SAN JUAN WATER DISTRICT

Wholesale Financial Plan and Water Rate Study

Summary Report

December 21, 2010



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SECTION I. SUMMARY

INTRODUCTION AND BACKGROUND

In April 2010, the San Juan Water District retained The Reed Group, Inc. to update the District's wholesale financial plan and water rates for the period from 2011 through 2015. The purpose of the study was to ensure that the wholesale water system is meeting financial obligations for ongoing operation and maintenance, debt service, and capital improvements while maintaining prudent reserves. The study also updated the calculation of water rates for each family member agency to help ensure that wholesale water costs are equitably distributed among member agencies.

The focus of this wholesale financial plan and water rate study is primarily on the District's wholesale water system capital improvement needs. The wholesale capital improvement plan includes about \$32.5 million in capital improvements over the ten-year planning period extending through FY 19-20. The financial plan presented herein shows that it may be possible to undertake this capital program on a pay-as-you-go basis, thereby avoiding the need for future long-term debt.

Wholesale water rate calculations were also updated based on the revenue needs developed through the financial planning process. The cost allocation methodology used in the rate calculations is generally the same as in past studies. One change, however, is that pumping costs applicable to water deliveries to the San Juan retail service area (RSA) and to the City of Folsom have been removed from the wholesale operating budget and will now be reflected in the retail budget¹. As a result, a uniform water usage charge applicable to all family member agencies is proposed. Fixed service charges continue to reflect some of the minor differences in service delivery requirements for each member agency. Charges related to debt service obligations also continue to be segregated out as separate charges to each member agency.

As discussed and agreed upon by the member agencies, this report assumes that billing practices will change beginning in 2011. Fixed service charges, as well as debt service charges, will be billed to each member agency on a quarterly basis, in advance. This is not changing. Water usage charges, however, will be billed in arrears following the end of each quarter based on the actual water used during the quarter. Currently, water usage charges occur in advance, based on estimated usage, with reconciliation occurring to true up the difference between estimated and actual usage. This change will improve billing efficiency, although it does result in a one-time pause in incoming cash during the transition from billing in advance to billing in arrears for this part of the rate structure.

During the course of this study, preliminary results and recommendations were presented to the Executive Committee, the District's Board of Directors, and the Ad Hoc Budget Committee. The District's Board of Directors approved new wholesale water rates

¹ A separate pumping surcharge applicable to the City of Folsom will be developed as part of the upcoming retail financial plan and water rate update study.

for 2011, reducing the previously approved overall 8 percent water rate increase be reduced to an overall 5 percent.

This report summarizes the analyses and recommendations of the wholesale financial plan and water rate study. It includes a financial strategy that relies upon ongoing revenues as well as available reserves to meet all financial obligations, including the planned capital improvement program.

FINANCIAL PLAN AND REVENUE NEEDS

The financial plan model covers the ten-year planning period from FY 10-11 through FY 19-20. The plan reflects estimated operation and maintenance costs, debt service obligations, and capital improvement needs of the wholesale water system. The financial plan is a cash-flow model, and differs from standard accounting income statements and balance sheets. The financial plan also separately reflects ongoing operation and maintenance, debt service payment obligations, and the capital improvement program, with separate revenue sources reflected for each. Financial reserves are also reflected in the financial planning model.

In 2009, the District issued \$30.51 million in revenue certificates of participation (COPs) providing net proceeds of \$17.6 million for the wholesale water system and \$9.9 million for the retail water system. Debt proceeds are being expended on current capital improvement projects. One of the obligations related to the District's outstanding debt is to maintain adequate ongoing revenues to cover all ongoing operating and maintenance costs, as well as at least 115 percent of annual debt service. The District's near-term water rate revenue requirements are guided more by the needs to meet this requirement than the need to cover all wholesale costs.

Details of the financial plan assumptions, findings, and recommendations are presented in Section II of this report. However, the analysis suggests that the District will need to increase the O&M water rate components (fixed service charges and water usage charges) by an overall 5 percent each year of the planning period. Debt service charges will be generally static, continuing to reflect each member agencies obligations for meeting debt repayment obligations. Other findings of the financial plan analysis include:

- Annual water sales have declined in recent years likely due to the slowdown in the
 economy, increased awareness of water supply issues, and water conservation
 efforts by each member agency. A partial rebound in demand is anticipated over
 several years.
- The margin for meeting the annual debt service coverage requirement will be relatively thin through FY 12-13, due in part to reduced water sales and the anticipated gradual rebound in sales.
- The portion of the debt service payments on the 2003 COPs related to the refunding of the 1993 COPs will end in FY 12-13, after which annual debt service payments will decline.
- With a temporary exception, the District financial reserve policies are generally maintained throughout the planning period including the 20 percent operating reserve, the \$1 million rate stabilization reserve, the general CIP reserve, remaining

COP proceeds, the connection fee reserve, the Hinkle reservoir reserve, debt service reserves, the employee vacation/sick leave reserve, the PERS reserve, and the OPEB liability reserve.

- From FY 12-13 though FY 17-18 the rate stabilization reserve is partially or fully utilized to help provide needed cash for the capital improvement program. Use of the reserve in this manner is consistent with its purpose, in that in the absence of using the reserve water rates would otherwise need to be higher than presented herein. In addition, from FY 14-15 through FY 16-17 the balance in the Operating Fund dips below the target minimum 20 percent operating reserve level. While a potential concern, because this occurs five years from now, it is recommended that the District monitor the situation, rather than planned for higher water rates at this time. A delay in capital projects could be sufficient to avoid this low-cash situation.
- Except for the fact that cash reserves may be drawn down to historic low levels, the financial plan indicates that the District should be able to fund the planned capital improvement program, as currently scheduled, over the next ten years without the need for additional long-term debt.

As with past practice, the District should monitor financial conditions and needs on an ongoing (annual) basis and update the financial plan model and future estimates at least every three to five years, or when conditions or plans changes sufficient to warrant an update. Actual future conditions, such as water deliveries, water sales revenue, operating and maintenance expenses, CIP project costs/timing, project financing, etc., may differ from the financial plan assumptions reflected herein. Material differences affecting the overall financial condition of the wholesale water system may warrant closer review and/or an earlier update. The need and magnitude of annual wholesale water rate increases may also be affected by differences between assumed and actual conditions.

PROPOSED WHOLESALE WATER RATES

Exhibit I-1 presents the proposed wholesale water rates to be implemented in January 2011. Fixed service and debt charges are billed quarterly in advance. In a change from current practice, beginning in January 2011, water usage charges will be billed in arrears at the end of each quarter, rather than in advance based on estimated water deliveries. This change in billing will avoid the need to adjust billings to reconcile actual deliveries relative to estimates.

Debt service charges are based on each member agency's obligations with respect to existing long-term debt, and the District's annual debt service payment obligations. Any changes to the debt service charges are related to changes in annual debt service payments. In FY 12-13 final payments will be made on the portion of the 2003 COPs related to repayment of the 1993 COPs. After that year, the debt service charges for SJWD-RSA, OVWC, and FOWD will all decline. **Exhibit II-2**, in Section II, presents annual debt service charges for each member agency and each debt obligation during the planning period.

