
Sacramento Suburban Water District

**MULTI-YEAR FINANCIAL PLAN,
WATER RATES, AND FACILITIES DEVELOPMENT
CHARGE UPDATE STUDY**

Final Report

November 9, 2006



THE REED GROUP, INC.

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I. Executive Summary

Introduction

In May 2006 the Sacramento Suburban Water District (District or SSWD) contracted with The Reed Group, Inc. to update the District's multi-year financial plan, water rate, and facilities development charges. The overall purpose of the study was to provide the District with a plan and strategy for meeting the capital improvement needs of the District as well as adequately fund ongoing operations and other financial obligations. The study was also intended to assist the District in transitioning to a pay-as-you-go approach to funding its capital improvement program, and avoiding the need to issue additional long-term debt.

The project includes several meetings with staff as well as workshops with the Board of Directors. In addition to addressing the financial needs of the District, efforts were directed at reviewing the District's flat and metered rate structures and considering modifications to the metered water rates to further encourage water conservation by customers.

The multi-year financial plan and water rates contained herein reflect the District's five-year operating and capital program budgets that cover the period from CY 2007 through CY 2011. Recommended facilities development charges are based on the District's current investment in water system facilities and calculated using the system buy-in methodology. This approach to calculating facilities development charges was adopted by the District in 2004.

Multi-Year Financial Plan

The multi-year financial plan is intended to serve as a planning and management tool. The plan enables the District to take a multi-year look at its financial needs. During the past decade both predecessor water districts utilized long-term financing to pay for major capital improvements. The District has now consolidated its debt and is now looking at multiple funding sources to support planned capital improvement projects. Planned funding sources include:

- Existing available capital reserves (including debt proceeds from 2004)
- Facilities development charges paid by new development
- Current revenues from water rates paid by current customers
- Potential grants from the Department of Water Resources or other sources

In a change from past practice, it is the desire of the District to avoid future long-term borrowing and move to a position whereby ongoing CIP expenditures are supported on a pay-as-you-go basis using available reserves and current revenues. This approach has the benefit of avoiding future interest and other costs of financing, as well as leading to more stable water rates once revenues are sufficient to support an ongoing pay-as-you-go capital improvement program.

The challenge for the District is to ramp up water rates to support an annual pay-as-you-go capital program that may range between about \$15 million and \$20 million per year. At present, water rates and facilities development charges (FDCs) generate about \$4 to \$5 million per year for the capital program.

The District began the current year with nearly \$37 million in debt proceeds remaining from certificates of participation (COPs) issued in 2004. About \$29.5 million is expected to be utilized in 2006 for capital projects, including acquisition of another 10 mgd of capacity in the City of Sacramento's Fairbairn water treatment plant (WTP). The remaining \$7.5 million is expected to be

used in 2007 after which the District's capital improvement expenditures will be limited to the amounts generated from water rate capital charges and new development FDCs.

All financial plan analyses included in this update study include full coverage of all operating and debt service obligations. Alternative scenarios included varying levels of CIP funding. In order to fully fund the District's 5-year CIP as scheduled water rates would need to be increased by an overall 13 percent in each of the next three years, followed by smaller increases in subsequent years. Other alternatives limit rate increases, but result in portions of the CIP being deferred, in some cases beyond the five-year planning period.

Exhibit I-1 summarizes five financial plan scenarios consistent with current financial projections and discussions with the Board of Directors. Information on each alternative scenario indicates how much of the CIP would be funded or unfunded.

