthly charges and tend to use substantially more

Fig. 5: Residential Usage



water than SFR customers using a 3/4” meter. Non-residential customers generally have less discretionary water use than residential users and, if these non-residential customers were billed using the same rate tiers as residential customers; they would effectively end up buying most of their water at the highest tier (assuming that the tiers reflect the usage patterns of the smaller residential customers who constitute the majority of accounts). Applying tiered rates to non-residential accounts also results in non-residential customers essentially being punished for any commercial success or growth.

The City’s non-SFR accounts should continue to use the current uniform block rate structure with the non-SFR quantity charge per hcf established at a price so that the ratio of non-SFR revenue to SFR revenue remains consistent. Table 18 shows that in FY2009, the percentage of base charge and quantity charge revenue from SFR users is 75%. The proposed non-SFR O&M quantity charge per hcf for FY2010 and FY2011, \$2.75 and \$3.25 respectively, will maintain this ratio of SFR to non-SFR revenue.

Table 19 outlines the proposed new rate structure and new rates and also projects the revenue from these new rates. After the new tiers are established in FY2010, the recommended increase in the quantity rate for FY2011 is 14%. As was the case with the proposed lift charges outlined earlier that were based on water consumption and projected revenue, the consumption figures in Table 19 (both SFR and non-SFR) have been reduced to reflect the goal of a 10% decrease in

purchased water from CMWD from FY2009 to FY2010. However, the conservation incentive and magnitude of decreased use is not expected to be uniform for all customers. The biggest consumption decreases are expected to be by the highest water users and take place in FY2010, when the rate increases are first enacted. The

Table 18
City of Thousand Oaks Water System
SFR Revenue v. Non-SFR Revenue

	FY09 (1)	FY10	FY11
SFR Base Charge Revenue	\$2,056,000	\$2,617,000	\$3,172,000
SFR Metered Charge Revenue	<u>\$9,781,000</u>	<u>\$9,927,000</u>	<u>\$12,503,000</u>
SFR Total	\$11,837,000	\$12,544,000	\$15,675,000
Non-SFR Base Charge Revenue	\$466,000	\$594,000	\$719,000
Non-SFR Metered Charge Revenue	<u>\$3,487,000</u>	<u>\$3,959,000</u>	<u>\$4,976,000</u>
Non-SFR Total	\$3,953,000	\$4,553,000	\$5,695,000
Total Base Revenue	\$2,522,000	\$3,211,000	\$3,891,000
Total O&M Metered Revenue	<u>\$13,268,000</u>	<u>\$13,886,000</u>	<u>\$17,479,000</u>
Total	\$15,790,000	\$17,097,000	\$21,370,000
Percentage of Overall Total from SFR	75%	73%	73%

1 - Assumes six months paid CMWD pass-through charge of \$0.16 and six months paid \$0.27.

assumed water decrease in Tier 1 is 7%, in Tier 2 it is 15%, and in Tier 3 it is 30%. The most significant decline in water use is predicted at Tier 3 because high water users presumably have the most discretionary water use; are capable of modifying their behavior the most; and will have the greatest economic incentive to reduce consumption.

The proposed rate adjustments are recommended for implementation effective November 16, 2009. This will allow sufficient time for the Prop 218 process to proceed and the billing system to be adjusted, but will also enable the Operations Fund to receive the needed increase in revenue as soon as possible.