3,322,147 2,045,362 1,835,685 754,511 311,082 8,268,788 Annual **Totals** \$ \$ \$ \$ \$ S 986,807 367,695 227,360 101,507 34,706 1,718,075 2009 COPs (Whls. & Retail Projects) **Annual Debt Service Payments** s 2003 COPs (San Juan 245,667 159,744 61,032 114,376 537,144 1,117,963 Project) ₩ 2003 COPs (1993 COP 234,582 103,972 291,196 629,750 Refunding) Recommended Wholesale Water Rates for 2011 \$ \$ \$ \$ \$ \$ ₩ San Juan Water District 367,450 208,340 80,300 35,160 1,002,330 311,080 Service Charge (\$/yr) Wholesale Water Rates ₩ Water Usage Charges 1,064,550 1,005,660 407,700 126,840 1,195,920 3,800,670 Estimated (₹ ₩ $\varphi \varphi \varphi \varphi$ Commodity 90.60 90.60 90.60 90.60 Uniform Rate (\$/AF) \$ \$ \$ \$ \$ 13,200 11,750 11,100 4,500 1,400 Water Deliveries 41,950 Est. 2011 (AF) 1,432,000 1,214,000 488,000 162,000 Allocation of 4,803,000 1,507,000 Requirement Annual Revenue San Juan Family Agencies San Juan WD - RSA \$ \$ \$ \$ \$ \$ ₩ Citrus Heights WD Fair Oaks WD Orange Vale WC City of Folsom

Exhibit I-1

Annual service charges and water usage charges presented in Exhibit I-1 together are intended to reflect and recover the costs associated with ongoing operation and maintenance, contributions to the ongoing pay-as-you-go capital program, and maintenance of financial reserves. Beyond 2011, it is recommended that the District increase these wholesale rate components by 5.0 percent each year. The District should update the financial plan and rate analyses within 5 years, or if there is material change to any of the information and/or assumptions reflected in this report.

SECTION II. WHOLESALE FINANCIAL PLAN

This section of the report described the financial plan for the District's wholesale water system. The ten-year financial plan is used to determine annual wholesale water rate revenue requirements. The annual rate revenue requirement is the amount of revenue needed from water rates to cover planned operating, maintenance, debt service, and capital program costs with consideration of other revenues and financial reserves.

FUND STRUCTURE AND CASH FLOWS

The financial plan is an annual cash flow model. As a cash flow model, it differs from standard accounting income statements, and balance sheets. The financial plan models sources and uses of funds into, out of, and between the various funds and reserves of the water utility.

The financial plan model is based on a fund, reserve, and account structure that separately addresses operating, debt service, and capital program needs, with three funds for these three purposes. This presentation helps provide transparency as to the sources and uses of funds for each type of obligation.

An understanding of the fund/reserve structure is helpful in understanding the financial plan worksheets that model annual cash flows through the water utility from one year to the next. The fund/reserve structure is comprised of:

- Wholesale Operating Fund The wholesale operating fund is the primary fund within the wholesale water system. Most wholesale revenues, including water rate revenues, flow into the operating fund and all operating and maintenance costs, excluding debt service payments, are paid out of this fund. Funds are also transferred from the operating fund to the wholesale capital fund to help pay for capital projects intended to rehabilitate and upgrade facilities. Three separate reserves are reflected in the operating fund.
 - Operating Reserve The District maintains an operating reserve within the operating fund equal to 20 percent of annual wholesale operating and maintenance costs. The purpose of the operating reserve is to provide working capital and funds for unplanned operating and maintenance expenditures. For FY 10-11, the wholesale operating reserve is about \$1,048,000.
 - o Rate Stabilization Reserve The District also maintains a \$1 million rate stabilization reserve. The rate stabilization reserve provides a buffer against variable revenues that may result from abnormal (e.g., water shortage) fluctuations in water demand. The reserve could also be used as a tool to mitigate unexpected (and unacceptably high) water rate increases due to changing circumstances.
 - o *PERS Reserve* A separate PERS reserve is shown as a part of the operating fund, and reflects the balance of funds set aside to meet future

- retirement obligations. At the beginning of FY 10-11, the PERS reserve had a balance of about \$257,000.
- O Uncommitted Fund Balance The balance in the operating fund in excess of the target amount for the operating reserves, as well as the other two reserves, is shown in the financial plan as uncommitted fund balance. After all other obligations are met the uncommitted fund balance is available to offset rate increases, and the financial plan model generally seeks to reduce any uncommitted fund balance over time. Negative amounts for the uncommitted fund balance indicates the degree to which the minimum operating reserve is not met. At the beginning of FY 10-11, the uncommitted fund balance was about \$1.5 million.
- *Non-Operating (Debt Service) Fund* The non-operating fund is used as the mechanism for tracking debt service obligations as well as payments made by member agencies in support of debt service payments. Outstanding debt was issued in 2003 and in 2009.
 - Debt Service Reserves Both the 2003 and 2009 certificates of participation (COPs) require the District to maintain certain debt service reserves.
 These reserves are each separately shown as part of the overall non-operating fund balance. Debt service reserves total about \$4.7 million.
- Wholesale Capital Fund The wholesale capital fund is used to account for capital project expenditures and related funding sources. The District applies a portion of property tax revenues (the 1 percent increment taxes) to the capital program. In addition, a portion of revenues from the wholesale water rates is transferred annually to the capital fund, in support of the long-term capital program. Capital projects funded from this fund are intended to rehabilitate, upgrade, and expand the wholesale water system to meet current and future needs of the utility. The financial plan model generally seeks to maintain a positive balance in the capital fund while also covering the costs of planned capital improvement projects. The capital fund is comprised of four separate reserves.
 - General CIP Reserve This reserve reflects the capital fund balance that is generally available for capital improvement purposes. At the beginning of FY 10-11, this reserve had a balance of about \$5.9 million
 - o Remaining COP Proceeds This reserve reflects the remaining proceeds from the issuance of COPs in 2009. COP proceeds are to be expended within a timely manner following debt issuance. If not expended the District is required to take steps to avoid arbitrage. At the beginning of FY 10-11, this reserve had a balance of about \$8.9 million
 - Connection Fee Reserves This reserve is used by the District to account for wholesale connection fee revenue. For purposes of financial plan analyses, it is assumed that connection fee revenue is expended in the year that it is received.
 - o *Hinkle Reservoir Reserve* The District maintains a sinking fund for the eventual replacement and upgrade of Hinkle Reservoir. The sinking

fund has a current balance of about \$2.3 million. The District adds \$50,000 annually to this reserve.

FINANCIAL PLAN ASSUMPTIONS

The financial plan was created to reflect the FY 10-11 budget and financial conditions as of the beginning of the fiscal year. The financial plan also reflects the District's debt service obligations and capital improvement program, as identified by staff, during the ten-year planning period.

The process used to develop the financial plan involved estimating future revenues and expenditures based on inflation and interest rates, water supply and demand projections, anticipated capital improvement needs, and other information. The District does not have formal estimates of future operating and maintenance costs, and capital improvement needs are defined at a planning level. The financial plan is based on the best available information and assumptions are believed to be reasonable; however, no assurance can be provided as to the accuracy and completeness of the estimates.

