



North of River Sanitary District No. 1

Sewer Service Charge Study



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North of River Sanitary District No. 1

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SECTION I

PURPOSE OF SEWER RATE STUDY

The purpose of this study is to recommend adjustments to the current sewer service charge in order to raise the funds needed to meet anticipated operating and maintenance (O&M) expenses for:

- Sewers;
- Sewage treatment;
- Treated effluent disposal;
- Repairs/replacement of existing capital improvements; and,
- Administration.

Capital improvements that will be needed to serve future sewer connections are not included in the sewer service charge. Costs for improvements to meet the needs of future sewer connections are covered by sewer capacity fees levied on new connections.

SECTION II

HISTORIC OPERATING EXPENSES AND REVENUES

This section summarizes operating expenses and revenues for Fiscal Years 2007/08 through 2011/12. The figures were taken from audits for those years. The audit results are summarized in three tables. For details, the reader is referred to the District's audits.

EXPENSES

The District's operating expenses can be divided into the following categories:

1. District administration;
2. Operation and maintenance of the sewerage system (conveyance, wastewater treatment plant [WWTP], and effluent disposal facilities);
3. Repairs to sewerage system facilities; and,
4. Debt service.

The District provided copies of the annual audits for Fiscal Years (FY) 2006/07 through 2011/12. Fiscal years begin July 1 of one year and end June 30 of the next year. **Table 1** shows summaries of the O&M expenses.

While "depreciation" is shown as an expense in **Table 1**, the District has not funded it. There is no "depreciation reserve fund" presently.

REVENUES

Table 2 summarizes the District's annual revenues for FY 2006/07 through FY 2011/12.

SURPLUS/(DEFICIT)

Table 3 shows the surpluses/deficits for the FY shown in **Tables 1** and **2**.

Table 1
Historic Operating Expense Summary

	Fiscal Year					
	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
General Administrative and	587,331	636,626	585,950	636,491	606,702	528,726
Sewage Collection	501,789	487,119	545,379	873,125	873,125	580,082
Sewage Treatment and Disposal	745,816	778,567	873,509	1,203,219	1,203,219	1,169,399
Interest Expense	688,678	764,401	541,334	587,586	573,155	542,110
Debt Service						
Outfall Sewer Bonds ¹	972,300	831,700	869,650	891,719	910,925	920,950
WWTP Loan ²	837,999	837,999	837,999	837,999	837,999	837,999
TOTAL EXPENSES	3,361,613	4,339,412	4,253,463	4,431,729	4,964,125	4,588,266
Depreciation	923,068	941,116	987,304	1,003,576	1,057,330	1,087,372
TOTAL EXPENSES	4,284,681	5,280,528	5,240,767	5,489,059	6,021,455	5,675,638

Notes: 1) The Outfall Sewer debt will be paid off in 2023.
 2) The WWTP loan will be paid off in 2019.

Table 2
Historic Operating Revenues

	Fiscal Year					
	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Sewer Service Charges	2,436,670	3,493,819	4,674,247	4,681,964	4,643,770	4,311,045
Interest Income	684,202	764,401	541,334	286,206	149,786	165,434
Property Taxes	194,072	219,541	214,764	163,823	174,804	167,755
Shafter Cost Sharing ¹	631,932	695,448	658,713	653,298	690,035	655,924
Other	323,098	151,350	554	30,838	21,336	39,254
TOTAL REVENUES	4,269,974	5,720,242	6,089,612	5,877,223	5,679,731	5,339,412

Notes: 1) *Shafter Cost Sharing* revenues cover Shafter's share of the WWTP operating costs, including a share of the WWTP loan (see **Table 1**) and purchases of additional capacity in the existing Outfall Sewer and WWTP.