Exhibit I-1
Sacramento Suburban Water District
Summary of Financial Plan Strategy Alternatives

	Alternative #1 Fully Funded 5-Year CIP as Planned (1)	Alternative #2 Fully Funded 5-Year CIP (2)	Alternative #3 Fully Funded CIP by 2010 (3)	Alternative #4 9% Per Year Rate Cap (4)	Alternative #5 7.5% Per Year Rate Cap (5)
Overall Annual Water Rate Increases					
CY 2007	13%	10%	10%	9%	7.5%
CY 2008	13%	10%	10%	9%	7.5%
CY 2009	13%	10%	10%	9%	7.5%
CY 2010	3%	10%	6%	9%	7.5%
CY 2011	3%	10%	5%	9%	7.5%
5-Year Compounding	53%	61%	48%	54%	44%
CIP Funding					
Total 5-Year CIP (6)	\$ 89,458,000	\$ 89,458,000	\$ 89,458,000	\$ 89,458,000	\$ 89,458,000
5-Year Funded CIP	\$ 89,458,000	\$ 89,856,623	\$ 85,569,000	\$ 83,683,000	\$ 77,496,000
5-Year Unfunded CIP (7)	\$ -	\$ -	\$ 3,889,000	\$ 5,775,000	\$ 11,962,000
Funded CIP in 2011	\$ 18,595,000	\$ 21,761,380	\$ 18,595,000	\$ 18,595,000	\$ 17,171,000
% Funded in 2011	100%	117%	100%	100%	92%

Notes:

- (1) Provides full CIP funding in each year of the 5-year planning period.
- (2) All projects fully funded within five years. Projects deferred in 2008 and 2009 could be completed in 2009 and 2010.
- (3) Annual CIP is fully funded by 2010, but projects deferred in 2008 and 2009 deferred past 2011.
- (4) Annual CIP is fully funded by 2011, but projects deferred in 2008, 2009, and 2010 deferred past 2011.
- (5) Annual CIP is not fully funded through 2011.
- (6) In future dollars assuming 5% annual construction inflation.
- (7) Portion of 5-year CIP unfunded due to revenue limitations.

Section II of this report presents details of the multi-year financial plan with consideration of the District's annual operating and maintenance costs, current and future debt service obligations, and capital program needs. The financial plan reflects the District's CY 2007 operating and capital budgets (and estimates for future years through 2011), current reserve policies, and debt service obligations. The financial plan is used to identify the annual water rate revenue requirements, which are subsequently used in water rate calculations. The District will need to increase water rate revenues to accomplish strategic objectives and meet current and ongoing financial obligations.

A specific financial plan strategy alternative is not recommended herein. That decision is left to the District's management and Board of Directors. However, only Alternative #1 would provide

sufficient revenues to complete annual planned capital improvement projects in each year of the planning period. Alternative #2 would enable the District to complete all capital projects identified in the 5-year plan to be completed within five years. However, some projects in 2008 and 2009 would need to be deferred until 2010 and 2011. Alternatives #3, #4, and #5 would all require some projects to be deferred beyond the 5-year planning period. Only Alternative #5 does not achieve full funding of planned annual capital program by 2011.

Water Rates and Rate Structures

Proposed water rates and rate structure changes are intended to assist the District with meeting financial obligations as well as achieving various rate setting objectives. The following rate setting objectives have guided the development of the proposed water rates.

- Water rates should generate sufficient revenues to meet the District's financial obligations related to operations, debt service, and capital improvement needs
- Water rates should reflect the cost of providing service to each customer group
- Water rates should encourage water conservation and efficient water use, and meet the *best management practices* for conservation-oriented water rates
- Water rates should be administratively simple and easy to explain to customers
- Water rates should be acceptable to customers.

The District continues to be in a period of transition as water meters are installed on unmetered residential connections and customers are gradually converted from flat rates to metered rates. Current flat rates include fixed monthly service charges with a portion of those charges varying based on parcel size. The fixed portion of the charge reflects fixed costs of service as well as a base water allotment considered sufficient for indoor water usage. The portion of the service charge tied to parcel size is intended to reflect an estimate of water usage for irrigation purposes. Any customer that believes that the flat rates are not representative of their particular water usage characteristics is able to receive a water meter and be billed on actual usage.

Current residential metered rates include fixed service charges plus two-tier water usage rates. The tier structure includes 10 CCF per month at a lower initial rate with usage in excess of 10 CCF at a higher rate. Ten CCF is equivalent to 250 gallons per day, and is representative of indoor water usage for residential customers.