Primary assumptions reflected in financial plan analyses are summarized below:

- Interest Rates Interest earned on fund/reserve balances is estimated to be 0.5 percent per year in FY 10-11 and then increasing by 0.5 percent per year each year until reaching 3.0 percent. Interest calculations are based on beginning of year balances. Interest accrues to each of the funds. The District also pays interest on outstanding long-term debt obligations. The interest payments on outstanding debt are those contained in existing contracts and repayment schedules.
- *Inflation Rates* Annual inflation rates for general operating and maintenance costs is 3.0 percent per year throughout the planning period. Inflation for chemical and energy costs is assumed 3.0 percent per year for five years, then 5.0 per year thereafter. Inflation on OPEB costs and construction costs is assumed to be 4.0 percent annually.
- Retail Customer Base and Water Deliveries Negligible growth in the customer
 base is assumed for financial planning purposes. Water deliveries are estimated
 to rebound toward historic levels over the next several years. Exhibit II-1
 summarizes historic and estimated future annual water deliveries during the
 planning period. While the District wheels water to the Sacramento Suburban
 Water District (SSWD) in most years, the financial plan conservatively assumes
 no deliveries to SSWD.
- Cost of Water Supplies The cost of water supplies depends on the mix of water from each of the District's water supply sources, however the mix of supplies is expected to remain relatively static. The District first utilizes water under its existing water rights then uses a combination of water under the PCWA contract and under a USBR contract. Temporary supplies are sometimes available, but not included in the analyses contained herein.
- *Operation and Maintenance Costs* The financial plan model is based on current operating and maintenance costs as reflected in the FY 10-11 operating budget.

Future operating and maintenance costs are estimated based on assumed inflation rates. Supply and other variable costs are also assumed to increase in proportion to water demand.

Exhibit II-1
San Juan Water District
Summary of Past and Projected Wholesale Water Deliveries

		Ar	nnual Water [Deliveries (Al	=)	
	San Juan RSA	Citrus Heights WD	Fair Oaks WD	Orange Vale WC	City of Folsom	Total
2000	14,287	19,564	14,018	4,422	1,324	53,614
2001	16,192	20,865	14,813	4,467	1,138	57,475
2002	17,361	17,618	11,456	4,377	1,149	51,960
2003	17,102	17,996	12,333	3,816	1,107	52,353
2004	17,941	19,775	13,629	4,165	1,415	56,924
2005	16,125	19,020	12,282	3,376	1,561	52,364
2006	15,193	18,683	11,235	3,641	1,730	50,483
2007	16,659	16,559	11,537	4,452	1,820	51,027
2008	17,064	17,036	10,534	4,703	1,608	50,945
2009	13,569	12,783	11,072	4,486	1,647	43,557
2010	12,687	11,366	10,707	4,363	1,334	40,457
2011	13,200	11,750	11,100	4,500	1,400	41,950
2012	14,000	12,500	11,800	4,700	1,480	44,480
2013	15,000	13,400	12,600	4,850	1,580	47,430
2014	15,150	13,534	12,726	4,899	1,596	47,905
2015	15,302	13,669	12,853	4,948	1,612	48,384
2016	15,455	13,806	12,982	4,997	1,628	48,868
2017	15,610	13,944	13,112	5,047	1,644	49,357
2018	15,766	14,083	13,243	5,097	1,660	49,849
2019	15,924	14,224	13,375	5,148	1,677	50,348
2020	16,083	14,366	13,509	5,199	1,694	50,851

• Debt Obligations – The District's wholesale debt obligations are limited to repayment of 2003 and 2009 COPs. Annual debt service on the 2003 COPs total about \$1.75 million. In FY 12-13 the portion of the 2003 COPs related to the 1993 COP refunding will be retired. Payments in that year will total about \$2.15 million. Beginning in FY 13-14 annual debt service on the 2003 COPs will be about \$1.1 million. Annual debt service on the 2009 COPs total about \$1.7 million, but will escalate to about \$2.1 million beginning in FY 13-14.

Exhibit II-2 provides details on wholesale debt service obligations, including the distribution to each member agency. **Exhibit II-3** provides information on the basis for the distribution to each agency.

Exhibit II-2 San Juan Water District

				Summary of	Summary of Debt Service Obligations	Obligations					
	Alloc. (1)	FY 10-11	FY 11-12	FY 12-13	FY 13-14	FY 14-15	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20
2003 CERTIFICATES OF PARTICIPATION (2)	PARTICIPATIO	N (2)									
1993 Refunding Principal Interest		555,000 76,400	570,000	995,000							
Total Payment Outstanding Balance	2,120,000	631,400 1,565,000	629,750 995,000	1,034,800							
SJWD-RSA Fair Oaks WD	46.24%	291,959	291,196	478,492							
Orangevale WC	16.51%	104,244	103,972	170,845							
lotal	100.00%	631,400	629,750	1,034,800							
San Juan Project Principal Interest		430,000 685,863	445,000 672,963	460,000	475,000 638,988	495,000 619,988	515,000 602,663	535,000 582,063	555,000 560,663	575,000 538,463	600,000
Total Payment Outstanding Balance	15,755,000	1,115,863 15,325,000	1,117,963 14,880,000	1,117,388 14,420,000	1,113,988 13,945,000	1,114,988 13,450,000	1,117,663 12,935,000	1,117,063 12,400,000	1,115,663 11,845,000	1,113,463 11,270,000	1,115,463 10,670,000
SJWD-RSA (3)	48.05%	536,135	537,144	536,868	535,235	535,715	537,000	536,712	536,039	534,982	535,943
Citrus Heights WD	21.97%	245,205	245,667	245,540	244,793	245,013	245,601	245,469	245,161	244,678	245,117
Pair Daks WD Orangevale WC	14.29%	60.917	159,744	159,661	159,176	60.870	159,701 61 016	60.983	159,415 60,906	159,101	159,386
City of Folsom (3)	10.23%	114,161	114,376	114,317	113,969	114,072	114,345	114,284	114,141	113,916	114,120
Total	100.00%	1,115,863	1,117,963	1,117,388	1,113,988	1,114,988	1,117,663	1,117,063	1,115,663	1,113,463	1,115,463
2009 CERTIFICATES OF PARTICIPATION	PARTICIPATIO										
Principal Interest		10,000	10,000	10,000	405,000	415,000	430,000	450,000	475,000	500,000	525,000
Total Payment		1.718.475	1,718,075	1,717,675	2,112,275	2,106,075	2,102,400	2,103,050	2,105,550	2,106,800	2,105,550
Outstanding Balance	30,105,000	30,095,000	30,085,000	30,075,000	29,670,000	29,255,000	28,825,000	28,375,000	27,900,000	27,400,000	26,875,000
SJWD-RSA (4)	57.44%	987,036	986,807	986,577	1,213,222	1,209,661	1,207,551	1,207,924	1,209,360	1,210,078	1,209,360
Citrus Heights WD	21.40%	367,781	367,695	367,610	452,060	450,734	449,947	450,086	450,621	450,889	450,621
Fair Oaks WD	13.23%	227,413	227,360	227,307	279,526	278,706	278,219	278,305	278,636	278,801	278,636
City of Folsom	2.02%	34.714	34.706	34,698	42.669	42.544	42.470	42.483	42.533	42.559	42.533
Total	100.00%	1,718,475	1,718,075	1,717,675	2,112,275	2,106,075	2,102,400	2,103,050	2,105,550	2,106,800	2,105,550
TOTAL ANNUAL DEBT SERVICE	ERVICE	7 84 7 134	1 815 177	2 001 937	1 748 457	1 7/5 376	1 744 551	1 744 636	1 7/15 300	1 745 060	1 715 303
Citrus Heights WD		612,131	613 362	613 150	696.854	695,746	695 548	695 555	695 782	695,566	695,738
Fair Oaks WD		622,053	621,685	772,431	438,702	438,024	437,920	437,920	438,051	437,902	438,022
Orangevale WC		266,692	266,511	333,329	185,612	185,300	185,229	185,235	185,306	185,260	185,295
City of Folsom (5)	•	3.465.738	3.465.788	3.869.863	3.226.263	3.221.063	3.220.063	3.220.113	3.221.213	3.220.263	3.221.013
						2001	000000000000000000000000000000000000000	0			2

Notes:

(1) See Exhibit II-3 for the basis for each allocation factor.