Table 3
SURPLUS/(DEFICIT)

	Fiscal Year					
	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
EXCLUDING DEPRECIATION						
Revenues from Table 2	4,269,974	5,720,242	6,089,612	5,877,223	5,679,731	5,339,412
Expenses from Table 1	3,361,613	4,339,412	4,253,463	4,431,729	4,964,125	4,103,204
Surplus/Deficit)	908,361	1,380,830	1,836,149	1,445,494	715,606	1,236,208
INCLUDING DEPRECIATION						
Depreciation from Table 1	923,068	941,116	987,304	1,003,576	1,057,330	1,087,372
Surplus / (Deficit)	(14,707)	439,817	848,845	441,918	(341,724)	791,712

SECTION III

DEBT SERVICE

The District currently has two outstanding bond issues:

- State Revolving Fund Loan (WWTP loan); and,
- 2013 Wastewater Revenue Refunding Bonds (Outfall Sewer).

The State Revolving Fund loan (SRF) was used to fund construction of the WWTP. The loan was repayable over a 20 year period. The first payment was made in August 2000 (FY 2000/01). The final, 20th payment will be made in 2019/20.

Table 4 shows the repayment schedule for the SRF loan.

The Outfall Sewer was constructed in 1991-92. The remaining principal amount of the Outfall Sewer bonds was refinanced in 2003 and recently refinanced in February 2013 to take advantage of a lower interest rate. **Table 5** shows the repayment schedule for the 2013 Wastewater Revenue Refunding Bonds. The final bond payment will be made in 2023.

TABLE 4
SRF PAYMENT SCHEDULE

FISCAL YEAR ENDING	REMAINING PRINCIPAL	INTEREST PAYMENT	PRINCIPAL PAYMENT	ANNUAL PAYMENT
6/30/2012	5,983,030			
		155,559	682,440	837,999
6/30/2013	5,300,590			
		137,815	700,184	837,999
6/30/2014	4,600,406			
		119,611	718,388	837,999
6/30/2015	3,882,018			
		100,932	737,067	837,999
6/30/2016	3,144,951			
		81,769	756,230	837,999
6/30/2017	2,388,721			
		62,107	775,892	837,999
6/30/2018	1,612,829			
		41,934	796,065	837,999
6/30/2019	816,763			
		21,236	816,763	837,999

TABLE 5
OUTFALL SEWER BONDS REPAYMENT SCHEDULE

	INTEREST PAYMENT	PRINCIPAL PAYMENT	TOTAL PAYMENT
6/30/2012			
	555,769	715,000	770,769
6/30/2013			
	219,150	655,000	874,150
6/30/2014			
	206,050	670,000	876,050
6/30/2015			
	192,650	680,000	872,650
6/30/2016			
	172,250	705,000	877,250
6/30/2017			
	158,150	715,000	873,150
6/30/2018			
	143,850	735,000	878,850
6/30/2019			
	121,800	760,000	881,800
6/30/2020			
	99,000	795,000	894,000
6/30/2021			
	67,200	825,000	892,200
6/30/2022			
	34,200	855,000	889,200
6/30/2023			

SECTION IV

FUNDED RESERVES

NORSO maintains four reserve accounts which are identified in the 2011/12 audit by the following names:

1. Reserve for capital outlay;
2. Reserve for capital improvement;
3. Reserve for operations and maintenance; and
4. Reserve for rate stabilization.

RESERVE FOR CAPITAL OUTLAY

Sewer capacity fees (connection fees) from new connections to the sewerage system are deposited into this account. Money in this reserve account is restricted to funding new sewers, wastewater treatment plant upgrades or replacements, and effluent disposal improvements to enable the District to serve additional customers.

The District borrowed \$8.9M from the Reserve to pay operating expenses for which no other funds were available for FY 2000/01 through FY 2006/07. Sewer service rates were increased in the first half of 2007. Since then, no more funds were borrowed from the Reserve for Capital Outlay to pay O&M costs.

The District deposits their funds with the Kern County Treasurer. Based on actual interest earning rates on deposits with the County Treasurer since 2001/02, the \$8.9M borrowed would have increased to about \$11.5M currently.

The District intends to repay the \$11.5M over a 20 year period at an interest rate of 3% per year. The County earned an average of about 3% per year on funds invested with them over the last 12 years.