Table 19
City of Thousand Oaks
Proposed Quantity Charges and Projected Revenue

	July 1, 2009 - Nov 15, 2009 -		Nov 16, 2009 -		
	FY09	Nov 15, 2009	June 30, 2010	Total FY10	FY11
O&M Quantity Charge (per hcf)		\$2.08			
Tier 1 (0 - 15 hcf)	n/a	n/a	\$2.40		\$2.74
Tier 2 (16 - 35 hcf)	n/a	n/a	\$3.00		\$3.42
Tier 3 (36+ hcf)	n/a	n/a	\$3.80		\$4.33
Single Family Residential Consumption (hcf) (1)	4,170,800	1,454,600			
Tier 1 (0 - 15 hcf)	n/a	n/a	742,200		1,250,800
Tier 2 (16 - 35 hcf)	n/a	n/a	649,100		1,093,900
Tier 3 (36+ hcf)	n/a	n/a	<u>731,500</u>		<u>1,232,700</u>
Total (2)	4,170,800	1,454,600	2,122,800	3,577,400	3,577,400
O&M SFR Quantity Charge Revenue		\$3,025,600			
Tier 1 (0 - 15 hcf)	n/a	n/a	\$1,781,300		\$3,422,200
Tier 2 (16 - 35 hcf)	n/a	n/a	\$1,947,300		\$3,741,100
Tier 3 (36+ hcf)	n/a	n/a	<u>\$2,779,700</u>		<u>\$5,340,100</u>
Total	n/a	n/a	<u>\$6,508,300</u>	\$9,533,900	\$12,503,400
O&M Non-SFR Quantity Charge (3)		\$2.08	\$2.75		\$3.25
Non-SFR Consumption (hcf)					
Commercial	677,500				
Multi-Family	309,700				
Irrigation (4)	<u>816,600</u>				
Total (5)	1,803,800	629,100	901,900	1,531,000	1,531,000
O&M Non-SFR Quantity Charge Revenue		\$1,308,500	\$2,480,200	\$3,788,700	\$4,975,800
Total O&M Quantity Charge Revenue (6)		\$4,334,100	\$8,988,500	\$13,322,600	\$17,479,200
Existing CMWD Pass-Through Charge (per hcf)		\$0.27	\$0.00		\$0.00
Existing CMWD Pass-Through Charge Revenue		\$562,600	\$0	\$562,600	\$0
Total Revenue Inclusive of Existing CMWD Pass-Through Charge		\$4,896,700	\$8,988,500	\$13,885,200	\$17,479,200

1 - Based on FY2008 Water Usage.

2 - Forecasting 14% reduction in overall residential consumption in FY10 compared to FY08. Assuming 7% decrease from July 1 to Nov 15, 2009 and, from Nov 15 to June 30, 2010 after new tiered rate structure is adopted, a 7% decrease in Tier 1 use, a 15% decrease in Tier 2 use, and a 30% decrease in Tier 3 use.

3 - Non-SFR accounts do not use the tiered rate structure. They have a uniform charge per hcf set to keep the non-SFR share of revenue consistent.

4 - From Table 2 - based on CY2008.

5 - Assuming 7% decrease from July 1 to Nov 15, 2009 and 20% decrease from Nov 15 to June 30, 2010 after new tiered rate structure adopted which equals overall decrease of 15%. FY11 consumption set equal to FY10.

6 - Not inclusive of CMWD Pass-Through charge per hcf.

RECOMMENDED CAPITAL FINANCING METHOD

Funds and Fund Balances

Table 20 shows the Water Operations Fund beginning balances as of June 30, 2008. The City's operations fund is comprised of four funds, two of which are restricted – the Water Conservation Program Reserve and the Insurance Reserve – and thus not listed in Table 20. The unrestricted reserves include an Operations Fund reserve of approximately \$830,000 and a Fixed Asset Replacement Fund of nearly \$635,000. The total estimated unrestricted Operations Fund balance as of June 30, 2008 is over

\$1.46 million. Table 20 also shows the Capital Projects and Capital Replacements Funds beginning balances as of June 30, 2008. The Capital Projects Fund balance is \$4.7 million and the Capital Replacements Fund balance is \$1.6 million.

Table 20
City of Thousand Oaks Water System
Water Fund Balances

Fund	As of 6/30/08
Operations Fund 611	\$ 828,100
Fixed Asset Replacement Fund 619	634,400
Total Operations Fund Balance	1,462,500
Capital Projects (Developer Fees) Fund 612	4,732,900
Capital Facilities Replacement Fund 613	1,628,400

Source: Enterprise Funds Equity Report, June 30, 2008.

Operations Fund Cash Flow Projection

Table 21 shows the cash flow projection through FY2011 for the Operations Fund based on the recommended new charges detailed in Tables 16, 17 and 19. The cash flow assumes that the new proposed base charges, tiered water rates, and lift charge will all take effect on November 16, 2009. The beginning FY2009 balance of \$1.46 million comes from Table 20 and the projected revenues come from the usage and rate projections in Tables 16, 17 and 19.

With the proposed new tiered-rate structure and the increase in rates, future water consumption levels, and therefore future water revenues, are uncertain. Nobody can predict with confidence the price elasticity of water for various water customers. Given the uncertainty in predicting future consumption levels, future wholesale water price increases, droughts, weather patterns, etc. the City needs to be prepared for water revenue variability and having an adequate operating reserve fund is more vital than ever.