(2) Excludes the portion of 2003 COPs for which Citrus Heights Water District is directly repsonsible for paying.

(3) Includes share of debt service related to direct benefit pump station improvements.

(4) Includes share of debt service related to retail service area improvements.

Exhibit II-3
San Juan Water District
Summary of Allocation Factors for Long-Term Debt Obligations

		Ō	d in a second	Odininal y of Anocation actors for Foriginal Debt Obligations		Conganons	Alloca	Allocation to Agencies	Sci	
	4 300	one of the second second	0,000	Basis of Alloc to	F	A S G CIANI S	CUM	S CANCE	OWN	200
	rar Amount	Net Proceeds	-% or issue	Agencies	Iotal	SJWD-R3A	OWID	LOWD	2000	LOISOILI
2003 CERTIFICATES OF PARTICIPATION	TICIPATION									
1993 Refunding	\$ 5,690,000	\$ 5,690,000 \$ 5,372,600	24.0%	1993 COP Alloc	100%	46.24%		37.25%	16.51%	
San Juan Project	•	6	ò			£				000
Po Improvements	\$ 6,441,042	\$ 6,441,642 \$ 6,000,000	%0.07	Project Cost Est. ♦	9,000,000	4,500,000			,	25,00%
WTP Improvements	\$ 11,863,358	\$ 11,863,358 \$ 11,050,000	49.3%	2002 Deliveries (AF)	51,960	17,361	17,618	11,456	4,377	1,149
					100%	33.41%	33.91%	22.05%	8.42%	2.21%
	\$ 18,305,000	\$ 18,305,000 \$ 17,050,000				48.05%	21.97%	14.29%	5.46%	10.23%
CHWD Project (1)	\$ 3,220,000	\$ 3,220,000 \$ 3,000,000	n/a (1)	Project Cost Est. \$	3,000	€	\$ 3,000,000			
2003 COP TOTALS	\$ 27,215,000	\$ 25,422,600			%001		%0.001			
2009 CERTIFICATES OF PARTICIPATION	TICIPATION									
Retail Improvements	\$ 10,983,600	\$ 9,900,000	36.0%	Project Cost Est. \$	9,900,000	\$ 9,900,000				
Wholesale Improvements		\$ 19,526,400 \$ 17,600,000	64.0%	2008 Deliveries (AF)	50,945	17,064	17,036	10,534	4,703	1,608
					100%	33.5%	33.4%	20.7%	9.5%	3.2%
2009 COP TOTALS	\$ 30,510,000	\$ 30,510,000 \$ 27,500,000				57.44%	21.40%	13.23%	5.91%	2.02%

Notes:

(1) This portion of the 2003 COPs is the direct responsibility of Citrus Heights Water District, and is not reflected in debt service schedules contained herein.

• Capital Improvement Program – The District's wholesale capital improvement program includes more than 25 projects totaling about \$30 million in current dollars. **Exhibit II-4** lists all the planned projects, as well as estimated cost and schedule for construction. Costs in Exhibit II-4 are expressed in current dollars. When these costs are carried forward into the financial plan exhibit they are escalated to the year of construction. In future dollars, planned project total about \$32.5 million.

The capital improvement program has a concentration of project expenditures in FY 10-11 of about \$14 million and another in FY 14-15 of about \$7 million, with other years having annual expenditures ranging between \$0.5 million and \$1.5 million (all in current dollars). The current concentration of projects will be funded with remaining proceeds from the 2009 COPs, general CIP reserves, and current revenues available for the capital program.

The entire capital improvement program is expected to be financed on a pay-as-you-go basis using current revenues and available reserves (including remaining 2009 COP proceeds). Property taxes continue to be an important source of revenue for capital projects. Consistent with prior financial plan analyses, 50 percent of property tax revenue received by the District is allocated to the wholesale water system, and directed towards capital projects.

Annual transfers from the operating fund to the capital fund ranging from \$400,000 to \$1.1 million annually are also included in the financial plan analysis and provide additional critical support for financing the capital program. By establishing rates sufficient to support a portion of the capital program the District may be able to avoid the need for additional long-term debt during the planning period. This has been an objective of the financial planning process, and the proposed rates help to achieve this objective.

FINANCIAL PLAN RESULTS

Details of the financial plan analyses are presented in **Exhibits II-5**, **II-6**, **and II-7** reflecting the operating, non-operating (debt service), and capital funds, respectively. The financial plan is also presented graphically in **Exhibit II-8**. Results of the financial plan analyses are summarized below.

- Current water rates and service charges provide relatively stable and predictable revenues for the wholesale water system, revenue fluctuations created by variable water deliveries are accommodated through existing reserve policies.
- Current rate revenues are generally sufficient for covering ongoing operating and maintenance costs and debt service payment obligations, however the current rates are insufficient to sustain the capital improvement program on a pay-as-you-go basis.
- While the District is meeting debt service coverage obligations, the margin is very slim (due in part to reduced water deliveries); increases water rates are advised in order to help ensure that coverage obligations continue to be met.