RESERVE FOR CAPITAL IMPROVEMENTS

The Reserve for Capital Improvements was established to provide a \$4M reserve fund for construction of sewerage projects needed to upgrade or replace existing facilities. Deposits into this fund are made after the balance falls below \$4M.

Table 6 shows a list of proposed capital improvements to be constructed beginning in FY 2013/14. The total cost of the improvements is estimated to be \$1,235,000.

**Table 6
Five Year Capital Improvement Program**

Project	2013/14	2014/15	2015/16	2016/17	2017/18
Replace Lift Station #1 Force Main	\$500,000				
Pretreatment Program	\$25,000				
Line Lift Station #3 Wetwell	\$20,000				
CCTV Pipe Repair	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000
Outfall Sewer Manhole Repair	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000
Shop/Yard Building		\$200,000			
Line Lift Station #2 Wetwell		\$20,000			
Line Lift Station #4 Panel			\$20,000		
WWTP GIS			\$200,000		
	\$595,000	\$270,000	\$270,000	\$50,000	\$50,000

RESERVE FOR OPERATIONS AND MAINTENANCE

The Reserve for Operation and Maintenance is similar to the Reserve for Capital Improvements except that this fund is used for unexpected, extraordinary expenses that were not included in the annual budget. Deposits to this fund are made after the balance falls below \$1M.

RESERVE FOR RATE STABILIZATION

The District receives property tax revenue. Some property owners fail to make their property tax payments in a timely manner. The Reserve for Rate Stabilization was established to provide funds to make up for unpaid property taxes. Unpaid taxes are collected eventually and the fund is reimbursed to maintain the \$75,000 balance.

RESERVE FUND SUMMARY

Table 7 summarizes the District's reserve funds and their balances as of February, 2013.

**TABLE 7
RESERVE FUND SUMMARY**

RESERVE	BALANCE	PURPOSE
Capital Outlay	\$13,830,681	Repository for sewer capacity fee revenue. Restricted to funding improvements for future sewer connections.
Capital Improvement	\$4,000,000	Reserved for funding capital improvements to existing sewer facilities. Amount set by Board of Directors and is replenished as needed.
O&M	\$1,000,000	Reserved for meeting unexpected (unbudgeted) O&M costs. Amount set by Board of Directors and is replenished as needed.
Rate Stabilization	\$75,000	Replace delinquent property taxes until payment is made. Amount set by Board of Directors and is replenished as needed.
	\$18,905,681	

SECTION V

PROPOSED SEWER SERVICE CHARGES

Table 8 shows how the proposed service charges for the FY 2013/14 through 2017/18 were calculated. The table is divided into three sections:

1. Summary;
2. Revenues; and,
3. Expenses.

The top of the table includes a list of assumptions that were used to calculate the proposed sewer service charges. Most of the assumptions pertain to annual increases in expenses and revenues. The following are comments on several of the assumptions.

SUMMARY

Annual Surplus/(Deficit)—The figures shown in **Table 8** in this line item are the difference between **Total Revenues** and **Total Expenses**.

A “balanced budget” would show “0” in this line. However, deficits (in parentheses) are shown for the three FY 2013/14, 2014/15 and 2015/16. Surpluses are shown for the last two FY. Money will be borrowed from the Reserve for Capital Improvements and repaid from revenues in later years. In this case, the borrowed funds will have been repaid by the end of 2017/18.

Equivalent SFRE—This line shows the number of SFRE (Single Family Residential Equivalents) which are provided sewer service by the District. The District’s sewer service charge is collected with property taxes by Kern County. The current tax roll shows 17,060 SFRE paying a sewer service charge to the District.

As shown in the table, it is expected that the number of SFRE receiving sewer service will increase by an (average) of 2% per year.

Calculated Sewer Service Charge (\$/SFRE)—As shown in the table, a 30.5% increase is proposed for FY 2013/14 from \$218.82 to \$285.60. For the remaining four FY covered by this report, a 2% per year increase is shown. The calculated Sewer Service Charge is the annual charge for a single family home.

