



THE CITY OF SAN DIEGO
REPORT TO THE CITY COUNCIL

DATE ISSUED: January 3, 2007 REPORT NO: 07-006

ATTENTION: Council President and Members of the City Council, City Council Meeting of January 8, 2007

SUBJECT: Proposition 218 Noticing of Proposed Sewer Rate Adjustments

REFERENCE:

REQUESTED ACTION:

- Council authorization to notice, pursuant to Proposition 218 to include the following:
 - Proposed sewer rate adjustments, increasing sewer system revenues by 8.75% in Fiscal Years 2007 and 2008 and 7% in Fiscal Years 2009 and 2010
 - Shames' Lawsuit settlement impact to Sewer Service Charges of 3.05% in Fiscal Years 2007 and 2008, 0.6% in Fiscal Year 2009, and 0.5% in Fiscal Year 2010, assuming the above rate increases are also implemented
 - Raise Single Family Residential (SFR) billing cap from 14 Hundred Cubic Feet (HCF) to 20 HCF
 - Reduce return to sewer ("return") factor for SFR water usage from 100% to 95%
 - New SFR customer rate increase from \$35.88 to \$38.32; and
- Set the public hearing date to consider proposed rate adjustments at the City of San Diego Council Meeting of February 26, 2007; and
- Receive the Wastewater Cost of Service Rate Study as the basis for establishing the rate structure.

STAFF RECOMMENDATION:

- Authorize the Mayor or his designee to initiate Proposition 218 noticing for the sewer rate adjustments by 8.75% on May 1, 2007 and May 1, 2008 (Fiscal Years 2007 and 2008), 7.00% on May 1, 2009 and May 1, 2010 (Fiscal Years 2009 and 2010) to ensure continued compliance with federal and state mandates and allow MWWD to enter into a Final Consent Decree with the United States Environmental Protection Agency (EPA) by June 30, 2007.
- Set the public hearing date to consider proposed wastewater rate adjustments at City of San Diego Council Meeting of February 26, 2007; and
- Receive the Wastewater Cost of Service Rate Study .

RAMIFICATIONS OF NO RATE INCREASES:

The proposed rate increases are on a critical timeline that is driven by litigation over past sewer spills in the consolidated cases of *United States v. City of San Diego* (Case No. 03-CV-1349K) and *Baykeeper v. City of San Diego* (Case No. 01-CV-0550B). The City is currently operating under a Partial Consent Decree entered in these cases, which expires on June 30, 2007. If the City has not obtained the funding necessary to approve and lodge a Final Consent Decree with the Court by June 30, 2007, it is likely the stay of litigation will be lifted and the cases will proceed to trial. This would result in rate payer-generated revenues being applied to litigation costs in addition to court-mandated improvements to the infrastructure. In addition, MWWD will be unable to access public or private financing, resulting in significant delays or suspension of infrastructure projects. Delays in these critical infrastructure projects will put the system at risk of collection and treatment system failures, increased sewage spills, violation of regulatory permits, and potential fines or other enforcement actions from regulatory agencies.

In order to approve and lodge a Final Consent Decree by June 30, 2007 and avoid the potential problems described above, the following timeline is imperative:

- January 8, 2007 - City Council hearing to set the public hearing as required by Proposition 218
- January 11, 2007 - Proposition 218 notice must be mailed to meet the 45 day noticing requirement
- February 26, 2007 - City Council public hearing to consider proposed rate increases (45 days after mailing the Proposition 218 notices) and introduction of ordinance authorizing a bond issuance and financing documents. The bond financing is anticipated to be a private financing.
- April 2007 - Closing of the bonds, and bond funds available for the Wastewater System and City Council consideration of a Final Consent Decree
- May 1, 2007 - rate increase effective to support the bond issuance and signing of the Final Consent Decree
- June 30, 2007 - deadline to lodge Final Consent Decree

This timeline and each of its dates for specific action is critical to ensure that MWWD complies with the EPA mandates. The Court has allowed MWWD to postpone the signing of the Final Consent Decree due to the City's financial crisis. However, the Court has firmly indicated that it will not allow further postponement of signing the Final Consent Decree.

The Raftelis Financial Consultants, Inc. Cost of Service Study's (COSS) recommendations are consistent with and are reflected in the wastewater basis for the sewer rate base fee and HCF fees being proposed. The City Council's ability to deviate from these rates is limited: the rate adjustments proposed by this report can only be changed if the alterations are consistent with the COSS. Changes that are inconsistent with the COSS could violate the requirement of Proposition 218 and State guidelines that sewer fees not exceed the proportionate cost of providing the service to each parcel. Therefore, any proposed changes should be examined carefully.

SUMMARY:

Background

Under the Final Consent Decree, the City is required to replace or rehabilitate pipelines and trunk sewers, upgrade various pump stations, and maintain the Operations & Maintenance (O&M) system at current levels. The Capital Improvement Program (CIP) is intended to address these issues as well as ensure sufficient O&M activities. In order to support this CIP, additional funds will be required through a

combination of bonds, grants, state revolving fund loans and cash. This investment in infrastructure will require a series of rate increases beginning May 1, 2007. Pursuant to Proposition 218, and prior to Council's formal consideration of rate increases, the City must provide property owners 45 days advance notice when any rate increases will be considered. This action authorizes this Notice to take place.

Proposition 218

On November 5, 1996, the voters of the State of California approved Proposition 218, the "Right to Vote on Taxes Act." Proposition 218, effective July 1, 1997, added Articles XIIC and XIID to the State Constitution, which contain a number of provisions affecting the ability of local governments to levy and collect both existing and future taxes, assessments, fees and charges. Article XIID, section 6(a)(1) imposes noticing procedures for imposing a new or increasing an existing property-related fee or charge. This initiative changed the way the public is notified of proposed fee increases. Specifically, it requires that notices be mailed to all property owners of record at least 45 days in advance of the date on which a proposed property related fee increase may be adopted.

Therefore, it is the intent of MWWD to mail notices on or before January 11, 2007, to property owners of record and City of San Diego sewer bill customers, advising them that the City Council of the City of San Diego will hold a public hearing on February 26, 2007 to consider adoption of the proposed revisions to existing sewer fees and charges. If adopted, the revisions would become effective on May 1, 2007 and annually thereafter through May 1, 2010.

History

In June, 1990, City Council approved a 6% increase in sewer service charges for five consecutive years, Fiscal Years 1991 through 1995. At that time the City Council also approved a 16% increase in sewer capacity charges. In January, 1999, Council again approved increasing all sewer service charges by 5% for three consecutive years, Fiscal Years 1999 through 2001. The emphasis of these increases was on the maintenance, repair, upgrade and expansion of the Metropolitan System in order to ensure compliance with the Ocean Pollution Reduction Act (OPRA) and the Stipulated Order in *United States v. City of San Diego* (Case No. 88-1101-B). The Stipulated Order required specified upgrades of the sewer collection system, including the replacement of 60 miles of concrete mains by June 30, 2003, a comprehensive pump station and force main audit, an upgraded information system, additional grease control, and incorporation of the capital improvement projects listed in the Interim Order.

Major accomplishments during this timeframe include the completion of the North City Water Reclamation Plant, South Bay Water Reclamation Plant, Metropolitan Biosolids Center, South Bay Ocean Outfall, Wastewater Operations Management Network, and major upgrades to the interceptor system and the Point Loma Wastewater Treatment Plant. As MWWD approached the completion of the major upgrades to the Metropolitan System, the emphasis shifted to the Municipal System, which consists of nearly 3,000 miles of pipeline and 80 pump stations.

In October, 2001, City Council approved increasing all sewer service charges by 7.5% for four consecutive years, Fiscal Years 2002 through 2005, to ensure continued compliance with the requirements of the Clean Water Act, OPRA, the State Ocean Plan, the National Pollutant Discharge Elimination System Permit, and the Stipulated Order (City Manager's Report No. 01-209). A portion of these increases was required to fund an Administrative Order from the EPA to reduce sewer spills. The following are the rate increases that were considered in October, 2001 of which the first four where approved and implemented:

FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09	FY10
7.5%	7.5%	7.5%	7.5%	6.5%	5.0%	5.0%	5.0%	5.0%

The proposed program included increasing the rehabilitation and replacement of the deteriorated pipelines from the current 15 to 20 miles to 60 miles per year. Subsequently an extensive closed circuit televising condition assessment of over one third of the pipeline system led to the recommendation that the pipeline rehabilitation and replacement program only be increased to 45 miles per year. This assessment determined that certain areas of the pipeline system were in satisfactory condition, resulting in a revised life expectancy that exceeded preliminary estimates.

Additionally, as the program was implemented, it was determined that only half of the nearly 3,000 mile pipeline system was being cleaned on a regular basis. Therefore, the City Council approved a staff recommendation to increase Wastewater Collection Division personnel and equipment assigned to pipeline maintenance. The additional maintenance resulted in the entire system being cleaned on a regular, scheduled basis, resulting in an 81% reduction in the number of sewage spills through Fiscal Year 2006.

Despite reducing the Municipal Capital Program from the projected 60 miles per year to 45 miles per year, construction cost increases substantially exceeded inflation-based cost projections. In 2004, MWWD received a \$152 million loan from Bank of America, which allowed the department to continue working on the Administrative Order, enabling completion of 30 miles of pipe replacement and rehabilitation per year. Because MWWD did not receive the proposed Fiscal Year 2006 rate increase, the CIP program has been substantially reduced in order to stay within current revenues.

City staff is currently working on a private financing option expected to be executed in April, 2007 to retire the outstanding loan obligation with Bank of America and fund the first year of capital projects required by the proposed Final Consent Decree in the consolidated cases of *United States v. City of San Diego* (Case No. 03-CV-1349K) and *Baykeeper v. City of San Diego* (Case No. 01-CV-0550B) in order to continue rehabilitation and replacement efforts. The next bond offering required to meet the Fiscal Years 2008 and 2009 capital needs is expected to occur in April, 2008. To ensure accurate estimates, an external consultant has conducted an analysis of the projected costs. Since the 2001 rate case anticipated needs through 2010 and construction costs have increased substantially over the 2001 assumptions, it is expected that additional rate increases will be needed to continue the system replacement and upgrade efforts beyond the current rate proposal.

Current Need

The City owns and operates a regional wastewater system that includes both the Municipal (Muni) and Metropolitan (Metro) Systems. The Muni system is a sewage collection system of nearly 3,000 miles of pipe that serves the City's service area. The Metro system, which services both the City and Participating Agencies (PAs), includes facilities which provide advanced primary treatment, secondary treatment, tertiary reclamation, sludge processing and effluent disposal. The Metro System currently includes three wastewater treatment plants that are operational, two ocean outfalls, a biosolids processing center, three major pump stations, and several miles of force mains and gravity flow interceptors. Due to the complex exchange of effluents, solids and centrates, sharing of one common outfall and receipt of flows from the participating agencies, the Metro system is viewed and operated as "a regional system" from a permitting, regulatory compliance and operational efficiency standpoint.