Part Proportionary Propo				CHAIN VEAD MUL	SAN JUA	Exhibit II-4 SAN JUAN WATER DISTRICT	T AMMIN SHAMM	TAP I					
Principle State Name					Cu	rrent Dollars							
Page 15 15 15 15 15 15 15 1	Line		Total Cost 1	FY10-11	FY11-12	FY12-13	FY13-14	FY14-15	FY15-16	FY16-17	FY17-18	FY18-19	FY19-20
Page 1987 Page	1 0	Raw Water Supply Dornled 11SBP Bineline (77" DW Binese Bineline)	-										
Section State Processing Personal	3 8	Bypass USBR Pumping Plant 2	f					- \$					
New Search Mark Channel New Search Mark	4	Existing USBR Pumping Plant Improvements ²							- \$				
Owner Satisful Manuel \$ 2,000,000 \$ 2,200,000 \$ 2,200,000 \$ 2,200,000 \$ 2,200,000 \$ 2,000,000<	2	Hydraulic Improvements											
Comparison of Control Programs	9	New Settled Water Channel	7										
Performance	7	60-in Filter Eff. TW Pipeline to Hinkle Res.	7										
Regular Floreculture, Modify Bassins S 8 8000 6 1 222000 8 2 22000	∞	Pre-Treatment											
Replace Studies Collection Modify Basins S. 24,000 \$ 22,000 Sexietal Ware Young Replace Studies (Collection Systems of Collection Systems of Collecti	6	Rapid Mix Process Improvements											
Replace Studies Calcitation System Statistical Statistical System Statistical Sta	10	Replace Flocculators, Modify Basins	7										
Secretary Water Joint Repair and Sault S. 25000 S	11	Replace Sludge Collection System	7,										
Filter Table Repairs Uggrade (18 settandors of 24 Teah) S 220,000 S 220,000 Filter Table Repairs Uggrade (18 settandors of 24 Teah) S 80,000 S 80,000 Filter Table Repairs Uggrade (18 settandors of 24 Teah) S 80,000 S 80,000 Filter Table Repairs Uggrade (18 settandors of 24 Teah) S 80,000 S 284,000 Filter Table Repairment Improvements S 284,000 S 286,000 Filter Table Repairment (10 control Bidg) S 100,000 S 286,000 Filter Table Repairment (10 control Bidg) S 100,000 S 280,000 Filter Table Repairment (10 control Bidg) S 100,000 S 280,000 Filter Energy Table Repairment (10 control Bidg) S 100,000 S 280,000 Filter Energy Table Repairment (10 control Bidg) S 100,000 S 280,000 Filter Energy Table Repairment (10 control Bidg) S 100,000 S 280,000 Filter Energy Table Repairment (10 control Bidg) S 100,000 S 280,000 S 280,000 Filter Energy Table Repairment (10 control Bidg) S 100,000 S 280,000 S 280,0	12	Settled Water Joint Repair and Caulk											
Filter Calcacy Pignale (18 settations of 24 Total) S = 200000 S = 600000 S = 6000000 S = 600000 S = 6000000 S = 600000 S = 6000000 S = 600000 S = 6000000 S = 600	13	Filters Eilear I ad Danaira											
Filter Callety Physics Improvements	‡ ‡	Filter Valve Actuators Unorade (18 actuators of 24 Total)	1	`									
Character February Character Chara	16	Filter Gallery Pining Improvements	1.										
Checination Mentering Equipment Improvements S 40,000 S 284,000 S 284,	17	Chemical Feed Systems	1										
Alum Tanks Replacement (or Secondary Constitution) \$ 284,000 \$ 284,000 \$ 100,000 \$ 100,000 \$ 100,000 Soles Institute of Polymer's System Improvements (in Control Bidg) \$ 100,000 \$ 2,800,	18	Chlorination Monitoring Equipment Improvements			3								
Polymer System Improvements (in Cantriol Bidgi)	19	Alum Tanks Replacement (w/ Secondary Containment)											
Price projects correctly planned S 2,890,000 S	20	Polymer System Improvements (in Control Bldg)											
Price projects complete, No projects currently planned S 2,890,000 \$ 2,890,000 \$ 2,890,000 \$ 2,890,000 \$ 2,800,000	21	Sol											
Total Craft Reservoir Tota	22	-			\$								
72-in CTBP Pipeline* S. 2890,000 S. 2890,000 S. 2890,000 S. 2890,000 S. 2890,000 S. 2890,000 S. 2800,000 S. 28	23	Ħ											
Hinkle Res. Groundwater Monitoring Wells S S S S S S S S S	24		2,										
Bifurcate Hinkle Res., Const. 2nd Inlet/Outlet * \$	25	ļ											
Transmission Pipeline Rehabilitation S 4,20,000 S 320,000 S 2,000,000 S 2,00	26	ļ	S										
FO-40 Transmission Pipeline Rehabilitation S 4,320,000 \$ 320,000 \$ 2,000,000	27	Ta											
Miscelloeeous CP terms	28		4		2,000,000)			
SCADA System Integration Improvements S 800,000 S 800,000 S 800,000 S 5,400,000 S 5,400,	59	Ž											
Solar Power (at Baldwin Site) - Design & Construction S. 5,400,000	30												
Hinkle Res Cover Testing/Repairs	31		5.										
In-Plant Pump Station Improvements	32												
Storage Building Old Shop) Replacement	33	In-Plant Pump Station Improvements											
WTP & Admin Bldgs Roof Repairs \$ 97,210 <th< td=""><td>34</td><td>Storage Building (Old Shop) Replacement</td><td>•</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>	34	Storage Building (Old Shop) Replacement	•										
Capital Improvement Program Totals S 150,000 S 1	32	WTP & Admin Bldgs Roof Repairs											
Truck-mounted Valve Actuator S 5,000 \$ 5,000	36	CTP Valve Actuator Repairs											
Wholesale Master Plan Update S 300,000 S 2,000,000	37	Truck-mounted Valve Actuator											
Unspecified Rehab/Upgrade Projects S 2000,000 \$ 2,000,000 \$ 5,000,00	38	Wholesale Master Plan Update											
1 S 29,801,210 S 14,056,210 S 2,150,000 S 752,000 S 7,043,000 S 1,500,000 S 500,000 S	39	Unspecified Rehab/Upgrade Projects	2,										
1 5 29,901,210 5 14,056,210 5 2,150,000 5 2,400,000 5 752,000 5 7,043,000 5 5,00,00													
		1				2,400,000							
		Notes:										Rec'd from K. I	ourkin on 8/4/10
 In its is a water supply reliability project which with wind the USBK, City of Roseville, and SAWD. The project scope, cost, and cost allocations are undefined at this point. This project includes the AFR 24" GB BPS On Site T-main. The S33 Liyo Occupate for this portion of the project will be paid by SIMD Retail. Project promitted for non-varional flowthinflar and redundancy. The scone, cost and implementation year of this project is currently unknow. Project will be commercious mith the cover replacement. 		1. All estimated costs are shown in 2010 dollars.	5	10 44011		Ē		:					
4 Project projections of projection of proje		 I his is a water supply reliability project which will be compled. This project includes the AFR 24" GR BPS Onsite T-main. The 	sted jointly with the he \$331 000 cost fo	USBK, City of 1	coseville, and SJA he project will be	VD. The project	scope, cost, and	cost allocations	are undefined at t	nis point.			
		4. Project required for operational flexibility and redundancy. The	he scope, cost and i	mplementation v	ear of this project	is currently unk	now. Project wil	he completed in	conjunction with	the cover replace	ment.		

Exhibit II-5 San Juan Water District Wholesale Financial Plan Summarv -- Operating Fund