EXPENSES

Capital Improvements Retained Interest—It is a policy of the District that this fund normally contain \$4,000,000 to be used as necessary for repair and/or replacement of existing capital improvements. If funds are withdrawn from the reserve, they are repaid.

The reserve fund is invested with the Kern County Treasurer. Over the last 12 years, funds invested with the Treasurer earned an average of 3% per year. It is now the intent to retain interest earnings on the reserve fund in the fund so that the fund will increase.

Annual Depreciation Expense Funded—As noted earlier, the District has not historically funded depreciation. A depreciation cost is included in the annual audits but no “depreciation reserve fund” has been created and deposits made into it. The **Calculated Depreciation Expense** figures are based on the yearly audits. From the last 12 years of audits, depreciation expense has increased by about 3.3% per year. As shown in the assumptions at the top of **Table 8**, this figure was used to project calculated depreciation in future years.

Funded Depreciation Expense—This line shows the amount of the calculated depreciation that is proposed to fund. As noted in the assumptions at the top of the table, it is proposed to fund 100% of the calculated depreciation.

The District proposes to fund depreciation. The depreciation fund will be used to offset future expenses for replacing major capital improvements such as the wastewater treatment plant (WWTP), for example. The existing WWTP is about 12 years old and will eventually need major repairs or replacement. The cost to replace the plant in today’s dollars is on the order of \$75M.

The District intends to fund 100% of the annual depreciation expense shown in each FY audit.

Repay Capital Outlay Reserve—As indicated in the assumptions at the top of the table, \$38/SFRE is needed to repay the Capital Outlay Reserve. This is more than half of the proposed first year increase.

The second major reason for the increase is the need to fund the depreciation fund to pay for replacement of major capital facilities such as the WWTP and sewers. The approximate cost to do this is \$67 in FY 2013/14.

The total increase necessary to repay the Capital Outlay Reserve and fund depreciation is \$105/SFRE which is substantially more than the \$67/SFRE increase proposed for the first year (2013/14).

Capital Improvements Projects (CIP)—**Table 6** shows a list of capital improvement projects proposed for the next five years. The projects will be paid for by borrowing from the Reserve for Capital Improvements as noted above.

PROPOSED SEWER SERVICE CHARGES

As shown on **Table 8**, it is proposed to increase the present annual sewer service charge from \$218.82/SFRE/Year to \$285.60 in FY 2013/14. For the next four years, an increase of 2% per year is shown.

It is recommended that the rates shown in the table be adopted with the provision that the rates can be adjusted annually based on the Consumer Price Index (Los Angeles-Riverside-Orange County) but not less than 2% shown in the table and not to exceed 5% per year.

**TABLE 8
NORTH OF RIVER SANITARY DISTRICT NO. 1
SEWER SERVICE CHARGE STUDY**

ANNUAL SFRE INCREASE (NEW CONNECTIONS)	2.0%		
ANNUAL G&A INCREASE	2.0%	ANNUAL DEPRECIATION EXPENSE INCREASE	3.3%
ANNUAL SEWAGE COLLECTION INCREASE	2.0%	ANNUAL DEPRECIATION EXPENSE FUNDED	100.0%
ANNUAL SEWAGE TREATMENT INCREASE	2.0%	ANNUAL OTHER(REVENUE) INCREASE	2.0%
ANNUAL PROPERTY TAX INCREASE	2.0%	REPAY CAPITAL OUTLAY RESERVE	\$38 /SFRE/YEAR
ANNUAL SHAFTER COST SHARING INCREASE	2.0%		
RESERVE FOR CAPITAL IMPROVEMENTS RETAINED INTEREST	3.0%		