MWWD focused on the needs of the Muni system in the early 2000s and there continues to be a critical need to rehabilitate or replace many pipelines, trunk sewers and pump stations through 2013. The following is the list of needs contemplated in the rate case and in compliance with the proposed sewer spills consent decree:

- Replacement and rehabilitation of 250 miles of sewer pipeline, including 17 specific trunk sewers
- Upgrade of 12 sewer pump stations

- Replace aging infrastructure, estimated at \$648 million, including specific projects required by the proposed Final Consent Decree: (see Attachment)
 - \$277 million for pipeline replacement and rehabilitation
 - \$197 million for trunk sewer rehabilitation
 - \$82 million for treatment plants
 - \$32 million for municipal sewer pump stations
 - \$15 million for large sewer pump stations
 - \$45 million for other projects, primarily the Metro Facilities Control System Upgrade, Wet Weather Storage Facility, and Annual Allocation - CIP Contingencies
- Meet ongoing O&M needs of the wastewater system, which includes mandates from the proposed Final Consent Decree
- Meet CIP pay-go costs of approximately 20% of the \$648 million CIP program

The rate case evaluates the financial needs and accounts for all costs related to the system. The current rate case is intended to provide the first four years of necessary rate increases for the capital and operation and maintenance (O&M) program that is planned. Additional rate increases will be necessary to continue the program after that point in order to sustain compliance with the proposed Final Consent Decree. However, monies saved from ongoing department-wide Business Process Re-engineering (BPR) and Bid to Goal or Managed Competition will be applied to minimize future rate increases. The following is an overview of the Rate Case analysis and the Cost of Service Study performed to determine the necessary rates and assure apportionment of the rates in a fair and equitable manner.

Rate Case

To provide for the continued operation of the City's regional wastewater system on a sound financial basis, the revenues must be sufficient to meet the funding requirements or cash obligations of the system. Revenue requirements include O&M and CIP expenditures, principal and interest payments on existing debt and other obligations. The wastewater enterprise's annual expenditures are divided between: the Muni expenditures and the Metro expenditures. Muni relates essentially to the collection system in the City's own retail service area and Metro relates to treatment and disposal services shared both by the City and the Participating Agencies (PA).

The MWWD Services and Contracts Division annually receive O&M and capital expenditure information for both the Metro and Muni infrastructure components. The Division utilizes these costs to develop comprehensive O&M and CIP cost projections for the entire wastewater enterprise as part of its financing plan development.

The information regarding the financing plan is used to determine the overall revenue needs of the wastewater system, which is then used to determine the rate increases necessary to carry out the financial plan. In February, 2006, the City of San Diego entered into a consultant services agreement with Berryman & Henigar, Inc. to develop a current sewer rate case for MWWD based on the financing plan developed by MWWD. In addition, the financing plan was reviewed by the Public Utilities Advisory Commission (PUAC) wastewater rate sub-committee, the accounting firm Mayer Hoffman McCann, P.C., and Raftelis Financial Consultants, Inc. for the cost of service study. After several meetings and document review, the PUAC subcommittee recommended supporting the proposed rate increases and the full PUAC voted to unanimously support the proposed rates. The accounting firm of Mayer Hoffman McCann, P.C. provided an agreed-upon procedures review and also indicated that the rates were reasonably supported (see attachments). Finally, the proposed rate increases are required to allow the City to sign the proposed Final Consent Decree with the EPA by June 30, 2007. These proposed rates will fund the O&M and CIP projects mandated in the first four years of the Final Consent Decree.

[This proposal does not include potential costs of providing secondary treatment at the Point Loma Wastewater Treatment Plant, as a decision has not been reached regarding implementation of this project.]

The fiscal year 2007 through 2010 financing plan for MWWD is shown in the schedule below:

METROPOLITAN WASTEWATER DEPARTMENT
FY2007 - FY2010 FINANCING PLAN
(Escalated Dollars in Thousands)

DESCRIPTION	FY 2007	FY 2008	FY 2009	FY 2010
OPENING BALANCES				
Balance from Prior Year	52,162	15,777	32,468	28,984
Prior Year Encumbrances & Cont. Appropriations	30,687	65,016	44,219	54,474
REVENUES				
Bond Proceeds	199,388	80,270	95,590	148,380
Service Charge Revenues	233,378	257,020	289,335	313,508
Sewage Treatment Plant Services	70,376	73,917	77,519	81,144
Interest Earnings	3,923	4,725	5,222	6,207
Services Rendered to Others	7,189	7,476	7,775	8,086
Capacity Charge	14,984	15,139	15,294	15,450
Other Revenues	24,953	3,518	3,518	3,518
TOTAL OPENING BALANCES & REVENUE	\$ 637,040	\$ 522,858	\$ 570,940	\$ 659,751
EXPENDITURES*				
Debt Service	95,947	99,251	105,750	113,481
Repay 2004 Bonds	152,000	0	0	0
Capital Improvements:				
Prior year appropriations	30,687	65,016	44,219	54,474
Current year appropriations & bond proceeds	91,927	75,188	129,744	191,534
Operating & Maintenance Expenses:				
Administrative Services (Finance, IT, HR)	63,137	64,269	66,929	70,049
Engineering and Program Management	12,142	12,359	12,871	13,471
Wastewater Treatment	87,420	88,988	92,672	96,990
Wastewater Collection	58,280	59,325	61,781	64,660
Environmental Monitoring and Tech Services	21,855	22,247	23,168	24,248
	242,834	247,189	257,421	269,418
TOTAL EXPENDITURES	\$ 613,395	\$ 486,644	\$ 537,134	\$ 628,907
Operating Reserve Increase	7,868	3,746	4,822	8,890
Funds Available for Appropriations	15,777	32,468	28,984	21,954
TOTAL BALANCE	\$ 23,645	\$ 36,214	\$ 33,806	\$ 30,844
TOTAL EXPENSE & BALANCE	\$ 637,040	\$ 522,858	\$ 570,940	\$ 659,751

* Includes projected encumbrances

In addition, the following Wastewater Rate Model Assumptions were made:

Consent Decree: The Consent Decree projects are set to the following schedule for rehabilitation and replacement of collection system pipelines: In fiscal year (FY) 2008 - 30 miles of rehabilitation; FY2009 - 35 miles of rehabilitation and 10 miles of replacement of pipelines; FY2010 through 2013 - 25 miles of rehabilitation and 20 miles of replacement and FY2014 through FY2017 - 15 miles of rehabilitation and 10 miles of replacement. The estimated cost is \$2.3 million per mile for pipe replacement and \$800 thousand per mile for pipe rehabilitation.

Financing: Private bond financing is scheduled for April 2007. The estimated bond proceeds are less than \$200 million including funding the bond redemption of \$144.6 million. Public bond financing is scheduled for April 2008. The public bond proceeds are estimate at less than \$90 million. Interest rate estimated for the projected private and public financing of 6% is based on the financial advisors' estimates. For interest rates we are assuming a level rate throughout the projected years.

Bond proceeds are calculated based on the estimated eligible capital improvements planned each year. In the early fiscal years of 2006-07 and 2007-08 a project by project analysis resulted in higher percentages (82.2% and 83.6%) of the capital expenditures than will be financed in those years. With the exception of the fiscal years of 2007 and 2008 it is assumed that 80% of the capital expenditures will be financed through the fiscal year 2014 and 70% of all capital expenditures for the remainder of the planning period will be financed.

State Revolving Fund: Repayment of loan proceeds begins one year after the project completion. The term of the loan is 20 years and the interest rate is 2% on the funds received. Source: SRF Loan Agreement.

Debt Coverage Ratio: The debt service requirements as covenanted in each Installment Purchase Agreement and State Revolving Fund (subordinate debt) are tested each projected fiscal year to assure compliance according to the agreement(s) terms.

Financial Results: FY 2003, 2004, 2005 & 2006 financial results are based on the best available financial data in November 2006 from the Auditor's office.

Flow & Load Projections: Agreed upon flows are based on sewage flow projections provided by Participating Agencies and MWW in March 2006. The Flow data excludes Tijuana flow.

Flow, TSS and COD projections based on continuing evaluation of metered flow data, associated strength characteristics, current growth forecasts for specific sub-areas as well as wastewater monitoring reports from the mid-1980s to present. This is reported in the Metropolitan Sewerage System FY 06 Projected Flow and Strength Report (Draft) dated March 30, 2006.

For facility planning purposes, system-generated total suspended solids (TSS) concentration will remain at 197.7 metric ton/day for the 10-year planning horizon. The annual averaged TSS concentration for FY 2005 is 195 metric ton/day. The COD concentration will remain at 386.5 mt/d. The annual averaged COD concentration for FY 2005 is 382 mt/d. This is reported in the Metropolitan Sewerage System FY 06 Projected Flow and Strength Report (Draft) dated March 30, 2006.

For facility planning purposes, system-generated total suspended solids (TSS) concentration will remain at 293 mg/L for the 10-year planning horizon. The annual averaged TSS concentration for FY 2005 is 286 mg/L.

Population Growth Projections: City of San Diego and overall regional growth projections are generally based on San Diego Association of Governments (SANDAG) 2030 Forecasts which were approved by the Board of SANDAG in November 2003. The City and individual Participating Agencies provide annual detailed growth projections based on agency planning and historical growth.

For facility planning purposes, system-generated total suspended solids (TSS) concentration will remain at 197.7 metric ton/day for the 10-year planning horizon. The annual averaged TSS concentration for FY 2005 is 195 metric ton/day. The COD concentration will remain at 386.5 mt/d. The annual averaged COD concentration for FY 2005 is 382 mt/d. This is reported in the Metropolitan Sewerage System FY 06 Projected Flow and Strength Report (Draft) dated March 30, 2006.

For facility planning purposes, system-generated total suspended solids (TSS) concentration will remain at 293 mg/L for the 10-year planning horizon. The annual averaged TSS concentration for FY 2005 is 286 mg/L.

Customer Accounts: The projected customer accounts are based on projected years' rate of increase in the City of San Diego population. Source: The projected population is from the SANDAG 2030 population projections adjusted based recent historical growth. Current accounts were from the Water Utilities Customers Information System Monthly Rate Code Summary (Actual).

Planning: The initial rate increase is effective May 1, 2007 and any subsequent years' increases are projected on the same date. Rate increases are projected each year in this Rate Case sensitivity from 2007 through 2017. An initial goal is approved rates for four consecutive year period, with projected rates from fiscal year 2007 to fiscal year 2017.

Right-of-Way Fees: No Right of Way fees will be included.

Shames Lawsuit: The Shames Lawsuit is not considered nor a part of the cost data for the base case.

Inflation: Annual inflation for Services Rendered to Others (less than 2% of total revenue) and operations and maintenance costs is 4% based on the most recent 15 year San Diego area consumer price index for all urban consumers. The annual inflation for the construction component of capital projects is stated as a conservative 4% based on the Engineering News Record Construction Cost Index most recent 10 year annual average and 15 year annual average.

Participating Agencies' Allocation: The allocation of operations and maintenance cost and capital improvement program cost to the Participating Agencies is based on the PA's percentages of the annual flow and load through the Metropolitan Sewer System dated April 2006. Participating Agencies will continue to finance Metro system capital contributions as set forth in the Regional Wastewater Disposal Agreement (RWDA). This is approximately 30% of the cost.

Participating Agencies' Contract Capacity: The Participating Agencies own a contracted capacity of the Metropolitan Wastewater System. Two Participating Agencies are projecting a flow in excess of their contract capacity through Fiscal Year 2020. All other Participating Agencies and the City of San Diego are projecting having excess capacity and may sell capacity to the those with higher flow than existing capacity. There is adequate projected excess capacity among the Participating Agencies to accommodate those with future capacity needs. Therefore no revenue is projected from the sale of capacity by the City to Participating Agencies.

Pension and Retiree Health Care Benefits: An additional pension contribution is recognized at a cost of \$1.9 million per year starting in year 2008 and continuing at the same value with inflation. Retiree health care benefits estimated liabilities will be considered and recorded as expenditures in the amount of \$2.7 million beginning in fiscal year 2008 and increased to \$8.3 million in year 2010 based upon the current best estimates.

Secondary Treatment: Secondary treatment at the South Bay Facility is planned for service by fiscal year 2018. Treatment at the secondary level at the Point Loma Wastewater Treatment Plant is not considered at all in the rate model.