			Wholesal	e Financial Pla	Wholesale Financial Plan Summary Operating Fund	perating Fund					
	FY 09-10 Estimate	FY 10-11 Budget	FY 11-12	FY 12-13	FY 13-14	FY 14-15	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20
CY R	CY Rate Increase>	2%	%9	2%	2%	%5	%9	2%	2%	2%	%5
WHOLESALE OPERATIONS											
Beginning Balance	3,405,320	4,070,096	3,755,000	2,996,000	2,598,000	2,332,000	2,105,000	1,910,000	2,571,000	3,431,000	4,309,000
Sources of Funds Wholesale Rate Revenue Sac Suburb WD	4,737,929	4,968,007	4,981,000	5,485,000	5,961,000	6,308,000	6,676,000	7,066,000	7,479,000	7,915,000	8,377,000
Water Sources - Pilot Project Rev. Other Water Sales	8,028	10,000	500,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Misc. Non-Oper. Revenue Interest Earnings Billing Change Cash Flow Loss	327,473 304,346	271,000 175,000	103,000 142,000 (368,000)	106,000	109,000	112,000 402,000	115,000 286,000	118,000 283,000	122,000 309,000	126,000 340,000	130,000 376,000
Total Sources of Funds	5,631,681	5,424,007	5,368,000	5,821,000	6,389,000	6,832,000	7,087,000	7,477,000	7,920,000	8,391,000	8,893,000
Uses of Funds	703 103	240	000 022	000	000	025 000	7	4 066 000	900	77	100
Source of Supply Water Forum	756,156	30,000	31,000	32,000	33,000	34,000	35,000	36,000	37,000	38,000	39,000
USBR Pump/WAPA Energy	72,373	80,000	86,000	93,000	102,000	109,000	116,000	123,000 7	130,000	138,000	146,000
Wtr. Sources - Pilot Project	07	2,000	450,000	2,000	2,000	2,000	2,000	200,'	2,000	7,000	2,000
Pumping & Telemetry Pumping Energy	107,868										
Water Treatment	1,173,431	1,225,272	1,262,000	1,300,000	1,339,000	1,379,000	1,420,000	1,463,000	1,507,000	1,552,000	1,599,000
Chemicals, Energy, Mat'ls	899,519	917,400	982,000	1,060,000	1,161,000	1,244,000	1,319,000	1,399,000	1,484,000	1,574,000	1,669,000
Solar Fright Cost Savings Trans. & Distribution	187,403	214,627	221,000	228,000	235,000	242,000	249,000	256,000	264,000	272,000	280,000
Customer Service	34,097	1 0	1 6	1 6	1 6	1 0		1 0			1 6
Conservation Fnoineering	233,341	281,295 184 125	290,000	299,000 196,000	308,000	317,000	327,000 214,000	337,000	347,000	357,000 234,000	368,000
Administrative & General	1,108,588	1,298,389	1,337,000	1,377,000	1,418,000	1,461,000	1,505,000	1,550,000	1,597,000	1,645,000	1,694,000
OPEB Expense (to Reserve)	140,500	184,000	191,000	199,000	207,000	215,000	224,000	233,000	242,000	252,000	262,000
Misc. Non-Oper. Expenses Transfer to Capital Fund	86,006	103,033	106,000	109,000	112,000 950,000	115,000	1,100,000	122,000 400,000	400,000	130,000	134,000
Total Uses of Funds	4,966,905	5,739,141	6,127,000	6,219,000	6,655,000	7,059,000	7,282,000	6,816,000	7,060,000	7,513,000	8,176,000
Ending Balance	4,070,096	3,755,000	2,996,000	2,598,000	2,332,000	2,105,000	1,910,000	2,571,000	3,431,000	4,309,000	5,026,000
Operating Reserve (20%)	993,000	1,048,000	1,125,000	1,084,000	1,141,000	1,192,000	1,236,000	1,283,000	1,332,000	1,383,000	1,435,000
Rate Stabilization Reserve	1,000,000	1,000,000	1,000,000	597,000	160,000	- 6	- 0	- 000	552,000	1,000,000	1,000,000
Employee Vac./Sick Leave Rsrv.	338,740	342,000	345,000 462,000	348,000	351,000	355,000	359,000 921,000	363,000	367,000	371,000	375,000
Uncommitted Fund Balance	1,481,378	1,007,000	64,000	- '	- '	(239,000)	(606,000)	(124,000)		240,000	762,000
OPEB Liability Reserve	372,000	558,000	755,000	965,000	1,191,000	1,436,000	1,703,000	1,987,000	2,289,000	2,610,000	2,950,000

Exhibit II-6 San Juan Water District Wholesale Financial Plan Summary -- Non-Operating (Debt Service) Fu

		wno	lesale rinancia	Wholesale Financial Plan Summary Non-Operating (Debt Service) Fund	ry non-Upera	ıtıng (Debt Ser	vice) rund				
	FY 09-10 Estimate	FY 10-11 Budget	FY 11-12	FY 12-13	FY 13-14	FY 14-15	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20
NON-OPERATING (DEBT SERVICE) FUND	UND										
Beginning Balance	4,726,734	4,726,734	4,726,734	4,726,734	4,726,734	4,726,734	4,726,734	4,726,734	4,726,734	4,726,734	4,726,734
Sources of Funds 2003 COP (1993 Refunding)											
San Juan WD - RSA		291,959	291,196	478,492	,						,
Fair Oaks WD		235,197	234,582	385,463							
Orangevale WC		104,244	103,972	170,845							
2003 COP (San Juan Project)				0		1		1	0	6	
San Juan WD - RSA		536,135	537,144	536,868	535,235	535,715	537,000	536,712	536,039	534,982	535,943
Citius neignis wo		243,203	150,007	450,040	150 176	450,013	150,001	243,409	150,101	450 404	150,117
Crangovale WC		60 9443	61 032	61 001	60.815	60.870	61,701	60,613	60,906	139,101	99,300
City of Folsom		117 161	11/1 376	11.4 21.7	113 969	114 072	114 345	114 284	114 141	113 916	114 120
2009 COP		- - - -	20.0.4	2,4	5,50	7,0,4	, , ,	1,504	<u>+</u> +	2,6	14,120
San Juan WD - RSA		987.036	986.807	986.577	1.213.222	1.209.661	1.207.551	1,207,924	1.209.360	1.210.078	1,209,360
Citrus Heights WD		367,781	367,695	367,610	452,060	450,734	449,947	450,086	450,621	450,889	450,621
Fair Oaks WD		227,413	227,360	227,307	279,526	278,706	278,219	278,305	278,636	278,801	278,636
Orangevale WC		101,531	101,507	101,483	124,797	124,431	124,213	124,252	124,400	124,473	124,400
City of Folsom		34,714	34,706	34,698	42,669	42,544	42,470	42,483	42,533	42,559	42,533
Total Sources of Funds		3,465,738	3,465,788	3,869,863	3,226,263	3,221,063	3,220,063	3,220,113	3,221,213	3,220,263	3,221,013
Uses of Funds Debt Service Payments 2003 COP (1993 Refunding) 2003 COP (San Juan Project) 2009 COP (Retail Project)		631,400 1,115,863 1,718,475	629,750 1,117,963 1,718,075	1,034,800 1,117,388 1,717,675	1,113,988 2,112,275	1,114,988 2,106,075	1,117,663 2,102,400	1,117,063 2,103,050	1,115,663 2,105,550	1,113,463 2,106,800	1,115,463 2,105,550
Total Uses of Funds		3,465,738	3,465,788	3,869,863	3,226,263	3,221,063	3,220,063	3,220,113	3,221,213	3,220,263	3,221,013
Ending Balance	4,726,734	4,726,734	4,726,734	4,726,734	4,726,734	4,726,734	4,726,734	4,726,734	4,726,734	4,726,734	4,726,734
2003 DS Reserve	1,696,800	1,696,800	1,696,800	1,696,800	1,696,800	1,696,800	1,696,800	1,696,800	1,696,800	1,696,800	1,696,800
2009 DS Reserve Surplus/(Deficit)	2,911,170 118,764	2,911,170 118,764	2,911,170 118,764	2,911,170 118,764	2,911,1 <i>7</i> 0 118,764	2,911,170 118,764	2,911,170 118,764	2,911,170 118,764	2,911,170 118,764	2,911,170 118,764	2,911,170 118,764
Est. DS Coverage (min=1.15)		1.18	1.16	1.31	1.46	1.52	1.53	1.46	1.52	1.59	1.66

Exhibit II-7 San Juan Water District Wholesale Financial Plan Summary -- Capital Fund