Non-residential customers are subject to fixed service charges plus a seasonal water usage rate structure. Under the seasonal rates a higher rate applies to water usage during peak months (May through October) and a lower rate during non-peak months (November through April).

Water rates proposed herein reflect discussion with and direction from the Board of Directors regarding current and alternative water rate structures. It is recommended that the residential flat rate structure remain the same until all customers are metered. No flat rate structure is perfect as individual water use characteristics vary dramatically. The current flat rate structure has been shown to be reasonable, particularly for the most prevalent parcel sizes (under 0.25 acre). Rather than attempt to improve on the flat rate structure, the District offers a water meter and metered billing to any customer that feels the flat rates are inequitable.

The non-residential seasonal rate structure is also recommended to remain unchanged. Tiered rate structures are less effective for non-residential customers due to diverse water needs and usage patterns. Seasonal rates provide an improved water conservation incentive during peak demand months.

During workshops with the Board of Directors, three-tier water usage rate structures were considered as an alternative to the current two-tier structure. The Board sought to improve the water conservation price signal embodied in the water rates, but was sensitive to ongoing efforts to transition customers from flat to metered rates and wanted to avoid rates that would be perceived as punitive for reasonable water use.

Exhibit I-2 summarizes the characteristics of the alternative 3-tier residential water usage rate structures that were considered during this study.

Exhibit I-2
Sacramento Suburban Water District
Summary of Residential Tiered Water Rate Alternatives

Break Point to Begin 3rd Tier (CCF) (1)	% of July Water Bills in 3rd Tier	% of July Water Usage in 3rd Tier	% of Annual Water Bills in 3rd Tier	% of Annual Water Use in 3rd Tier	% of Annual Comm. Rate Revenue from 3rd Tier
None (2-Tiers) (2)	0.0%	0.0%	0.0%	0.0%	0.0%
50	17%	14%	5.4%	8.7%	14%
60	11%	10%	3.3%	6.4%	11%
70	6.8%	7.7%	2.2%	5.0%	8.5%
80	4.6%	6.1%	1.5%	4.1%	7.0%
90	3.3%	5.0%	1.1%	3.4%	5.8%
100	2.6%	4.1%	0.8%	2.9%	5.0%
110	2.0%	3.5%	0.7%	2.5%	4.3%
120	1.7%	2.9%	0.5%	2.2%	3.8%

Notes:

- (1) All alternatives assume 0-10 CCF at the first tier rate, with the second tier rate applying until the third tier rate applies (varies by alternative). Analyses assume that the second tier rate is 125% of the first tier rate, and the 3rd tier rate is 200% of the first tier rate.
- (2) Represents the current 2-tier rate structure.

Based on a detailed analysis of residential water use characteristics, including analysis by parcel size and season, it is recommended that the District adopt a three-tier rate structure in which the third tier begins when monthly usage exceeds 100 CCF. While this is generally an ample amount of water for residential purposes, there will be some (large) residential lots that may reasonably use this much water with efficient irrigation practices. We recommend an approach that attempts to reduce the risk that customers will perceive the rates as being punitive. Because the District will be annually switching additional residential customers from flat to metered rates, it is important that the metered rate structure not be perceived as overly aggressive. Tier design and water use issues are described in additional detail in Section III of this report.

The current standard meter size within the District is 3/4". Current rate schedules include service charges starting with this size and then include higher charges for larger meter sizes. Staff asked that we develop and include water rates appropriate for a 5/8" water meter. Proposed rate schedules include such charges.

At present, the water rates include separate components for operations and maintenance (both fixed service charges and variable water usage charges), debt service charges, and capital improvement charges. Separate debt service and capital improvement charges were established in 2004 in order to (1) demonstrate that customers in Arcade and Northridge service areas were only paying for debt service related to their predecessor water district, and (2) to begin a process of funding a portion of the CIP with ongoing water rates.