BWA recommends that the City seek to maintain a Water Operations Reserve Fund equal to at least 25% (three months) of its annual O&M expenses. This is an achievable long-term goal that would provide the City with a financial cushion for dealing with annual revenue and expense

fluctuations and non-catastrophic emergencies. Having a fund reserve of this size in place also would give the City the ability to more gradually phase in future rate increases when needed. Furthermore, the City may have to absorb future unexpected costs increases, such as occurred in the past year when CMWD imposed a mid-year wholesale water price increase in addition to what CMWD had initially forecasted. Such a scenario is feasible in the future and the City needs to take steps to build its Operations Reserve Fund to enable it to weather such unanticipated costs.

Table 21
City of Thousand Oaks Water System
Operations Fund 611 Cash Flow Projection

	FY09	July 1, 2009 - Nov 15, 2009	Nov 16, 2009 - June 30, 2010	Total FY10	FY11
Beginning Fund Balance	\$1,462,500			\$1,101,300	\$1,171,500
Revenue					
Base Charges	2,567,000	963,000	2,306,000	3,269,000	3,962,000
Metered Water Sales	13,268,000	4,896,700	8,988,500	13,885,200	17,479,200
Lift Charges	644,100	234,700	388,300	623,000	747,100
Interest Income (1)	57,500	0	0	0	47,000
Stand-By (Fire Detectors)	47,900	16,600	27,600	44,200	44,200
Backflow Prevention	12,700	11,300	18,800	30,100	30,000
Plan Checking/Filing Fee	-	-	-	-	-
Inspection Fees	400	-	-	-	-
Rental of City Facilities	24,000	9,000	15,000	24,000	24,000
Misc Revenue (2)	63,900	22,800	37,900	60,700	58,900
Total Operations Revenue	16,685,500	6,154,100	11,782,100	17,936,200	22,392,400
Expense					
Salaries	1,930,300	804,200	1,340,300	2,144,500	2,213,700
Fringe Benefits	984,000	388,100	646,900	1,035,000	956,500
Maintenance and Operations	3,462,700	1,171,200	1,952,100	3,123,300	3,360,600
CMWD Purchase Costs	10,695,000	4,322,600	7,204,300	11,526,900	14,159,900
Chargeback	(25,300)	11,300	18,900	30,200	(19,800)
Capital Outlay	-	2,300	3,800	6,100	-
Total Operations Expenses	17,046,700	6,699,700	11,166,300	17,866,000	20,670,900
Operations Fund Net Revenue	(361,200)			70,200	1,721,500
Ending Fund Balance	1,101,300			1,171,500	2,893,000
Minimum Fund Balance Target (3)	2,502,800			2,690,400	3,358,900

1 - Estimated at 4% of beginning balance for FYs 10 & 11.

2 - Federal grants, construction water, private capital contribution, sale of salvaged equipment, reimbursements, and other rev.

3 - 15% of operating expenses. Long-term goal is that the Operations Fund Reserve is at least 3 months (25%) of annual expenses. Recommended that City increase target to 20% for FY12 and 25% for FY13.

Table 21 is showing a minimum fund reserve target of only 15% of annual O&M expenses. However, this target is still not quite achieved by the end of FY2011 when the reserve fund is projected to equal 13% of annual operating expenses. Given the rate increases already recommended, achieving the desired 25% target in the short-term simply is not feasible. However, BWA recommends that the City strive to reach an Operations Reserve Fund of 20% in

FY 2012 and 25% in FY 2013. It is acceptable if reserves fall below the target on a temporary basis as needed, provided action is taken to rebuild the reserve fund over the long-run.

As noted earlier, BWA also recommends that the current 16%/84% ratio of fixed to variable revenue move towards a 30%/70% ratio over time. This is the California Urban Water Conservation Council’s recommended ratio and moving in this direction would decrease the risk the City currently experiences with such a large portion of its revenues derived from variable sources.

Connection Charges

A connection charge based on an equitable allocation of engineering cost estimates for new water facilities is a key element of the City's overall financing plan. Revenue from the City’s PIF is available to pay the proportionate costs of system improvements and to pay for expansion. State law precludes the use of such revenue to pay any portion of operation and maintenance expenses. This is consistent with current City policy.