			Wnoles	wnolesale Financial Pian Summary Capital Fund	an Summary	Capital Fund					
	FY 09-10 Estimate	FY 10-11 Budget	FY 11-12	FY 12-13	FY 13-14	FY 14-15	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20
WHOLESALE CAPITAL FUND											
Beginning Balance		17,114,159	5,768,159	6,932,159	8,117,359	9,037,359	2,712,359	2,799,359	2,994,359	3,164,359	3,508,359
Sources of Funds											
Property Taxes (50% of 1% Incr.)	328,149	425,000	425,000	425,000	425,000	425,000	425,000	425,000	425,000	425,000	425,000
Translet from Operations Wholesale Connection Fees		3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
SCADA Reimb. (SJ-RSA)		100,000)))		0		
Roseville Project Reimb.		1,169,000									
24" GB BPS Pipe Reimb. (SJ-RSA)		193,000	000	000							
Fair Oaks 40 Cost Share Keimb. CSI Rebate (Solar Project)		320,000	392,000	390,000	388,000	386,000	384,000		,		,
Total Sources of Funds	I	2,710,000	3,400,000	3,781,200	1,766,000	1,914,000	1,912,000	828,000	828,000	1,028,000	1,428,000
Uses of Funds											
Raw Water Supply Projects		1 000 000						٠		٠	
Hydraulic Improvement Projects			٠		315 000	2 948 000		٠	٠		٠
Pre-Treatment Projects		2,000,1		٠	531,000	4 706 000	٠		٠	٠	•
Filtor Designate		340,000			000	1,1 00,000	1 825 000				
riliei riojecis		000,010					1,023,000				
Chemical Feed System Projects		324,000	104,000								
Solids Handling Facility Projects											
Hinkle Reservoir Projects		2,890,000	52,000								
Transmission Pipeline Projects		320,000	2,080,000	2,163,000	•						•
Miscellaneous Projects		6,852,000		433,000		585,000		633,000	658,000	684,000	712,000
Total Uses of Funds	_	14,056,000	2,236,000	2,596,000	846,000	8,239,000	1,825,000	633,000	658,000	684,000	712,000
Ending Balance	17,114,159	5,768,159	6,932,159	8,117,359	9,037,359	2,712,359	2,799,359	2,994,359	3,164,359	3,508,359	4,224,359
General CIP Reserve	5,898,498	3,452,159	4,543,159	5,642,359	6,462,359	23,359	(20,641)	39,359	70,359	271,359	840,359
Remain. COP Proceeds	8,935,429										
Connection Fee Reserve	25,103										
Hinkle Reservoir Reserve	2,255,129	2,316,000	2,389,000	2,475,000	2,575,000	2,689,000	2,820,000	2,955,000	3,094,000	3,237,000	3,384,000

- Modest increases to the O&M rate components (service charge and water usage charge) of 5 percent per year should be sufficient to meet estimated future costs, including capital program expenditures.
- With these annual increases reserve levels will reach minimum levels in FY 15-16 and then gradually rebound.
- Based on financial plan assumptions, the rate stabilization reserve may be partially used beginning in FY 12-13, fully used in FY 14-15, and then fully replenished to \$1 million by FY 18-19. From FY 14-15 through FY 16-17 the operating fund may be below the target minimum operating reserve by as much as \$600,000.
- While these potential future financial conditions may not be acceptable, there are several variables that could improve conditions between now and then, and higher water rates at this time appear unwarranted. Events that could improve the financial outlook over the next few years include:
 - o A higher than expected rebound in water deliveries to member agencies
 - o Water sales to SSWD
 - Deferral or lower costs of any of the planned capital improvement program
 - o Any growth in property tax revenues

At this point in time, it is recommended that the District increase the O&M water rate components an overall 5 percent per year. While additional increases may be necessary to meet capital program needs in about five years, there are too many variables that could change this need to suggest it now.

As with past practice, the District should monitor financial conditions and needs on an ongoing (annual) basis and update the financial plan model and future estimates at least every three to five years, or when conditions or plans changes sufficient to warrant an update. Actual future conditions, such as water deliveries, water sales revenue, operating and maintenance expenses, CIP project costs/timing, project financing, etc., may differ from the financial plan assumptions reflected herein. Material differences affecting the overall financial condition of the wholesale water system may warrant closer review and/or an earlier update. The need and magnitude of annual wholesale water rate increases may also be affected by differences between assumed and actual conditions.

Debt service charges paid by each member agency are unaffected by this rate recommendations. Debt service charges will be adjusted commensurate with debt repayment obligations.

The next section of this report provides details on changes to the wholesale water rates for 2011.

SECTION III. WHOLESALE WATER RATES

The proposed wholesale water rates were calculated generally using the rate methodology developed by the District in 1998 and updated several times since then. The wholesale water rates include fixed annual service charges (including charges specifically related to certain debt obligations) plus a water usage rate that applies to each acre-foot (AF) of actual water deliveries. The process for calculating water rates includes three basic steps.

- 1. Annual water rate revenue requirement determination. The revenue requirement is the amount of revenue to be generated from water rates to cover operating, debt service, and capital program needs with consideration of other revenues and reserve policies. The financial planning model serves to determine the annual water rate revenue requirement.
- 2. Cost of service analysis and allocation of costs to each member agency. The annual revenue requirement is allocated to each member agency through cost of service analysis and a cost allocation process. Costs are allocated to each agency based on (1) recent actual water deliveries, (2) peak demand characteristics, and (3) number of retail customers served. In a change from past practice, pumping costs previously allocated to San Juan RSA and the City of Folsom are now handled as retail costs and removed from the analysis herein.
- 3. Water rate design. The rate design process involves determining the fixed service charges and commodity rates that will generate the required revenues from each customer. The wholesale water rates include a separate service charge for debt service allocated to each member agency. In addition, for rate simplicity, a single uniform water usage rate is proposed for all member agencies, with any difference in the allocation of costs to agencies reflected in the service charge.

2011 WHOLESALE RATE CALCULATIONS

The annual water rate revenue requirement for 2011 was determined to be about \$4.80 million, exclusive of all debt service charges. This amount was determined from the financial plan model and reflects a blend of costs from both FY 10-11 and FY 11-12.

The cost of service analysis was performed on each of the District's broad cost classifications, including source of supply, water treatment, transmission, conservation, engineering, administrative and general, and capital program transfer. Non-rate revenues and changes in operating fund balance were also factors in determining the annual revenue requirement. **Exhibit III-1** illustrates how the cost of service analysis was performed. The small table at the top of Exhibit III-1 presents cost allocation metrics for each member agency, including estimated average water deliveries, peak water use, and number of retail customers. In June 2009, the District began obtaining data from new wholesale meters. Estimated water use for each agency relies more heavily on recent data than on delivery data prior to June 2009.