Fund Balance Interest: Interest rates estimated for projected earnings on fund balance are based on the City Treasury Investments assumed return for fiscal year 2007 which is 3%. This rate is based on the most recent three plus years' data. For interest rates we are assuming a level rate throughout the projected years.

Revenue: The charges for the years 2007 through 2017 are based on the projected population and the projected service rates. The new connections are projected by the percentage change in population.

Capacity Charges are based on the 2006 Cost of Services Study throughout the ten year period from FY 2007 to FY2017. Treatment Plant Services are based on projected flow plus projected costs of treatment for the Participating Agencies (inflated).

Minimum Fund Balance: The minimum fund balance will be maintained at a minimum of \$20 million of unrestricted funds.

Rate Stabilization Fund: The rate stabilization fund is established to stabilize the sewer service rates in future years.

Operating Reserve: The operating reserve is increasing from 45 days to 70 days starting in fiscal year 2007 to fiscal Year 2010.

Unallocated Reserve: This reserve is for contingencies and it is established in the operating budget each fiscal year at \$3.3 million.

Shames Lawsuit

In 2004, a lawsuit was filed against the City by consumer advocate Michael Shames (Superior Court Case No. GIC 831539). The lawsuit alleges that SFR customers paid a disproportionately higher share of sewer rates, which benefited the commercial and industrial users. On December 6, 2006, City Council approved a settlement of the suit that would give rebates to approximately 225,000 single-family ratepayers.

The following is an overview of the Shames Settlement:

- Proposed settlement is subject to Court approval
- \$40 million total to be returned to the SFR class, less \$5 million in Plaintiff's attorneys fees, rebated over a 4 year period
- Most SFR customers to benefit
- SFR settlement class is based on residence from May 23, 1994, through September 30, 2004

The overall sewer rate increases with the proposed Shames settlement in Fiscal Years 2007 through 2010, will be as identified in the table below if the CIP and O&M rates are adopted. The Shames settlement rate impact in the first year will be 3.05% if the other proposed rates are adopted, or as high as 6.0% if no rate increase is adopted.

The following table shows the impacts of the Shames settlement if the proposed rates are adopted:

Effective Date	May 1, 2007	May 1, 2008	May 1, 2009	May 1, 2010
CIP / O&M rates	8.75%	8.75%	7.00%	7.00%
Shames Settlement	3.05%	3.05%	0.60%	0.50%
Overall rates	11.80%	11.80%	7.60 %	7.50%

The proposed rate increases of 8.75% on May 1, 2007, and May 1, 2008, and 7.00% on May 1, 2009 and May 1, 2010 will cumulatively provide approximately \$241 million in additional revenue during those years.

Cost of Service Study

The rate case that was developed by Berryman & Henigar, Inc. determined the overall revenue needs to be derived from the rate payers. In conjunction with the development of the current sewer rate case, a utility cost of service and rate design study was conducted by Raffelis Financial Consultants, Inc. (RFC) (see Attachment). The COSS includes a thorough review of revenue requirements, cost of service allocations,

and design of a system of user charges for the City's wastewater service consistent with State Water Resources Control Board (SWRCB) Revenue Guidelines and City policies. The focus of the COSS was on the City's retail wastewater service which provided an overall basis for the apportionment of the rate increases between the various rate payer classes. The proposed rates are based on both the Berryman & Henigar rate case and the RFC Study. The specific objectives of the Study included:

- Update flow, Chemical Oxygen Demand (COD) and suspended solids loadings for all customer classes
- Update and review of wastewater revenue requirements
- Review and update of the allocation of treatment and collection costs to the wastewater parameters of Flow, Total Suspended Solids (TSS), and COD to retail customer classes
- Development of an appropriate SFR class sewer cap, and "return" to sewer factor in keeping with SWRCB guidelines
- Review of the fixed base charge component
- Update of full cost recovery capacity fees

The following major factors were considered as part of the Study:

User Classification and Loading

The City currently serves a population of nearly 1.2 million within the City's service area. In July, 2006 it was estimated that the City had a total of 270,805 meters. The breakdown of the City's sewer user classes, and the number of meters associated with each class as of FY 2006, are as follows:

<u>User Class Description</u>	<u>Number of Meters</u>	<u>Average Daily Flow</u>
Single Family Residential (SFR)	223,996	46.45 MGD *
Multi-Family Residential (MFR)	30,395	34.06 MGD
Commercial/Industrial	16,414	30.44 MGD

- *MGD (Million Gallons Per Day)*

Residential users are similar in their flow strength characteristics and are, therefore, assumed to have identical TSS and COD loadings. The commercial/industrial user class varies widely based on the type of work in which they engage. A more detailed discussion of User Classifications and Loadings is contained in Section 4 of the Study (Attachment).

Revenue and Expenses

Revenue requirements from rates are the net of all expenditures, including reserve requirements, less non-rate revenues. The City's principal sources of revenue to recover operating costs include sewer service charges paid by the City's retail users and full cost recovery from the PAs per their cost sharing agreements with the City. The primary sources of revenue to recover capital costs include sewer connection fees, capital fund balance, bond proceeds, state and federal grants and loans, capacity fees, pay-as-you-go revenues from the PAs and interest earnings.

The City's retail service area O&M expenditures, which are the focus of this Study, are estimated to be in the range of \$206 to \$231 million per year between FY 2007 and FY 2011. Retail service area annual capital expenditures, including debt service and pay-as-you-go capital, are in the range of \$81 to \$137 million per year. Debt service constitutes the majority of capital expenditures and ranges between \$72 and \$102 million per year over that same time period.

Rate Design

The City's existing retail wastewater rate structure for SFR, MFR, and Commercial/Industrial user classes includes a fixed Base Fee and a Usage Rate. The Base Fee of \$11.32 per month is the same for all customer classes. The base fee currently recovers approximately 16 percent of the overall revenue requirements of the City's wastewater enterprise. The current Usage Rate is applied differently according to customer class:

- SFR usage is based on 100 percent return of minimum winter water usage ("return") and is capped at 14 hundred cubic feet (HCF) monthly. Users are billed at a rate of \$2.889 per HCF ;
- MFR usage is based on 95 percent return of water usage and billed at a rate of \$3.721 per HCF; and
- Commercial/Industrial usage is based on a sewer return rate, the percentage of metered potable water returned to the sewer, and pollutant loadings developed for each business type according to Standard Industrial Classification (SIC) codes.

Both MFR and Commercial/Industrial class customers may have individual return rates and pollutant loadings based on monitoring performed on their wastewater discharges by the City.

Study Recommendations

SINGLE FAMILY RESIDENTIAL SEWER CAP

RFC recommends the SFR sewer cap be increased to 20 HCF and the assumed SFR return factor be dropped from 100 percent to 95 percent. SFR customers are currently subject to a 14 HCF sewer cap based on a mass balance analysis of customer winter usage. The purpose of the sewer cap is to determine the level at which it is assumed water usage ceases to be returned to the system as wastewater. Usage above the sewer cap is assumed to be outdoor usage for purposes such as irrigation and other outdoor uses. The prior cost of service study looked at this question and suggested that the sewer cap be raised to its current level of 14 HCF, then to 16 HCF two years later. Guidance from SWRCB personnel suggests that the sewer cap be set at a level that captures 95 percent of the SFR accounts. Using this SWRCB direction, the calculated sewer cap would fluctuate between 17 and 21 HCF, depending on climate conditions during the winter measurement months. In order to conform to SWRCB direction and in order to set a stable cap, the City has chosen to average five years of winter usage and establish 20 HCF as the proposed SFR sewer cap.

RATE DESIGN CHANGES

RFC recommends the continued use of a rate structure that includes both a fixed monthly base fee and a variable usage charge.

Base Fee: RFC recommends that the City continue to utilize a uniform monthly base fee for all system users. The current method for setting the base fee is appropriate under SWRCB guidance and the City may continue its use.

Residential Usage Rate: RFC recommends that the City continue its existing method of computing monthly SFR wastewater charges, but with a usage cap of 20 HCF instead of the existing 14 HCF cap as discussed above. RFC also recommends revising the SFR return factor to 95 percent from the current 100 percent.

Commercial/Industrial Usage Rate: For commercial/industrial users, RFC recommends that the City continue to charge users based on their flow and strength. The strength and return factors for these users are based on industry standards and built into the City's database. RFC also recommends that wastewater charges for Commercial/Industrial users discharging greater than 25,000 gpd of flow continue to be calculated individually based on measured or estimated strength.

Contract customers and hauled waste customers would continue to be charged on a unit cost rate in which the base fee is included in the unit rate for flow.

CAPACITY CHARGE

Capacity fees are one-time fees used to recover the cost of providing the system capacity required when a new user connects to the wastewater system. Examples of such costs include those related to increasing wastewater transmission and treatment capacity in treatment plants, ocean outfalls, interceptors, pumping stations, and sewer mains.

The City currently charges \$3,710 per equivalent dwelling unit (EDU) or SFR account. The minimum capacity assigned to any sewer connection is one EDU. Qualifying low income housing is eligible for a reduced capacity fee as outlined in Water Department Instruction 55.30. MFR units having individual, City-read water meters are assigned one EDU per unit, while MFR units that share a common water meter are charged based on a density-adjusted formula. Non-residential customers are charged based upon the number of fixture units by using a conversion factor that equates 20 fixture units to one EDU.

The City has incurred major costs over the last ten years to upgrade and expand facilities and will continue to incur additional costs to comply with EPA mandates to meet discharge requirements. The capital costs of existing facilities and growth-related portion of future costs of improvements to the City's facilities form the basis of the calculated capacity fee. The capital costs the City has incurred prior to 2006 and the future costs to be incurred over the next ten years were reviewed. The projects associated with these capital costs were examined and the net capacity available from these projects was determined in order to derive the capacity fee. These projects include sewer mains, pumping stations, treatment plant upgrades, outfall costs etc. The resultant full-cost-recovery capacity fee is \$4,124 per EDU.

The COSS recommendations are consistent with and are reflected in the Wastewater rate case. The City Council's ability to deviate from these rates is limited: the rate adjustments proposed by this report can only be changed if the alterations are consistent with the COSS. Changes that are inconsistent with the COSS could violate the requirement of Proposition 218 that wastewater fees not exceed the proportionate cost of providing the service to each parcel. Therefore, any proposed changes should be examined carefully.

BASE CHARGE

Under SWRCB guidance, RFC believes the existing methodology for determination of the base fee is appropriate. For these reasons, the City has decided to continue with its existing methodology for development of the customer base charge.

Mayor's Pre-conditions

As a requirement prior to considering any new rate recommendations, the Mayor's Office set stringent pre-conditions for MWWD and the Water Department to address. Mayor Sanders directed City staff to undertake review efforts in response to concerns about potential mismanagement and inefficiencies in both systems. The Mayor's pre-conditions included:

- Completion of a comprehensive examination of the budgets and rate structures of both the water and wastewater systems
- A review by outside accountants of past practices regarding the use of previous rate increases and bond proceeds by both systems
- A detailed report regarding whether the water or wastewater systems had raised rates for projects that have not been, or never will be, completed
- An analysis of the various operational and capital demands on the systems' cash flows
- A complete accounting of any funds that have been transferred out of these systems and for what purposes
- A study of how San Diego's water and wastewater rates compare with surrounding agencies
- A thorough report of what administrative expenses can be trimmed from both systems

In addition to the outlined pre-conditions, the Mayor has stated that additional safeguards will be put in place to ensure that funds derived from rate payers are spent appropriately.