In 2005 the District refunded existing debt associated with the predecessor districts and no longer needs to distinguish the debt service components of the water rates by service area. In addition, in recognition that debt is a means of financing the capital improvement program, the Board of Directors decided that both debt service costs and pay-as-you-go CIP costs should be reflected in a single "capital facilities charge" component of the water rates. As a result, the proposed water rates shown in **Exhibit I-3** combine the previous debt service and capital improvement charges. Water rate schedules presented in Exhibit I-3 would be sufficient to fully fund each year of the 5-year CIP as planned (financial strategy Alternative #1). Rate schedules consistent with other financial alternatives are available, and can be used at the District's direction.

Additional details regarding water rate and rate structure recommendations are included in Section III of this report. The proposed rates are reasonable and fairly reflect the cost of providing service for all customer classes. Information pertaining to water bills for various "typical" customers is presented at the end of Section III.

This study also included developing recommendations for increasing the District's private fire service charges. These charges apply to private fire service connections used to provide required fire flow capacity. **Exhibit I-4** summarizes the recommended private fire service charges, which vary with the size of the connection.

Facilities Development Charges

In 2004, the District adopted a single facilities development charge schedule for the entire District (consolidating previous capacity charges from predecessor districts). FDCs are one-time charges to new development intended to reflect the estimated reasonable cost of capacity in the water system from which new customers will benefit. The FDCs adopted in 2004 were based on the system buy-in methodology for calculating capacity charges.

This update study included an update to FDCs. Section IV of this report describes the FDC methodology and presents its calculation. The calculation follows the same methodology as developed in 2004. **Exhibit I-5** summarizes the proposed FDC schedule and is based on the current investment in water system facilities, including estimates for current (FY 2007) capital program activities. As with current practice, the District should adjust the FDCs annually to reflect the effects of inflation and every few years update the full fee calculation.

As with the proposed water rates, a new FDC for a 5/8" meter is included in the proposed schedule. The FDCs presented herein are based on the November 2006 20-Cities Construction Cost Index, with a value of 7,911.