Exhibit III-1 San Juan Water District Wholesale Water Rate Cost Allocation Steps

Wholesale Cost Allocation -- Units of Service

	Est. Annual	Water Use	Peak Month	Water Use	2010 No. of
Wholesale Customers	Annual Total (AF)	Avg. Rate (mgd)	Peak Factor (%)	Peak Rate (mgd)	Customers (Accts.)
San Juan WD - RSA	13,439	12.00	191%	22.95	10,323
Citrus Heights WD	12,537	11.19	172%	19.26	19,541
Fair Oaks WD	10,644	9.50	188%	17.86	14,480
Orange Vale WC	4,293	3.83	186%	7.13	5,572
City of Folsom	1,459	1.30	159%	2.07	981
Total	42,372	37.83	183%	69.27	50,897

Wholesale Cost Allocation -- Units Costs of Service (2011)

	Total		Supply		Water Tr	eat	ment	Trans.	C	Sustomer
	Cost	(Variable)	((Variable)		(Fixed)	(Fixed)		(Fixed)
Units of Service			42,372		42,372		42,372	69.27		50,897
			AF		AF		AF	mgd		Accts.
Source of Supply										
Total	\$ 835,000	\$	835,000	\$	-	\$	-	\$ -	\$	-
Unit Cost		\$	19.71	\$	-	\$	-	\$ -	\$	-
Water Treatment										
Total	\$ 2,048,000	\$	-	\$	804,000	\$	1,244,000	\$ -	\$	-
Unit Cost		\$	-	\$	18.97	\$	29.36	\$ -	\$	-
Transmission										
Total	\$ 218,000	\$	-	\$	-	\$	-	\$ 218,000	\$	-
Unit Cost		\$	-	\$	-	\$	-	\$ 3,147	\$	-
Conservation										
Total	\$ 286,000	\$	143,000	\$	-	\$	-	\$ -	\$	143,000
Unit Cost		\$	3.37	\$	-	\$	-	\$ -	\$	2.81
Engineering										
Total	\$ 187,000	\$	-	\$	-	\$	187,000	\$ -	\$	-
Unit Cost		\$	-	\$	-	\$	4.41	\$ -	\$	-
Admin. & General										
Total	\$ 1,610,000	\$	441,000	\$	362,000	\$	645,000	\$ 98,000	\$	64,000
Unit Cost		\$	10.41	\$	8.54	\$	15.22	\$ 1,415	\$	1.26
Capital Replac. Contrib.										
Total	\$ 500,000	\$	-	\$	-	\$	500,000	\$ -	\$	-
Unit Cost		\$	-	\$	-	\$	11.80	\$ -	\$	-
Misc. Revenues/Rsrvs.										
Total	\$ (882,000)	\$	(241,000)	\$	(198,000)	\$	(353,000)	\$ (54,000)	\$	(35,000
Unit Cost		\$	(5.69)	\$	(4.67)	\$	(8.33)	\$ (780)	\$	(0.69)
Total Rev. Rqmt. and	\$ 4,802,000	\$	27.80	\$	22.85	\$	52.46	\$ 3,782	\$	3.38
Unit Costs of Service			per AF		per AF		per AF	per mgd		per Acct.
		\$	1,178,000	\$	968,000	\$	2,223,000	\$ 262,000	\$	172,000

Exhibit III-2 San Juan Water District Wholesale Water Rate Cost Allocation Steps

Wholesale Cost Allocation -- Allocation to Wholesale Customers (2011)

	Supply		Water T	reat	ment	Trans.	C	ustomer		Cost of Se	rvice
Wholesale Customers	(Variable)	(Variable)		(Fixed)	(Fixed)		(Fixed)		(\$)	(%)
Unit Cost of Service>	\$ 27.80	\$	22.85	\$	52.46	\$ 3,782	\$	3.38			
	per AF		per AF		per AF	per mgd		per Acct.			
San Juan WD - RSA											
Units of Service	13,439		13,439		13,439	22.95		10,323			
Alloc. of Costs	\$ 373,620	\$	307,015	\$	705,057	\$ 86,817	\$	34,885	\$	1,507,394	31.4%
Citrus Heights WD											
Units of Service	12,537		12,537		12,537	19.26		19,541			
Alloc. of Costs	\$ 348,543	\$	286,409	\$	657,735	\$ 72,851	\$	66,036	\$	1,431,574	29.8%
Fair Oaks WD											
Units of Service	10,644		10,644		10,644	17.86		14,480			
Alloc. of Costs	\$ 295,925	\$	243,171	\$	558,439	\$ 67,561	\$	48,933	\$	1,214,029	25.3%
Orange Vale WC											
Units of Service	4,293		4,293		4,293	7.13		5,572			
Alloc. of Costs	\$ 119,360	\$	98,082	\$	225,243	\$ 26,959	\$	18,830	\$	488,473	10.2%
City of Folsom											
Units of Service	1,459		1,459		1,459	2.07		981			
Alloc. of Costs	\$ 40,553	\$	33,323	\$	76,527	\$ 7,812	\$	3,315	\$	161,530	3.4%
Total Costs	\$ 1,178,000	\$	968,000	\$:	2,223,000	\$ 262,000	\$	172,000	\$ 4	4,803,000	100.0%

The lower portion of Exhibit III-1 shows how the revenue requirement is allocated to various cost categories to arrive at unit costs for supply, treatment, transmission, and customer costs.

Exhibit III-2 shows how unit costs are then applied to the units of service (metrics) for each agency to arrive a total allocation of costs to each member agency. The far right columns in Exhibit III-2 summarize the total allocation of the revenue requirement to each member agency.

Proposed wholesale water rates for 2011 are summarized in **Exhibit III-3**. The O&M rate components include fixed service charges and a uniform water usage rate for each member agency. The uniform rate is simply a 5 percent increase from the current wholesale water rate. The annual service charge is derived by subtracting the estimated total water usage revenue for each agency (based on the uniform rate and estimated water usage for 2011) from the allocated total revenue requirement for each agency.

Details on the determination of debt service charges were presented in Exhibits II-2 and II-3, in Section II of this report.

3,322,147 2,045,362 1,835,685 754,511 311,082 8,268,788 Totals Annual \$ \$ \$ \$ \$ \$ 986,807 367,695 227,360 101,507 34,706 1,718,075 2009 COPs (Whls. & Retail Projects) **Annual Debt Service Payments** ↔ 537,144 245,667 159,744 61,032 114,376 1,117,963 2003 COPs (San Juan Project) ↔ 99999 2003 COPs (1993 COP Refunding) 234,582 103,972 291,196 629,750 Recommended Wholesale Water Rates for 2011 \$ \$ \$ \$ \$ \$ S San Juan Water District 311,080 367,450 208,340 80,300 35,160 1,002,330 Annual Service Charge (\$/yr) Exhibit III-3 Wholesale Water Rates ↔ \$ \$ \$ \$ \$ \$ Estimated Water Usage 1,195,920 1,064,550 1,005,660 407,700 126,840 3,800,670 Charges € ↔ Commodity 90.60 90.60 90.60 90.60 Uniform Rate (\$/AF) \$ \$ \$ \$ \$ \$ 13,200 11,750 11,100 4,500 1,400 Est. 2011 Water Deliveries (AF) 41,950 1,507,000 1,432,000 1,214,000 488,000 162,000 Revenue Requirement Allocation of 4,803,000 Annual San Juan Family Agencies ₩ San Juan WD - RSA Citrus Heights WD Fair Oaks WD Orange Vale WC City of Folsom

MODIFIED BILLING PRACTICES

At present, the District bills wholesale member agencies for water service on a quarterly basis, in advance of service. The fixed annual service charge and debt service charges are divided into four equal quarterly payments. The quarterly water usage charge is based on the estimated water deliveries for the quarter, multiplied by the applicable water usage rate. After the end of each quarter, the District reconciles actual water deliveries against the estimate used for billing purposes, and then provides a debit or credit against future invoices.

Beginning in 2011, the District plans to change the billing practice for the water usage charge such that water usage is billed in arrears, using actual water deliveries. This will avoid the need for reconciliation. Fixed service charges and debt service charges will continue to be charged in advance of each quarter.

During the transition from billing in advance to billing in arrears for water usage there will be a timing delay in water usage revenue. This effective cash loss (though not an accounting loss) has been estimated to be about \$368,000, and has been reflected in the financial plan analyses.