Results of Mayor's Pre-conditions

The City entered into agreements with the audit firm of Mayer Hoffman McCann P.C. (MHM) to perform a review of how bond proceeds and previous rate increases were used and a review of the proposed rate increases in the Metropolitan Wastewater Department. MHM offered the findings of those reviews in a series of reports delivered to the Mayor in August 2006. The results of the MHM reviews found that MWWD appropriately spent bond proceeds and revenue from previous rate increases and followed appropriate accounting standards. The MHM reports did note that a very few inter-fund transfers from the wastewater enterprise accounts were made "inappropriately." At the Mayor's direction, the transfers noted by MHM have been reimbursed to the wastewater fund. The Mayor adopted all of the remedial recommendations contained in the reports regarding bond proceeds and previous rate increases.

Efficiency Efforts

MWWD is currently going through a Bid-To-Goal analysis and Business Process Re-engineering, and anticipates having final results by the end of this calendar year. The preliminary results and recommendations of these efforts were considered in determining the proposed sewer rates. These efforts have resulted in recommendations that would generate salary and fringe savings of approximately 13% and a proposed reduction in staff of approximately 140 full time equivalent positions in FY2008.

In addition, MWWD has been proactive in assessing its business processes over the past years. The following programs have resulted in savings over the years due to MWWD's practice of continuous process improvements:

- Bid to Goal (1998-2005) has resulted in approximately a \$120 million budget reduction and \$70 million in additional savings
- Cost Savings Initiatives – Value Engineering, Business Case Evaluation, Zero-Based Management Review
- Proactive in Energy Savings and Management – MWWD owns or controls on site power generation (these facilities include cogeneration of digester gas and landfill gas, hydroelectric and photovoltaic systems) which provides approximately \$5 million/year savings and \$1.0 million/year in revenue. MWWD has also conducted energy audits and obtained approximately \$1.5 million in energy grants and incentives since 2001

- International Standards Organization (ISO 14,001) certified in three Divisions (O&M, Wastewater Collection, and Environmental Monitoring & Technical Services)

Recommendations

In order to meet projected revenue requirements, including desired operating and debt service reserve fund levels, the following annual revenue adjustments are recommended by the Study:

FY 2007	FY 2008	FY 2009	FY 2010
8.75%	8.75%	7.00%	7.00%

The current and proposed rates for each sewer classification are described below:

Class	Current Base	Current Rate/HCF*	Proposed Base	Proposed Rate/HCF*	% Change
Single Family Residential	\$11.32	\$2.889	\$12.31	\$2.890	8.7%
Multi-family Residential	\$11.32	\$3.721	\$12.31	\$4.038	8.5%
Commercial/Industrial					
Base	\$11.32		\$12.31		8.7%
Flow		\$2.753		\$3.026	9.9%
Total Suspended Solids		\$0.429		\$0.443	3.2%
Chemical Oxygen Demand		\$0.154		\$0.180	16.6%
Contracts: Navy & Hauled Waste					
Flow		\$2.753		\$3.132	13.8%
Total Suspended Solids		\$0.429		\$0.459	6.8%
Chemical Oxygen Demand		\$0.154		\$0.186	20.7%

* 1 HCF (Hundred Cubic Feet) = 748 Gallons

FISCAL CONSIDERATIONS:

Cost of noticing property owners and utility customers at this time is estimated at \$230,000. This cost will be shared equally by MWWD and the Water Department.

PREVIOUS COUNCIL and/or COMMITTEE ACTION:

The PUAC sewer rate subcommittee, at the meeting of November 29, 2006, supported the proposed sewer rate increases of 8.75% in Fiscal Years 2007 and 2008 and 7% in Fiscal Years 2009 and 2010 by a vote of 4 to 1 in favor of the action; and supported the Study recommendations by a vote of 4 to 1 in favor of the action.

At the meeting of December 4, 2006, the PUAC unanimously voted in favor of the proposed sewer rate increases of 8.75% in Fiscal Years 2007 and 2008 and 7% in Fiscal Years 2009 and 2010, and the COSS recommendations.

COMMUNITY PARTICIPATION AND PUBLIC OUTREACH EFFORTS:

Public Input sessions have been held throughout San Diego as follow:

Various stakeholder meetings

November 27, 2006 Town Hall Meeting San Ysidro Multi-Cultural Center

November 28, 2006 Town Hall Meeting Balboa Park War Memorial

November 29, 2006 PUAC Water and Wastewater Rate Sub-Committee Meeting

December 4, 2006 Full PUAC Meeting

December 5, 2006 Town Hall Meeting Rancho Bernardo Library

A stakeholder meeting will be scheduled the week of January 2, 2007

Additional public outreach and workshops will be scheduled before the public hearing date.

Additional community outreach briefings will be scheduled at the request of Council members and the Community.

KEY STAKEHOLDERS AND PROJECTED IMPACTS:

City of San Diego wastewater users will receive a notice of the hearing to take place on February 26, 2007.



Robert J. Ferrier
Acting Metropolitan Wastewater Department
Director



R.F. Haas
Deputy Chief of Public Works

Attachments:

1. Proposition 218 Notice
2. 4-year CIP Project Estimates
3. Raftelis Financial Consultants, Inc. Wastewater Cost of Service Study
4. Mayer Hoffman McCann P.C., Independent Accountant's Review (4 reports)
5. Sewer Rate Comparisons

To locate the attachments please see the following pages:

Attachment 1 see pages 16 thru 21

Attachment 2 see pages 22 thru 23

Attachment 3 see pages 24 thru 87

Attachment 4 see pages 88 thru 115

Attachment 5 see page 116

NOTICE OF PUBLIC HEARING [insert city logo]

The San Diego City Council will hold a public hearing to consider proposed increases in water and sewer rates and charges. Interested parties are invited to attend:

Date: Monday, February 26, 2007
Time: 2 p.m.
Place: City Administration Building
202 "C" Street, 12th Floor Council Chambers
San Diego, CA

Explanation of Rate Increases

If adopted, the proposed rate changes will be implemented over the next four years. The proposed rates are presented in the tables below. The amount of your utility bills will depend on your customer class (single family residential rates are different than industrial rates, for example) and the amount of water you use.

The proposed increases will help the City provide reliable, high quality water and sewer services. The City water and wastewater departments rely only on customer revenues to provide these services. No local, state or federal taxes offset the cost of these services. The proposed rates collect only that estimated amount needed to cover actual costs of water and sewer service. As discussed in more detail below, service costs are increasing due to more demanding federal and state environmental rules, inflation, and the need to maintain equipment and facilities to avoid more expensive repairs later.

How Can I Participate?

Interested parties can comment on the proposed rates. California law prohibits the City from implementing the new rates if a majority of the affected property owners file written protests opposing the rates before the end of the public hearing. Written protests must be submitted to the City Clerk, Mail Station No. _____ City Administration Building, 202 "C" Street, San Diego, CA 92101, before the end of the public hearing which is scheduled for 2:00 pm, February 26, 2007. Each protest must identify the affected property (by assessor's parcel number or street address) and include the signature of a record property owner or utility customer. Email protests will not be accepted. Although oral comments at the public hearing will not qualify as formal protests unless accompanied by a written protest, the City Council welcomes input from the community during the public hearing.

How Can I Get More Information?

If you have any questions regarding the hearing, the proposed rates or how to file a protest, please contact Customer Service at 619-515-3500 for both water and sewer rates.

More information regarding the proposed water and sewer rates is available on the City website: www.sandiego.gov. This information includes the recently completed Water and Wastewater Cost of Service Studies which describe in detail the basis and reasons for the proposed charges. The Studies can also be viewed at the City Clerk's Office located at 202 C Street, 2nd Floor, San Diego, CA 92101.

Proposed Water Service Rates and Charges

The City supplies water to more than 1.3 million customers through almost 3,500 miles of water pipes, three water treatment plants, nine raw water storage facilities, and thirty treated water storage facilities. The principal reasons for the proposed water rate increases are to provide revenues sufficient to:

- ✓ Operate and maintain, repair and replace water facilities to maintain system reliability, including water treatment plant upgrades and reservoir improvements.
- ✓ Replace aging pipes, pumps and other infrastructure, including 75 miles of cast iron pipe, to reduce the number of pipeline breaks and emergency repairs.
- ✓ Comply with federal and state environmental and safe drinking water rules, including a State Department of Health Services Compliance Order requiring among other things upgrading and expansion of water treatment capacity.

To accomplish the above purposes, the City proposes to increase the overall revenue to the Water Department incrementally over the next four years through annual rate increases for all customer classes as follows:

July 1, 2007	July 1, 2008	July 1, 2009	July 1, 2010
6.5%	6.5%	6.5%	6.5%

Additionally, consistent with industry cost of service principles and accepted rate setting methodologies, the City is proposing to refine its water rates by reallocating charges to more accurately reflect costs of service. Proposed changes include increasing the number of customer classes, lowering overall cost recovery from fixed monthly charges, and increasing overall cost recovery based on the amount of water used. These changes may increase or decrease customers' bills, depending on the customers' class and the amount of water used. The breakdown of the proposed water rates is:

Monthly Base Service Charge

Meter Size	Existing FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Inches	Existing \$/month	Proposed \$/month	Proposed \$/month	Proposed \$/month	Proposed \$/month
5/8	15.87	15.18	16.17	17.22	18.34
3/4	15.87	15.18	16.17	17.22	18.34
1	17.11	22.17	23.61	25.15	26.78
1 1/2	75.41	38.13	40.61	43.25	46.06
2	116.24	58.09	61.87	65.89	70.17
3	414.73	104.98	111.80	119.07	126.81
4	692.00	171.83	183.00	194.89	207.56
6	1,542.72	337.46	359.39	382.76	407.63
8	2,081.78	537.01	571.92	609.09	648.68
10	2,793.63	770.49	820.57	873.91	930.71
12	3,892.44	1,435.00	1,528.28	1,627.61	1,733.41
16	6,514.14	2,499.62	2,662.10	2,835.13	3,019.42

Commodity Rate (HCF = Hundred Cubic Feet; SFR = Single Family Residential)

Proposed* Customer Class	HCF	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
		Existing \$/HCF	Proposed \$/HCF	Proposed \$/HCF	Proposed \$/HCF	Proposed \$/HCF
SFR	0-7	1.731	2.262	2.409	2.566	2.732
	8-14	2.163	2.461	2.621	2.791	2.973
	Over 14	2.372	2.775	2.955	3.147	3.352
Other Domestic Commercial & Industrial Temporary Construction & Irrigation		2.003	2.461	2.621	2.791	2.973
		2.003	2.357	2.510	2.673	2.847
		2.003	2.524	2.688	2.863	3.049

*Currently there are two Customer Classes: SFR and Other.

Proposed Sewer Service Rates and Charges

The City supplies sewer services to more than 1.3 million City residents through 3,000 miles of sewer pipes and four major treatment plants. The principal reasons for the proposed sewer rate increases are similar to those for water service:

- ✓ Operate and maintain, repair and replace wastewater facilities to maintain system reliability.
- ✓ Replace aging infrastructure at an estimated cost of roughly \$650 million, including approximately 45 miles of sewer pipes per year.
- ✓ Comply with federal and state environmental rules and guidelines, including resolution of litigation with the federal Environmental Protection Agency and environmental groups over past sewer spills.
- ✓ Settle litigation over the City's past sewer rates, including a temporary four-year rebate to single family residential customers. ("Shames Settlement")
- ✓ Update costs and loadings of treatment parameters using current data.