Table 22
City of Thousand Oaks Water System
Capital Program (Developer Fees) Cash Flow Projection - Fund 612

	FY09	FY10	FY11	FY12	FY13	FY14
Number of New SUs		5	5	5	5	5
PIF per SU	\$4,100	\$4,346	\$4,607	\$4,883	\$5,176	\$5,487
PIF % Rate Increase (1)		6%	6%	6%	6%	6%
Beginning Fund Balance	\$ 4,732,900	\$ 4,620,300	\$ 2,420,700	\$ 1,716,700	\$ 1,355,000	\$ 1,176,300
Revenue						
Plant Investment Fee	49,700	21,700	23,000	24,400	25,900	27,400
Fire Flow Surcharge	22,000	200	200	200	200	200
Special Facilities Surcharge	9,500	3,000	3,000	3,000	3,000	3,000
Interest Income (2)	67,900	184,800	96,800	68,700	54,200	47,100
Total Revenue	149,100	209,700	123,000	96,300	83,300	77,700
Expense						
Capital Improvements (3)	261,700	2,409,300	827,000	458,000	262,000	401,000
Net Revenue	(112,600)	(2,199,600)	(704,000)	(361,700)	(178,700)	(323,300)
Ending Fund Balance	4,620,300	2,420,700	1,716,700	1,355,000	1,176,300	853,000

1 - ENR average for LA over the past five years is 6.1%.

2 - Estimated at 4% of beginning balance.

3 - See Table 11.

State law (Government Code §66000 *et seq.*) requires that a reasonable relationship exist between the amount of a connection charge and the cost of the associated public facility. Future users must be treated in a consistent manner and funds collected must be used for certain capital purposes. Because Certificate of Participation loan proceeds can be used for project financing, the

connection fee should include a component of debt issuance and interest costs. However, since the City's water system currently has no outstanding debt, this provision does not apply here.

The current PIF charge, collected from new customers as they connect to the system, is \$4,100. The proposed PIF for FYs 2010 and 2011 requires no further increase beyond the annual ENR adjustment. Table 22 shows the projected PIFs escalated at 6% annually which represents the ENR average for Los Angeles over the past five years from December 2003 to December 2008. The PIF is indexed to an inflation factor to maintain equity based on the timing of new connections. The intent is to collect the same amount in current dollars from each new ERU. The PIF is annually adjusted based on a comparison of the then current ENR with the base index. Ordinance No. 1517-NS, passed on May 5, 2009, established that the basis for future adjustments to the water PIF is the July 2008 ENR Construction Cost Index for Los Angeles which was 9335.69.

Capital Facilities Replacement Charge

The capital facilities replacement charge is the main revenue source used to support the CIP for costs related to current users' share of permit compliance and upgrades/replacements. Once the PIF is equitably established and sized to reflect future users' share of costs, the capital replacement charge revenue is needed to fund the balance of costs allocated to the current users' share. The replacement charge provides greater flexibility than the PIF revenue because it is within the purview of the City. There is no corresponding control of revenue from connection charges in the event of an economic downturn and resulting construction slowdown. As the City nears build out, PIF revenue will continue to decrease and the capital replacements component of the quantity rate will become increasingly important. In FY2006, revenue from the capital replacements component exceeded that from PIFs for the first time. This occurred again in FYs 2007 and 2008 and will undoubtedly continue given the proposed increases to the capital replacements component.

A capital component for CIP purposes is included in customers' water bills as part of the quantity rate. This capital component is based upon metered water use and is charged per hcf. The current capital replacements charge is \$0.25/hcf. Table 23 shows a recommended increase of \$0.05/hcf to this charge to finance the CIP projects that were detailed in Table 13.

Tables 22 and 23 show that the City can fund its water CIP on a pay-as-you-go basis and it does not need to use any debt financing.

Table 23
 City of Thousand Oaks Water System
 Capital Facilities Replacement Cash Flow Projection - Fund 613

	FY09	July 1, 2009 - Nov 15, 2009	Nov 16, 2009 - June 30, 2010	FY11	FY12	FY13	FY14
Water Use (hcf) (1)	6,085,500	2,122,300	3,042,800	5,165,100	5,165,100	5,165,100	5,165,100
Capital Fac Repl Charge/hcf	\$0.25	\$0.25	\$0.30	\$0.30	\$0.30	\$0.30	\$0.30
Beginning Fund Balance	\$ 1,628,400	\$ 2,402,300	\$ 2,381,800	\$ 2,311,300	\$ 2,521,500	\$ 3,207,100	\$ 3,906,100
Revenue							
Metered Water Sales	1,376,100	530,600	912,800	1,549,500	1,549,500	1,549,500	1,549,500
Meter/Hydrant Installations	107,000	31,200	52,100	83,300	83,300	83,300	83,300
Miscellaneous Revenue	40,000	8,200	13,700	21,900	21,900	21,900	21,900
Interest Income (2)	39,300	96,100	95,300	92,500	100,900	128,300	156,200
Total Revenues	1,562,400	666,100	1,073,900	1,747,200	1,755,600	1,783,000	1,810,900
Expense							
Capital Improvements (3)	334,200	686,600	1,144,400	1,537,000	1,070,000	1,084,000	2,199,000
Capital Outlay	454,300	-	-	-	-	-	-
Total Expenses	788,500	686,600	1,144,400	1,537,000	1,070,000	1,084,000	2,199,000
Net Revenue	773,900	(20,500)	(70,500)	210,200	685,600	699,000	(388,100)
Ending Fund Balance	2,402,300	2,381,800	2,311,300	2,521,500	3,207,100	3,906,100	3,518,000