**Exhibit I-3
Sacramento Suburban Water District
Proposed Water Rates**

	CY 2007	CY 2008	CY 2009	CY 2010	CY 2011
Flat Water Rates					
<u>Water Usage Charge (\$/1,000 sq. ft.)</u>	\$ 0.70	\$ 0.80	\$ 0.91	\$ 1.01	\$ 1.07
Additional Dwelling Units (\$/add'l DU)	\$ 6.62	\$ 7.31	\$ 8.03	\$ 8.70	\$ 9.31
Monthly Service Charges					
3/4" connection	\$ 15.30	\$ 15.12	\$ 14.89	\$ 14.49	\$ 13.92
1" connection	\$ 22.82	\$ 22.23	\$ 21.55	\$ 20.64	\$ 19.48
1 1/2" connection	\$ 43.62	\$ 42.24	\$ 40.69	\$ 38.71	\$ 36.22
2" connection	\$ 49.55	\$ 45.04	\$ 40.19	\$ 34.66	\$ 28.84
Metered Water Rates					
<u>Water Usage Charges (\$/CCF)</u>					
Residential - 1st Tier (0-10 CCF)	\$ 0.66	\$ 0.73	\$ 0.80	\$ 0.87	\$ 0.93
Residential - 2nd Tier (11-100 CCF)	\$ 0.83	\$ 0.91	\$ 1.00	\$ 1.09	\$ 1.16
Residential - 3rd Tier (101+ CCF)	\$ 1.32	\$ 1.46	\$ 1.61	\$ 1.74	\$ 1.86
Non-Resid. - Off-Peak (Nov-Apr)	\$ 0.69	\$ 0.75	\$ 0.81	\$ 0.87	\$ 0.93
Non-Resid. - Peak (May-Oct)	\$ 0.86	\$ 0.94	\$ 1.01	\$ 1.09	\$ 1.16
Monthly Service Charges					
5/8" meter	\$ 5.05	\$ 4.35	\$ 3.60	\$ 2.80	\$ 1.95
3/4" meter	\$ 7.35	\$ 6.35	\$ 5.25	\$ 4.05	\$ 2.75
1" meter	\$ 12.05	\$ 10.35	\$ 8.50	\$ 6.50	\$ 4.35
1 1/2" meter	\$ 23.75	\$ 20.30	\$ 16.60	\$ 12.60	\$ 8.30
2" meter	\$ 37.80	\$ 32.30	\$ 26.40	\$ 19.90	\$ 13.05
3" meter	\$ 70.60	\$ 60.25	\$ 49.20	\$ 37.05	\$ 24.20
4" meter	\$ 117.50	\$ 100.20	\$ 81.75	\$ 61.55	\$ 40.10
6" meter	\$ 234.55	\$ 200.05	\$ 163.15	\$ 122.70	\$ 79.80
8" meter	\$ 422.00	\$ 359.85	\$ 293.40	\$ 220.60	\$ 143.35
10" meter	\$ 679.70	\$ 579.55	\$ 472.50	\$ 355.20	\$ 230.75
12" meter	\$ 1,007.60	\$ 859.10	\$ 700.40	\$ 526.50	\$ 342.00
Capital Facilities Charges (Flat and Metered Accounts)					
<u>Monthly Capital Facilities Charge (for current debt obligations and ongoing capital program expenditures)</u>					
5/8" meter	\$ 12.35	\$ 15.55	\$ 19.25	\$ 20.00	\$ 20.95
3/4" meter/connection	\$ 18.40	\$ 23.20	\$ 28.70	\$ 29.85	\$ 31.25
1" meter/connection	\$ 30.75	\$ 38.75	\$ 48.00	\$ 49.85	\$ 52.20
1 1/2" meter/connection	\$ 61.25	\$ 77.25	\$ 95.65	\$ 99.40	\$ 104.00
2" meter/connection	\$ 98.05	\$ 123.65	\$ 153.10	\$ 159.05	\$ 166.50
3" meter	\$ 184.00	\$ 232.05	\$ 287.30	\$ 298.50	\$ 312.40
4" meter	\$ 306.70	\$ 386.85	\$ 478.95	\$ 497.55	\$ 520.80
6" meter	\$ 613.20	\$ 773.40	\$ 957.60	\$ 994.85	\$ 1,041.25
8" meter	\$ 1,103.90	\$ 1,392.20	\$ 1,723.80	\$ 1,790.90	\$ 1,874.40
10" meter	\$ 1,778.60	\$ 2,243.25	\$ 2,777.45	\$ 2,885.40	\$ 3,020.00
12" meter	\$ 2,636.65	\$ 3,325.55	\$ 4,117.65	\$ 4,277.70	\$ 4,477.25

**Exhibit I-4
Sacramento Suburban Water District
Proposed Private Fire Service Charges**

	CY 2007	CY 2008	CY 2009	CY 2010	CY 2011
Private Fire Service Charges (\$/month)					
2" fire service	\$ 10.70	\$ 12.10	\$ 13.65	\$ 14.05	\$ 14.45
3" fire service	\$ 20.05	\$ 22.65	\$ 25.60	\$ 26.35	\$ 27.15
4" fire service	\$ 32.60	\$ 36.85	\$ 41.65	\$ 42.90	\$ 44.15
6" fire service	\$ 64.90	\$ 73.35	\$ 82.90	\$ 85.40	\$ 87.90
8" fire service	\$ 114.85	\$ 129.75	\$ 146.65	\$ 151.05	\$ 155.50
10" fire service	\$ 179.45	\$ 202.75	\$ 229.15	\$ 236.00	\$ 242.95
12" fire service	\$ 200.00	\$ 225.95	\$ 255.35	\$ 263.00	\$ 270.75

**Exhibit I-5
Sacramento Suburban Water District
Proposed Facilities Development Charges**

Water Service Connections	
5/8" meter	\$ 2,510
3/4" meter	\$ 3,747
1" meter	\$ 6,257
1 1/2" meter	\$ 12,477
2" meter	\$ 19,971
3" meter	\$ 37,469
4" meter	\$ 62,460
6" meter	\$ 124,883
8" meter	\$ 224,812
10" meter	\$ 362,210
12" meter	\$ 537,038