SUMMARY	FISCAL YEARS						
	2011/12 ²	2012/13 ³	2013/14	2014/15	2015/16	2016/17	2017/18
TOTAL REVENUES	5,339,412	4,778,695	6,045,674	6,264,921	6,492,659	6,729,224	6,974,965
TOTAL EXPENSES	4,103,204	3,941,719	6,628,327	6,407,935	6,509,831	6,452,384	6,508,965
ANNUAL SURPLUS/(DEFICIT)	1,236,208	836,976	(582,653)	(143,014)	(17,172)	276,840	466,000
RESERVE FOR CAPITAL IMPROVEMENTS	0	0	582,653	143,014	17,172	(276,840)	(466,000)
TOTAL SURPLUS/(DEFICIT)	1,236,208	836,976	0	0	0	0	0
EQUIVALENT SFRE	16,719	17,060	17,401	17,749	18,104	18,466	18,836
CALCULATED SEWER SERVICE CHARGE (\$/SFRE)	218.82	218.82	286.33	292.05	297.90	303.85	309.93
ANNUAL % CHANGE	0.00%	0.00%	30.85%	2.00%	2.00%	2.00%	2.00%

REVENUES	FISCAL YEARS						
	2011/12 ²	2012/13 ³	2013/14	2014/15	2015/16	2016/17	2017/18
TOTAL SERVICE CHARGE REVENUE	4,311,045	3,733,069	4,982,445	5,183,736	5,393,158	5,611,042	5,837,728
INTEREST INCOME	165,434	165,434	165,434	165,434	165,434	165,434	165,434
PROPERTY TAXES	167,755	171,110	174,532	178,023	181,583	185,215	188,919
SHAFTER COST SHARING	655,924	669,042	682,423	696,072	709,993	724,193	738,677
OTHER	39,254	40,039	40,840	41,657	42,490	43,340	44,206
TOTAL REVENUES	5,339,412	4,778,695	6,045,674	6,264,921	6,492,659	6,729,224	6,974,965

EXPENSES	FISCAL YEARS						
	2011/12 ²	2012/13 ³	2013/14	2014/15	2015/16	2016/17	2017/18
GENERAL AND ADMINISTRATION	528,726	539,301	550,087	561,088	572,310	583,756	595,431
SEWAGE COLLECTION	589,082	600,864	612,881	625,139	637,641	650,394	663,402
SEWAGE TREATMENT AND DISPOSAL	1,169,399	1,192,787	1,216,643	1,240,976	1,265,795	1,291,111	1,316,933
STATE LOAN DEBT SERVICE (WWTP)	837,999	837,999	837,999	837,999	837,999	837,999	837,999
2003 REFUNDING BOND DEBT SERVICE (OUTFALL SEWER)	977,998	770,769	874,150	876,050	872,650	877,250	873,150
REPAY CAPITAL IMPROVEMENT RESERVE	0	0	661,246	674,471	687,960	701,719	715,754
CAPITAL IMPROVEMENTS RESERVE RETAINED INTEREST			120,000	123,600	127,308	131,127	135,061
CALCULATED DEPRECIATION EXPENSE	1,087,372	1,123,255	1,160,323	1,198,613	1,238,168	1,279,027	1,321,235
FUNDED DEPRECIATION EXPENSE	0	0	1,160,323	1,198,613	1,238,168	1,279,027	1,321,235
CAPITAL IMPROVEMENT PROJECTS (CIP)¹							
REPLACE LIFT STATION #1 FORCE MAIN			500,000				
PRETREATMENT PROGRAM			25,000				
LINE LIFT STATION #3 WETWELL			20,000				
CCTV PIPE REPAIR			25,000	25,000	25,000	25,000	25,000
OUTFALL SEWER MANHOLE REPAIR			25,000	25,000	25,000	25,000	25,000
SHOP/YARD BUILDING				200,000			
LINE LIFT STATION #2 WETWELL				20,000			
LINE LIFT STATION #4 WETWELL					20,000		
WWTP GIS					200,000		
LIFT STATION #4 PANEL						50,000	
TOTAL CIP¹			595,000	270,000	270,000	100,000	50,000
TOTAL EXPENSES	4,103,204	3,941,719	6,628,327	6,407,935	6,509,831	6,452,384	6,508,965

¹ Capital Improvement Projects will be funded using existing reserve funds which will be repaid as funds before available.

² Data obtained from 2011/12 audit

³ Data obtained from 2012/13 District Budget