1 - FY09 figure based on CY2008 water use (see Table 2). Forecasting 15% reduction in overall consumption in FY10 compared to FY08.

Assuming 7% decrease from July 1 to Nov 15, 2009 and 20% decrease from Nov 15 to June 30, 2010 after new tiered rate structure adopted which equals overall decrease of 15%. FY11 consumption set equal to FY10.

2 - Estimated at 4% of beginning balance.

3 - See Table 12.

Summary of Proposed Charges

Table 24 summarizes all of the various new rate recommendations and Table 25 shows the overall combined impact of these new rates on three hypothetical SFR water accounts assuming a 3/4" meter. As expected under the newly proposed tiered rate structure, a high water user sees the greatest increase in their monthly rates. The existing CMWD pass-through charge of \$0.27/hcf is incorporated into the new proposed rates. The projected wholesale water costs are covered by the proposed rates. However, if CMWD again announces unanticipated wholesale water price increases before the next financial plan and rate review in 2011, the need for a CMWD pass-through charge may arise once more.

Table 24
City of Thousand Oaks Water System
Proposed Charges

Base Rate Meter Size	July 1, 2009 - Nov 16, 2009 -			FY11
	FY09	Nov 15, 2009	June 30, 2010	
Single Units				
3/4"	\$10.06	\$10.06	\$14.46	\$15.53
1"	\$18.31	\$18.31	\$26.31	\$28.26
1-1/2"	\$34.72	\$34.72	\$49.90	\$53.58
2"	\$56.74	\$56.74	\$81.54	\$87.57
3"	\$110.62	\$110.62	\$158.97	\$170.72
4"	\$184.72	\$184.72	\$265.46	\$285.08
6"	\$371.69	\$371.69	\$534.16	\$573.63
Multiple Units				
3/4"	\$21.01	\$21.01	\$30.19	\$32.42
1"	\$27.47	\$27.47	\$39.48	\$42.39
Above 1"		see single unit rate		
SFR Quantity Rate Component (per hcf)				
Operations and Maintenance	\$2.08	\$2.08		
Tier 1 (0 - 15 hcf)	n/a	n/a	\$2.40	\$2.74
Tier 2 (16 - 35 hcf)	n/a	n/a	\$3.00	\$3.42
Tier 3 (36+ hcf)	n/a	n/a	\$3.80	\$4.33
Non-SFR Quantity Charge (per hcf)	\$2.08	\$2.08	\$2.75	\$3.25
CMWD Pass-Through (per hcf)	\$0.27	\$0.27	\$0.00	\$0.00
Capital Replacement (per hcf)	\$0.25	\$0.25	\$0.30	\$0.30
Total SFR Quantity Charge	\$2.60	\$2.60		
Tier 1 (0 - 15 hcf)			\$2.70	\$3.04
Tier 2 (16 - 35 hcf)			\$3.30	\$3.72
Tier 3 (36+ hcf)			\$4.10	\$4.63
Total Non-SFR Quantity Charge	\$2.60	\$2.60	\$3.05	\$3.55
Lift Rate/hcf/lift	\$0.13	\$0.13	\$0.15	\$0.17
PIF - Single Family (1)	\$4,100	\$4,346	\$4,346	\$4,607
1 - Estimated for FY10 and FY11.				

Table 25
City of Thousand Oaks Water System
Sample Monthly Charges for Single Family Resident (3/4" meter)

	Current Rates	11/16/09	% Increase	7/1/10	% Increase
Low SFR User Bill (10 hcf/m)	\$36.06	\$41.46	15%	\$45.89	11%
Average SFR User Bill (23 hcf/m)	\$69.86	\$81.36	16%	\$90.83	12%
High SFR User Bill (60 hcf/m)	\$166.06	\$223.46	35%	\$251.27	12%

Note: Assume Zone P1 user - no lift charge applied.