To accomplish the above purposes, the City proposes to increase the overall revenue to the wastewater department incrementally over the next four years through annual rate increases for all customer classes as follows:

	May 1, 2007	May 1, 2008	May 1, 2009	May 1, 2010
General	8.75%	8.75%	7.00%	7.00%
SFR rebate	3.05%	3.05%	0.60%	0.50%
Total	11.80%	11.80%	7.60%	7.50%

In addition to the rate increase above, the City proposes to use updated treatment costs and loadings and to implement other measures described below, consistent with the Wastewater Cost of Service Study and State guidelines. These adjustments may increase or decrease customers' bills, depending on the customers' class and the amount of water used. The breakdown of the proposed wastewater rates is:

**Rates for Single Family Residential ("SFR") and
Multi-Family Residential ("MRF") Customers**

Customer Class	Current 2007	May 1, 2007	May 1, 2008	May 1, 2009	May 1, 2010
SFR (note 1)					
Usage Fee \$/HCF	2.889	2.890	3.143	3.364	3.600
Base Rate \$/account	11.32	12.31	13.39	14.33	15.34
MFR (note 2)					
Usage Fee \$/HCF	3.721	4.038	4.392	4.700	5.029
Base Rate \$/account	11.32	12.31	13.39	14.33	15.34

**Rates for Single Family Residential ("SFR") and
Multi-Family Residential ("MRF") Customers with Shames Settlement**

Customer Class	Current 2007	May 1, 2007	May 1, 2008	May 1, 2009	May 1, 2010
SFR (note 1)					
Usage Fee \$/HCF	2.889	2.9781	3.2389	3.3842	3.618
Base Rate \$/account	11.32	12.69	13.80	14.42	15.42
Usage Rebate \$/HCF		(0.0881)	(0.0959)	(0.0202)	(0.0180)
Base Rebate \$		(3.63)	(3.66)	(3.34)	(3.33)
MFR (note 2)					
Usage Fee \$/HCF	3.721	4.1612	4.5260	4.7282	5.0541
Base Rate \$/account	11.32	12.69	13.80	14.42	15.42

Note 1: Current rates are based on the assumption that 100% of the water used in the winter month of the lowest usage is a good measure of the volume of wastewater generated by a home on a monthly basis. This figure is also capped at 14

Hundred Cubic Feet (HCF). Proposed rates beginning May 1, 2007 will be based on 95% of minimum winter water use and capped at 20 HCF, consistent with State guidelines. New customers will be charged a New Customer rate of \$38.32 per month until they have a winter water use history on which to base their rate (adjustment done each July 1).

Note 2: 2007 rates are based on 95% of water use.

Rates for Commercial Industrial Customers Discharging Less Than 25,000 GPD

Customer Class	Current 2007	May 1, 2007	May 1, 2008	May 1, 2009	May 1, 2010
Comm/Ind (note 3)					
Flow \$/HCF	2.7534	3.0257	3.2905	3.5209	3.7674
TSS \$/lb	.4294	.4431	.4819	.5157	.5518
COD \$/lb	.1544	.1801	.1959	.2097	.2244
Base Fee \$/account	11.32	12.31	13.39	14.33	15.34

Rates for Commercial Industrial Customers Discharging Less Than 25,000 GPD with Shames Settlement

Customer Class	Current 2007	May 1, 2007	May 1, 2008	May 1, 2009	May 1, 2010
Comm/Ind (note 3)					
Flow \$/HCF	2.7534	3.1180	3.3909	3.5420	3.7862
TSS \$/lb	.4294	.4566	.4966	.5188	.5546
COD \$/lb	.1544	.1856	.2018	.2110	.2255
Base Fee \$/account	11.32	12.69	13.80	14.42	15.42

Note 3: 2007 based on percentage of metered water use returned to sewer and pollutant loading based on national estimates of wastewater generation by businesses in the same Standard Industrial Classification (SIC) code as the business served.

Rates for Large Commercial Industrial Customers

Customer Class	Current 2007	May 1, 2007	May 1, 2008	May 1, 2009	May 1, 2010
Comm/Ind (note 4)					
Flow \$/HCF	2.7534	3.0257	3.2905	3.5209	3.7674
TSS \$/lb	.4294	.4431	.4819	.5157	.5518
COD \$/lb	.1544	.1801	.1959	.2097	.2244
Base Fee \$/account	11.32	12.31	13.39	14.33	15.34

Rates for Large Commercial Industrial Customers with Shames Settlement

Customer Class	Current 2007	May 1, 2007	May 1, 2008	May 1, 2009	May 1, 2010
Comm/Ind (note 4)					
Flow \$/HCF	2.7534	3.1180	3.3909	3.5420	3.7862
TSS \$/lb	.4294	.4566	.4966	.5188	.5546
COD \$/lb	.1544	.1856	.2018	.2110	.2255
Base Fee \$/account	11.32	12.69	13.80	14.42	15.42

Note 4: 2007 rates based on percentage of metered water use returned to sewer and pollutant loading for Large customers discharging more than 25,000 gpd is based on national estimates of businesses in the same Standard Industrial Classification (SIC) code as the business served or individually measured.

Rates for Contracts: Navy & Hauled Waste Customers

Customer Class	Current 2007	May 1, 2007	May 1, 2008	May 1, 2009	May 1, 2010
Contract/Haulers (note 5)					
Flow \$/HCF	2.7534	3.132	3.4061	3.6446	3.8998
TSS \$/lb	.4294	.4586	.4988	.5338	.5712
COD \$/lb	.1544	.1864	.2028	.2170	.2322

Rates for Contracts: Navy & Hauled Waste Customers with Shames Settlement

Customer Class	Current 2007	May 1, 2007	May 1, 2008	May 1, 2009	May 1, 2010
Contract/Haulers (note 5)					
Flow \$/HCF	2.7534	3.2275	3.5100	3.6665	3.9193
TSS \$/lb	.4294	.4726	.5140	.5370	.5741
COD \$/lb	.1544	.1921	.2090	.2183	.2334

Note 5: Proposed rates applicable to contract customers and hauled waste customers. No base fee is charged; cost of serve is based entirely on volume of wastewater estimated to be generated.

This material is available in alternative formats upon request. To order information in an alternative format, or to arrange for a sign language or oral interpreter for the meeting, please call the Clerk's office at least 5 working days prior to the meeting at 533-4000 (voice) or 236-7012 (TT).

METROPOLITAN WASTEWATER DEPARTMENT
PROJECT FORECASTS FOR FY2008 THROUGH FY2011
 (IN MILLION DOLLARS AT 4% INFLATION)

FUNDING SOURCE	PROJECT TITLE	BOND REIMBURSEMENT						TOTAL
		FY 2008	FY 2009	FY 2010	FY 2011			
MUNI	PIPELINES							
MUNI	ANNUAL ALLOCATION - ACCELERATED PROJECTS	0.4	0.5	0.2	1.5		2.6	
MUNI	ANNUAL ALLOCATION - PIPELINE REHABILITATION	5.7	26.0	31.5	23.4	24.3	110.9	
MUNI	ANNUAL ALLOCATION - SEWER MAIN REPLACEMENTS	12.0	5.2	25.9	53.8	56.0	152.9	
MUNI	ANNUAL ALLOCATION - UNSCHEDULED PROJECTS	1.5	1.1	1.1	1.2	1.2	6.1	
MUNI	EAST MISSION GORGE FORCE MAIN REHABILITATIONS	0.1				3.5	3.6	
MUNI	EAST MISSION GORGE TRUNK SEWER REHAB	0.1					0.1	
MUNI	PIPELINE IN THE R.O.W. & EASEMENTS	0.4					0.4	
MUNI	FIRP PH 2 - CONNECT TO COPLEY DR.	0.2					0.2	
MUNIRO	SOUTH METRO SEWER REHABILITATION PHASE IIIB		0.2				0.2	
	SUBTOTAL	\$20.4	\$33.0	\$58.7	\$79.9	\$85.0	\$277.0	
	TRUNK SEWERS							
MUNI	ANNUAL ALLOCATION - MWWD TRUNK SEWERS	5.9	2.0	3.5	3.5	3.5	18.4	
MUNI	ANNUAL ALLOCATION - TRUNK SEWER REHABILITATIONS	1.6	8.9	3.5	21.3	39.0	74.3	
MUNI	BALBOA TRUNK SEWER	0.1		0.1	7.2	3.9	11.3	
MUNI	CHOLLAS VALLEY TRUNK SEWER	0.1					0.1	
MUNI	EAST POINT LOMA TRUNK SEWER 2	0.1		3.2	17.3		20.6	
MUNI	HARBOR DRIVE TRUNK SEWER REPLACEMENT	0.1	0.1	0.1	0.1	15.3	15.7	
MUNI	LA JOLLAPB TS - CHELSEA ST. RELOC	0.2					0.2	
MUNI	LAKE MURRAY IN CANYON TRUNK SEWER	0.5			14.3		14.8	
MUNI	MIRAMAR ROAD TRUNK SEWER	0.8					0.8	
MUNI	MONTEZUMA TRUNK SEWER	0.1				2.8	2.9	
MUNI	OTAY MESA TRUNK SEWER	0.5		14.4			14.9	
MUNI	SORRENTO VALLEY TRUNK SEWER RELOC	3.2					3.2	
MUNI	SOUTH MISSION VALLEY TRUNK SEWER	0.2		8.7	4.5		13.4	
MUNI	SOUTH PACIFIC HWY TRUNK SEWER	0.7					0.7	
MUNI	USIU TRUNK SEWER	1.3			0.1	4.3	5.7	
	SUBTOTAL	\$15.4	\$11.0	\$33.5	\$68.3	\$68.8	\$197.0	
	TREATMENT PLANTS							
MUNIRO	ANNUAL ALLOCATION - PT. LOMA TREATMENT PLANT & RELATED FACIL	1.3	0.8	0.8	0.8	0.8	4.5	
MUNIRO	ANNUAL ALLOCATION-METRO BIOSOLIDS CENTER	0.6	0.8	0.7	0.7	0.7	3.5	
MUNIRO	ANNUAL ALLOCATION-NORTH CITY WATER RECLAMATION PLANT	0.4	0.7	0.5	0.4	0.2	2.2	
MUNIRO	ANNUAL ALLOCATION-SOUTH BAY WATER RECLAMATION PLANT		0.2	0.2	0.2	0.2	0.8	
MUNIRO	METRO BIOSOLIDS CENTER	0.1					0.1	
MUNIRO	MBC BIOSOLIDS STORAGE SILOS	0.1	1.6	3.7	3.0	0.8	9.2	
MUNIRO	MBC ODOR CONTROL FACILITY UPGRADES	0.3		0.2	0.3		2.7	
MUNIRO	MBC STANDBY CENTRIFUGE FEED FACILITIES	0.1	1.0	4.0	1.9		5.1	
MUNIRO	MBC SWITCHGEAR RECONFIGURATION	0.1	0.2	1.1	0.3		1.7	
MUNIRO	MBC WASTEWATER FORCEMAIN EXTENSION	0.1	0.4	1.3	0.4		2.2	
MUNIRO	NORTH CITY RAW SLUDGE /PT. LOMA CATHODIC PROT.	0.1	0.2	0.7	0.3		1.3	

FUNDING SOURCE	PROJECT TITLE	BOND REIMBURSEMENT					TOTAL
		FY 2008	FY 2009	FY 2010	FY 2011		
METRO	NCWRP - EFFLUENT PUMP STATION UPGRADE						0.8
METRO	NCWRP - ULTRAFILTRATION & EDR UPGRADE						2.1
METRO	PT. LOMA - DIGESTER FACILITY UPGRADE						0.1
METRO	PT. LOMA - DIGESTER S1 & S2 UPGRADE	0.1	0.3	0.7	0.8	0.3	0.6
METRO	POINT LOMA - GRIT PROCESSING IMPROVEMENTS	0.6					0.6
METRO	PT. LOMA SO. ACCESS RD PROTECTION	1.7	0.3	3.3	14.2	14.9	34.4
METRO	SBWRP DEMINERALIZATION PHASE 1 & 2	0.1	0.1	0.5	1.1	8.8	10.6
	SUBTOTAL	\$5.8	\$6.7	\$17.8	\$23.1	\$28.6	\$82.0
	MUNI PUMP STATIONS						
MUNI	ANNUAL ALLOCATION - PS 64, 65, PENASQUITOS & E. MISSION GORGE						2.6
MUNI	ANNUAL ALLOCATION - SEWER PUMP STATION RESTORATIONS	0.8	1.1	0.3		0.4	10.1
MUNI	PUMP STATION 64 ELECTRICAL SYS UPGRADE	2.1	2.9	5.1			0.1
MUNI	PUMP STATION 64 FIBER OPTIC NETWORK	0.1		0.8	0.7		1.5
MUNI	PUMP STATION 84 UPGRADE & PUMP STATION 62 ABANDONMENT						2.0
MUNI	PUMP STATION UPGRADES	0.3	2.6	1.3	5.6	3.4	13.2
MUNI	SEWER PUMP STATION 79	0.9	1.6				2.5
	SUBTOTAL	\$4.2	\$8.2	\$7.5	\$6.3	\$5.8	\$32.0
	LARGE PUMP STATIONS						
METRO	ANNUAL ALLOCATION - METROPOLITAN SYSTEM PUMP STATIONS						5.5
METRO	NCWRP - SLUDGE PUMP STATION UPGRADE	3.5	1.0	0.3	0.3	0.4	0.4
METRO	OTAY RIVER PUMP STATION	0.1		0.2	0.1	0.1	0.1
METRO	PUMP STATION 2 ONSITE STANDBY POWER	0.2	4.1	4.7			9.0
	SUBTOTAL	\$3.8	\$5.1	\$5.2	\$0.4	\$0.5	\$15.0
	OTHER PROJECTS						
MUNI	ANNUAL ALLOCATION - CIP CONTINGENCIES						13.8
MUNI	ANNUAL ALLOCATION - DEVELOPER PROJECTS		2.5	2.9	4.5	3.9	2.7
MUNI	ANNUAL ALLOCATION - MUNI FACILITIES CONTROL SYSTEMS UPGRADE		0.6	0.7	0.7	0.7	0.8
METRO	ANNUAL ALLOCATION - METRO OPERATIONS CENTER	1.1	0.2	0.1	0.2	0.2	1.8
METRO	MOC 7 DEMO & PARKING LOT	0.1					0.1
METRO	ENVIRONMENTAL MONITORING & TECH SERVICES LAB	0.8					0.8
METRO	ENVIRONMENTAL MONITORING & TECH SERVICES LAB BOAT DOCK	0.7	2.0				2.7
METRO	METRO FACILITIES CONTROL SYSTEM UPGRADE	0.7	5.2	2.3	3.7		11.9
METRO	NORTH CITY RAW SLUDGE / POINT LOMA CATHODIC PROTECTION		0.4				0.4
METRO	POOLED CONTINGENCY			0.2	0.6	0.6	1.4
METRO	POOLED CONTINGENCY		0.6	0.7	0.5	0.5	2.3
METRO	WASTEWATER OPERATIONS MGMT.	0.4					0.4
METRO	WET WEATHER STORAGE FACILITY		0.4	0.7	3.5	1.3	5.9
	SUBTOTAL	\$3.8	\$11.9	\$7.6	\$13.7	\$8.0	\$45.0
	TOTAL PROJECTS	\$53.4	\$75.9	\$130.3	\$191.7	\$196.7	\$648.0

NOTE:
Project estimates are based on appropriations and include bond reimbursements.



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RAFTELIS FINANCIAL CONSULTANTS, INC.

Memo

To: Darlene Morrow Truver

From: Sudhir D. Pardiwala/Jon Davis

No. of Pages: 2

Date: December 16, 2006

Re: **Changes in Final Wastewater Rates from November 20 Executive Summary Draft Handout**

Rates presented in the November 20, 2006 version of the Wastewater Cost of Service Report Executive Summary have changed slightly from what is now shown in the FINAL version of the report. There were several changes to our rate calculations that are reflected in the new rates. Despite the various changes, the overall revenue increase targeted for MWWD has remained 8.75% in the first year. We revised the fees as we received updated information about operating costs, debt data from the City's rate case, and update of the rate structure for the 95 percent return factor for Single Family Residential (SFR) customers.

User rates for both Residential and Commercial/Industrial customer classes increased slightly. Three changes to the Test Year Cost of Service drove the increase:

- Additional O&M costs mostly related to employee benefits that were not available at the time of the executive summary were provided by the City in the Rate Case model and incorporated into the COS model increasing net revenue requirements.
- Interest on bond proceeds was updated to reflect the updated amount of bond proceeds reducing the capital portion of net revenue requirements.
- Revenue under existing rates was updated to reflect the existing rates multiplied by usage under the existing rate structure for SFR users. A recommendation of this Study was to modify the SFR rate structure adjusting the sewer cap from 14 hcf and 100% return to 20 hcf and 95% return.

Proposed rates from November 20 and from the December 15 FINAL Report are shown below.

Original Tables from November 20

Table ES-2 Proposed Residential Rate Schedule

Description	Usage Rate (\$/hcf of water use)	Base Fee (\$/account)
SFR Rates (1)	\$2.840	\$12.31
MFR Rates	\$3.970	\$12.31

(1) SFR rate based on a 20 hcf sewer cap

Table ES-3 Proposed Commercial/Industrial Rate Schedule

Flow (\$ per hcf of wastewater)	TSS (\$/lb)	COD (\$/lb)	Base Fee (\$/account)
\$2.975	\$0.4392	\$0.1791	\$12.31

Original Tables from FINAL REPORT December 15

Table ES-2 Proposed Residential Rate Schedule

Description	Usage Rate (\$/hcf of water use)	Base Fee (\$/account)
SFR Rates (1)	\$2.890	\$12.31
MFR Rates	\$4.038	\$12.31

(1) SFR rate based on a 20 hcf sewer cap and a 95% return factor

Table ES-3 Proposed Commercial/Industrial Rate Schedule

Flow (\$ per hcf of wastewater)	TSS (\$/lb)	COD (\$/lb)	Base Fee (\$/account)
\$3.0257	\$0.4431	\$0.1801	\$12.31

The calculation of the Capacity Fee also increased since its inclusion in the November 20 Executive Summary. Two changes to the Capacity Fee calculation drove the increase:

- Expansion Debt Interest was modified to include interest on projected expansion related CIP projects to be financed through revenue bonds. The interest generated by debt service reserve contributions from expansion bond proceeds was then deducted.
- The changes in the operating costs and rates discussed above resulted in changes to System Reserves included in the capacity fee calculation.

The net impact of these changes was a \$208 increase in the Capacity Fee to \$4,124.

CITY OF

SAN DIEGO

Wastewater Cost of Service Rate Study



FINAL REPORT

RFC
RAFTELIS FINANCIAL
CONSULTANTS, INC.

December 15, 2006





RAFTELIS FINANCIAL
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December 15, 2006

Ms. Darlene Morrow-Truver
Deputy Director
Services and Contract Division
City of San Diego
9192 Topaz Way
San Diego, CA 92123

Subject: Wastewater Cost of Service and Rate Design Report

Dear Ms. Morrow-Truver:

Raftelis Financial Consultants, Inc. is pleased to present this report on the wastewater cost of service, rate design and capacity fee study (Study) to the City of San Diego (City). We are confident that the results developed based on a cost of service analysis, when implemented, will result in fair and equitable sewer rates to the City's users and the revenue program will be acceptable to the State Water Resources Control Board (SWRCB).

The Study involved a review of the City's financial plan or rate case, usage characteristics, and rate structures. In addition, the Study also included a review of the City's existing capacity fees. The proposed changes to the City's existing rate structures and capacity fee are summarized below.

Rate Structure: Based on our review of the City's existing residential and commercial/industrial rate structures and, we propose the following:

- Continue the use of a rate structure that includes both a fixed monthly base fee and a variable charge based on water usage.
- Continue monthly SFR user charges based on a minimum 30-day winter water usage but with a usage cap of 20 hundred cubic feet (hcf) of water instead of the existing 14 hcf. In addition, a 95% return factor would be applied to SFR usage to account for water use that is not returned as sewer flow.
- Continue applying the same fixed monthly fee to all customers based on our justification of the costs allocated for base fee recovery.

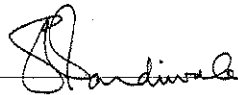
Capacity Fee: Based on our review of the City's existing capacity fee, we estimate a full-cost-recovery capacity fee of \$4,124 per EDU.

The proposed rate structure, and rates are presented in the Executive Summary and the rationale is discussed in detail in Sections 2 through 9 of the report. The implementation of

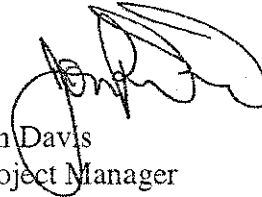
the proposed wastewater rates and capacity fee should result in a revenue program that is fair and equitable and acceptable to the SWRCB.

It was a pleasure working with you and we wish to express our thanks to you Ms. Orrie Irwin, and Barbara Sharatz and to all staff members of the Metropolitan Wastewater Department for the support and cooperation extended throughout the study. We also express our thanks to Mr. Chuck Crandall for his assistance. If you have any questions, please call me at (626) 583-1894.

Very truly yours,
Raftelis Financial Consultants, Inc.



Sudhir Pardiwala
Vice President



Jon Davis
Project Manager

City of San Diego, California



WASTEWATER COST OF SERVICE
RATE STUDY REPORT

FINAL

Prepared By

RFC

RAFTELIS FINANCIAL
CONSULTANTS, INC.

December 15, 2006

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Appendix A - List of Acronyms

Appendix B - COD, TSS, and Return Factors By SIC Code

SECTION 1: EXECUTIVE SUMMARY

The City of San Diego (City) has commissioned a utility Cost of Service and Rate Design (Study) for the Metropolitan Wastewater Department (MWW). The Study includes a thorough review of revenue requirements, cost of service allocations, and design of a system of user charges for the City's wastewater service consistent with State Water Resources Control Board (SWRCB) Revenue Guidelines and City policies. This report documents the results of the Study, updates cost of service based wastewater rates for City customers, and suggests changes to the rate structure. In addition, it reviews options for development of the monthly customer base charge. Rate changes are projected to be considered for approval by City Council and become effective for retail customers May 1, 2007.

The City provides both wholesale wastewater transportation, treatment, and disposal services to the Participating Agencies (PAs) and retail collection, transportation, treatment and disposal services to the City's users. To finance its capital program, the City uses a combination of federal grants, state loans, bonds, rates, and reserves. ~~The federal loans and grants are generally administered by the SWRCB.~~ As a recipient of federal grants and state loans, the City is contractually obligated to comply with the SWRCB's Revenue Program Guidelines, which requires that system users be billed for service on a basis proportionate to use.

The focus of this Study is the City's retail wastewater service. The specific objectives of the Study include:

- Update flow, chemical oxygen demand (COD) and suspended solids (SS) loadings for all customer classes;
- Update and review the overall costs (revenue requirements) of providing wastewater service;
- Determine costs of service for the City's retail customers;
 - Review the allocation of costs to the wastewater parameters of Flow, Total Suspended Solids (TSS), and Chemical Oxygen Demand (COD);
 - Review the allocation of parameter costs to retail customer classes;
- Develop an appropriate Single Family Residential (SFR) class sewer cap in keeping with SWRCB guidance;
- Review the fixed base charge component of the customer monthly bill; and,
- Update full cost recovery Capacity Fees.

The Executive Summary highlights the principal findings and recommendations of the Study. The following additional sections document the review process findings and recommendations to address the objectives of this Study.

- Section 2: Introduction;
- Section 3: Wastewater System;
- Section 4: User Classifications and Loadings;
- Section 5: Revenue Requirements;
- Section 6: Study Issues;
- Section 7: Cost Of Service;
- Section 8: Rate Design; and,
- Section 9: Capacity Fee Review.

1.1 Wastewater System

This section of the Executive Summary provides a brief background of the wastewater system, a review of the revenue requirements and cost of service, an evaluation of issues, and suggested changes to wastewater rates and capacity fees.

The City owns and operates a regional wastewater system that includes both the Municipal (Muni) System and Metropolitan (Metro) System. The Muni System is primarily a sewage collection system that serves the City's service area. The Metro System includes facilities that provide advanced primary treatment, secondary treatment, tertiary reclamation, sludge processing and effluent disposal. The City holds two NPDES permits for the regional system that stipulate discharge limitations: the first covering advanced primary treatment at the Point Loma Wastewater Treatment Plant; and the second covering secondary treatment at the South Bay Water Reclamation Plant. The City provides retail wastewater services through the Muni System and wholesale wastewater treatment services to fifteen PAs pursuant to the terms of the Regional Wastewater Disposal Agreement. Some of the PAs transport their wastewater flow to the Metro System treatment facilities through the Muni collection system and are charged separate transportation fees.

1.2 User Classification and Loadings

In a previous Cost of Service Study the City adopted recommendations that resulted in the current system of user classifications. Residential users have similar characteristics and are, therefore, assumed to have identical TSS and COD loadings. The commercial/industrial user strength, however, varies widely based on the type of work they engage in. For the purpose of this Study it was determined that user classifications currently in place still accurately reflect conditions within the City. A more detailed discussion of User Classifications and Loadings is contained in Section 4.

1.3 Review of Revenue Requirements

Revenue requirements from rates are the net of all expenditures, including reserve requirements, less non-rate revenues. The City's principal sources of revenue to recover operating costs include sewer service charges paid by the City's retail users and full cost recovery from the PAs per their cost sharing agreements with the City. The primary sources of revenue to recover capital costs include sewer connection fees, capital fund balance, bond proceeds, state and federal grants and loans, capacity fees paid by City retail users and the PAs, pay-as-you-go revenues from the PAs and interest earnings.

The City's retail service area operations and maintenance (O&M) expenditures, which are the focus of this Study, are estimated to be in the range of \$206 to \$231 million per year between FY 2007 and FY 2011. Retail service area annual capital expenditures, including debt service and pay-as-you-go capital, are in the range of \$81 to \$137 million per year. Debt service constitutes the majority of capital expenditures and ranges between \$72 and \$102 million per year over that same time period.

In order to meet projected revenue requirements, including desired operating and debt service reserve fund levels, City staff proposed the following revenue adjustments, which are intended for docketing by the City Council in February 2007:

WASTEWATER COST OF SERVICE RATE STUDY

Table ES-1 Proposed (2007) and Projected (2008-2010) Revenue Adjustments

May 1, 2007	May 1, 2008	May 1, 2009	May 1, 2010
8.75%	8.75%	7.00%	7.00%

1.4 Cost of Service

The total FY 2007 net cost of service to be recovered from the City's retail user rates is estimated to be approximately \$262 million, of which \$226 million are operating costs and the remaining \$37 million are capital costs mostly debt service costs. Additional capital costs are recovered from non-rate revenue including capacity fees.

The cost of service allocations presented in this study are based on the functional-design method approved by the SWRCB. The revenue requirements are allocated to different user classes in proportion to their use of the wastewater system. As mandated by the SWRCB, functional allocations are made to flow, TSS, and COD parameters. The cost of service allocations performed for the City's retail service area users are consistent with the system-wide proportionate use approach used in allocating revenue requirements between the City and the PAs.

As part of this Study, Raftelis Financial Consultants, Inc. (RFC) also evaluated options to cost justify the base fee by allocating costs attributable to customer accounts directly to another functional parameter.

1.5 Rate Design

The City's existing retail wastewater rate structure for Single Family Residential (SFR), Multi-Family Residential (MFR), and Commercial/Industrial user classes includes a fixed Base Fee and a Usage Rate. The Base Fee of \$11.32 per month is the same for all customer classes. The base fee currently recovers approximately 16 percent of the overall revenue requirements of the City's wastewater enterprise. The current Usage Rate is applied differently according to customer class:

- SFR usage is based on 100 percent return of minimum winter water usage and is capped at 14 hundred cubic feet (hcf) monthly. Users are billed at a rate of \$2.889 per hcf ;
- MFR usage is based on 95 percent return of water usage and billed at a rate of \$3.721 per hcf; and
- Commercial/Industrial usage is based on a sewer return rate, the percentage of metered potable water returned to the sewer, and pollutant loadings developed for each business type according to Standard Industrial Classification (SIC) codes.

Both MFR and Commercial/Industrial class customers may have individual return rates and pollutant loadings based on monitoring performed on their wastewater discharges by the City.

As mentioned, the overall focus of this Study was the review of the cost of service rate setting methodology originally developed for the City in 2003. Specifically, the Study focused on an update of system costs, flows and loadings. Generally, it was decided that system characteristics had not changed significantly since 2003 and a full review of cost allocation was not necessary at this time. The current rate structure meets regulatory guidelines and the City is satisfied with the rate structure, however, the City did want to review the effects of increasing the SFR sewer cap to conform more closely to guidance from SWRCB personnel.

1.6 Study Recommendations

This section of the Executive Summary outlines our suggestions. These suggestions impact various aspects of the wastewater rate structure and capacity fees.

1.6.1 Single Family Residential Sewer Cap

RFC recommends the SFR sewer cap be increased to 20 hcf and the assumed SFR return factor be dropped from 100 percent to 95 percent. SFR customers are currently subject to a 14 hcf sewer cap based on a mass balance analysis of customer winter usage. The purpose of the sewer cap is to determine the level at which it is assumed water usage ceases to be returned to the system as wastewater. Usage above the sewer cap is assumed to be outdoor usage for purposes such as irrigation and other outdoor uses. The prior cost of service study looked at this question and suggested that the sewer cap first be raised to its current level of 14 hcf and then, two years later, increased to 16 hcf. Guidance from SWRCB personnel suggests that the sewer cap be set at a level that captures 95 percent of the SFR accounts. Using this SWRCB direction, the calculated sewer cap would fluctuate between 17 and 21 hcf depending on climate conditions during the winter measurement months. In order to conform to SWRCB direction, the City has performed an analysis of SFR winter usage over several years to determine where the cap would fall. In order to set a stable cap, the City has chosen to average five years of winter usage and establish 20 hcf as the proposed SFR sewer cap.

The SWRCB guidance provides some latitude to assume that users return less than 100 percent of water use to the sewer system as wastewater. The City's climate may justify allowing a small percentage of water use for irrigation, even during the winter. We recommend the 95 percent return factor used for MFR be extended to include SFR usage as well.

1.6.2 Rate Design Changes

While the allocation of costs to customer classes must follow regulatory guidelines to ensure cost recovery proportionate to cost of serving those customer classes, the City has some flexibility in the design of the rate structure. To minimize impacts, retain simplicity, ensure reasonable stability of revenue, RFC recommends the continued use of a rate structure that includes both a fixed monthly base fee and a variable usage charge.

Base Fee: RFC recommends that the City continue to utilize a uniform monthly base fee for all system users. The current method for setting the base fee is appropriate under SWRCB guidance and the City may continue its use. This Study did review alternatives for development of a base fee as discussed in subsection 1.6.5.

Residential Usage Rate: RFC recommends that the City continue its existing method of computing monthly SFR wastewater charges, but with a usage cap of 20 hcf instead of the existing 14 hcf cap as discussed above. RFC also recommends revising the SFR return factor to 95 percent from the current 100 percent. A short discussion on levels of usage cap is presented in Section 6 of this report. The system mass balance analysis, which compares the actual total wastewater flow to flow implied from metered water use using a 20 hcf winter cap and a 95% return factor indicates these adjustments to the SFR usage cap are justified. RFC recommends that the City continue its existing method of determining monthly SFR user charges based on a 30-day minimum winter water usage but apply the 95 percent return factor. RFC also recommends that the City continue to compute MFR wastewater usage charges based on water usage and a 95 percent return factor. Table ES-2 presents a summary of the Residential Rate Schedule. All proposed rates include a projected May, 2007 revenue increase of 8.75%.

WASTEWATER COST OF SERVICE RATE STUDY

Table ES-2 Proposed Residential Rate Schedule

Description	Usage Rate (\$/hcf of water use)	Base Fee (\$/account)
SFR Rates (1)	\$2.890	\$12.31
MFR Rates	\$4.038	\$12.31

(1) SFR rate based on a 20 hcf sewer cap and a 95% return factor

Commercial/Industrial Usage Rate: For commercial/industrial users, RFC recommends that the City continue to charge users based on their flow and strength. The strength and return factors for these users are based on industry standards and built into the City's database.

RFC also recommends that wastewater charges for Commercial/Industrial users discharging greater than 25,000 gpd of flow continue to be calculated individually based on measured or estimated strength. The recommended cost of service rates are shown in Table ES-3. Rates include the 8.75% revenue increase.

Table ES-3 Proposed Commercial/Industrial Rate Schedule

Flow (\$ per hcf of wastewater)	TSS (\$/lb)	COD (\$/lb)	Base Fee (\$/account)
\$3.0257	\$0.4431	\$0.1801	\$12.31

Contract customers and hauled waste customers would continue to be charged on a unit cost rate in which the base fee is included in the unit rate for flow. The recommended unit cost of service rates are shown in Table ES-4. Rates include the 8.75% revenue increase.

Table ES-4 Proposed Unit Cost Rate Schedule

Flow (\$ per hcf of wastewater)	TSS (\$/lb)	COD (\$/lb)
\$3.1320	\$0.4586	\$0.1864

1.6.3 Rate Impacts

The main objective of this Study is to arrive at a fair and equitable allocation of costs to all user classes and individual users in proportion to their demand for wastewater services and to comply with guidance from the SWRCB. Overall increases for all customers are driven by inflationary pressures on both utility O&M and capital costs. Modifications to the sewer rate structure result in a range of customer impacts based on user classification and usage.

The impacts discussed in this paragraph compare rates under the existing and proposed rate structure. Due to the recommended change in the return factor from 100 percent to 95 percent, SFR users below the existing 14 hcf cap (approximately 85 percent of SFR accounts) will see increases ranging from 1.9 to 5.8 % less than the 8.75% overall increase. SFR users above the current 14 hcf cap will experience higher increases since usage up to the new 20 hcf cap will become billable. Compared to the average increase of 8.75 percent for the wastewater enterprise, the projected bill impacts for SFR vary from

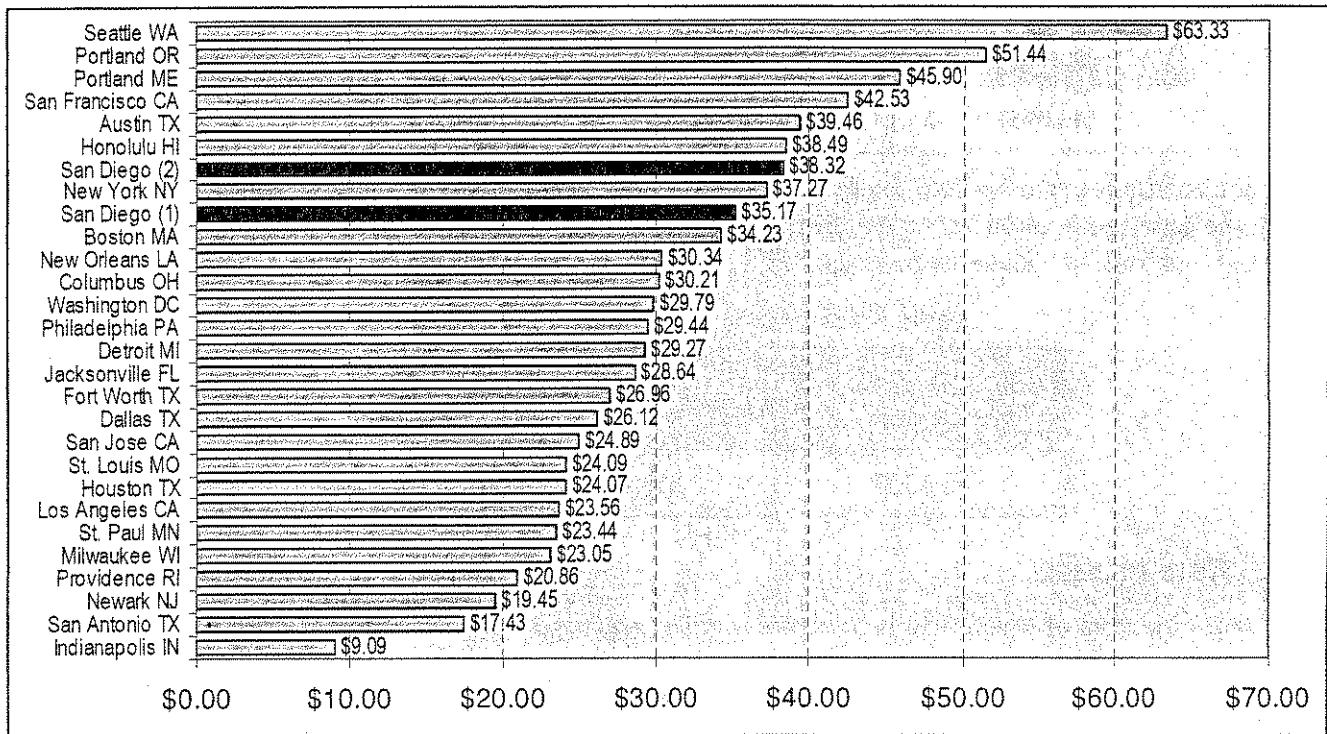
WASTEWATER COST OF SERVICE RATE STUDY

increases of 2 percent to increases of 35 percent depending on metered water usage. SFR users above the current 14 hcf cap will experience higher increases since usage up to the new 20 hcf cap will become billable. Compared to the average increase of 8.75 percent for the wastewater enterprise, the projected bill impacts for SFR vary from increases of 2 percent to increases of 35 percent depending on metered water usage. MFR and Commercial/Industrial accounts will experience more consistent increases in their sewer service charges due to inflationary pressures on operating and capital costs since their rate structure will not be changed.

While the recommended changes lead to varying increases in wastewater charges, they ensure a fair and equitable allocation that is proportionate to use. In addition, all aspects of the Study including identification and aggregation of O&M and capital costs and the development of rate structures conform to the revenue program guidelines set forth by the SWRCB.

Monthly wastewater bills of the average SFR customer under proposed rates and customers of other comparable utilities in the nation are shown in Table ES-5. Bills are calculated under existing rate structures at 9 hcf of monthly usage. Proposed City customer bills are compared to those of other San Diego regional utilities in Table ES-6 based on 9 hcf of monthly water usage, the City average. The latter chart shows the City below the average as compared to other San Diego based agencies.

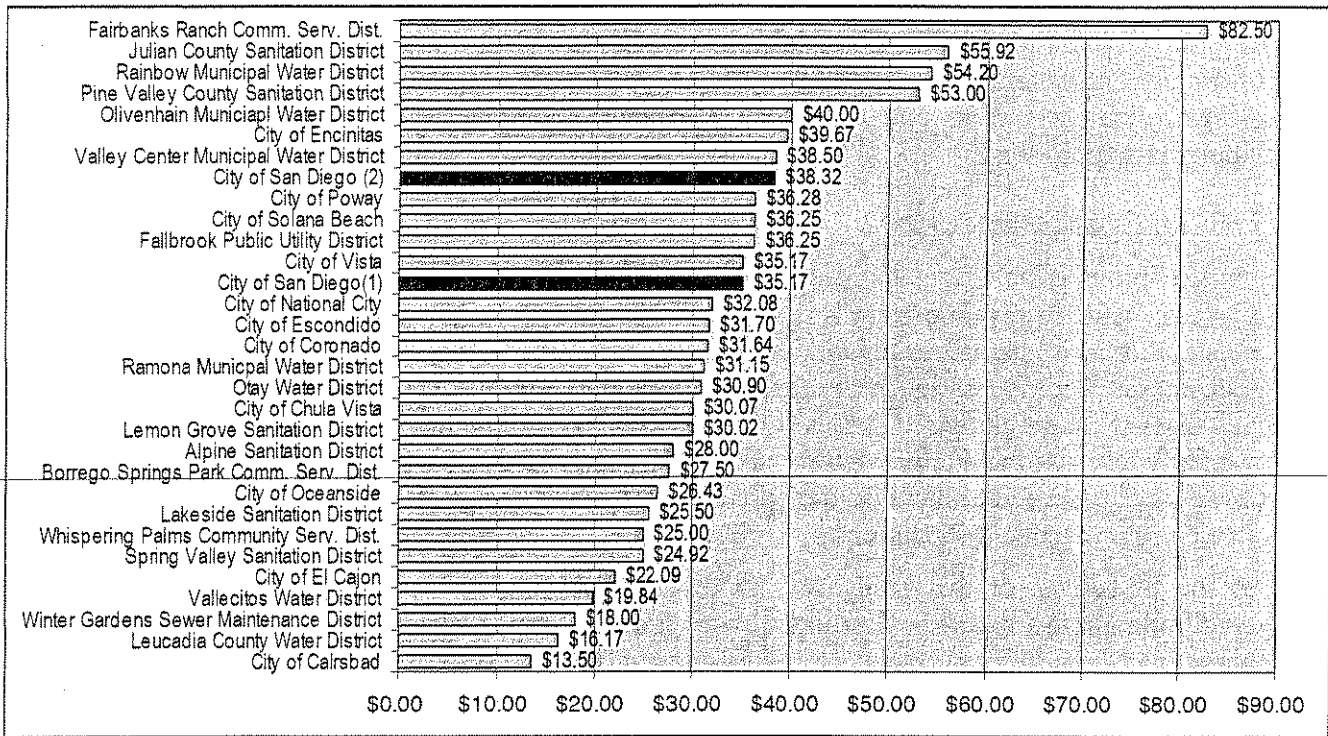
Table ES-5: National Comparison of Monthly Wastewater Bills



- (1) based on existing rates
- (2) based on proposed rates

WASTEWATER COST OF SERVICE RATE STUDY

Table ES-6: Regional Comparison of Monthly Wastewater Bills



- (1) based on existing rates
- (2) based on proposed rates

1.6.4 Capacity Fee Update

Capacity fees are one-time fees used to recover the cost of providing the system capacity required when a new user connects to the wastewater system. Examples of such costs include those related to increasing wastewater transmission and treatment capacity in treatment plants, ocean outfalls, interceptors, pumping stations, and sewer mains.

The City currently charges \$3,710 per equivalent dwelling unit (EDU) or SFR account. The minimum capacity assigned to any sewer connection is one EDU. Qualifying low income housing is eligible for a reduced capacity fee as outlined in Water Department Instruction 55.30. MFR units having individual, City-read water meters are assigned one EDU per unit, while MFR units that share a common water meter are charged based on a density-adjusted formula. Non-residential customers are charged on the basis of the number of fixture units, using a conversion factor that equates 20 fixture units to one EDU.

The City has incurred major costs over the last ten years to upgrade and expand facilities and will continue to incur additional costs to comply with EPA mandates to meet discharge requirements. The capital costs of existing facilities and growth-related portion of future costs of improvements to the City's facilities form the basis of the calculated capacity fee. The capital costs the City has incurred prior to 2006 and the future costs to be incurred over the next ten years were reviewed. The projects associated with these capital costs were examined and the net capacity available from these projects was determined in order to derive the capacity fee. These projects include sewer mains, pumping stations, treatment plant upgrades, outfall costs etc. The resultant full-cost-recovery capacity fee is \$4,124 per EDU.

WASTEWATER COST OF SERVICE RATE STUDY

Implementation of the higher capacity fee would result in additional capacity fee revenue. Since these additional dollars would replace funds that would otherwise be supplied by current system users, and assuming the increase in cost per EDU does not result in a reduction in the number of EDU's sold, the funds from current system users could be utilized to reduce the magnitude of future capital replacement borrowings, offset operations and maintenance expenses, augment the rate stabilization fund, or for other appropriate purposes.

1.6.5 Base Charge Options

Base charges provide the City a source of stable revenues that do not vary with usage. Ideally the City would like to increase revenue from this source for stability. Rating agencies also prefer this type of revenue stability as it guarantees revenue recovery. However, as the base charge increases and variable charge decreases there is less incentive for conservation. Currently the City recovers 16 percent of the revenues from the base charge. The level of the base charge revenue as a percentage of total revenue was originally discussed and approved by stakeholders in the previous rate study completed in 2004. As a result we have proposed to increase the base charge by the average revenue increase of 8.75 percent to retain the current revenue distribution.

One of the objectives of this study was to evaluate alternative methods for allocating cost to be recovered through the monthly customer base charge. It is well accepted to incorporate a fixed component into the utility rate structure. Since most of the utility's costs are fixed, over the short term, revenue from the fixed component, or Base Charge, promotes revenue stability, which is critical to a strong financial position. This base charge is currently set to recover annual administrative costs from the Muni system. However, the City wanted to investigate alternatives for allocating costs to an account-based functional parameter, in addition to flow, TSS, and COD parameters. Then, a base charge unit cost could be calculated by dividing this account-based allocation by the total number of accounts in the City wastewater system.

RFC identified five specific types of costs that may be equitably allocated on an account basis and recovered through a customer base charge. These types of costs include:

- Meter reading, billing, and customer service costs; and,
- Inflow and infiltration costs;

and portions of:

- Administrative and General costs;
- Sewer lateral maintenance costs; and
- Debt Service costs.

These types of costs were chosen because all, or a portion of them, are more closely related to the number of system accounts than they are to system flow or loadings. Our analysis looked at historical Muni and Metro system operating costs and allocated them among flow, TSS, COD, and account-based functional parameters. The analysis showed that a reasonable allocation of these costs would justify the current level of base charge in the City system. Allocation of cost for base charge recovery is presented in more detail in Section 5.

It was determined that since the SFR class represents over 80 percent of overall system accounts, this account-based functional parameter allocation would disproportionately impact SFR users. In addition,

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the SWRCB guidance does not explicitly allow for cost allocation to functional parameters other than flow, TSS, and COD. Under SWRCB guidance, RFC believes the existing methodology for determination of the base fee is appropriate. For these reasons, the City has decided to continue with its existing methodology for development of the customer base charge.

SECTION 2: INTRODUCTION

2.1 Background

The City retained Raftelis Financial Consultants, Inc. (RFC) in 2006 to update a cost of service and rate design study and to address rate structure issues to ensure a continued fair and equitable system of user charges for the City's retail wastewater service. The City needs to finance capital expenditures required to meet conditions of a consent decree. The Study will help promote financial stability so that the City can access the debt markets to obtain financing at the lowest cost. This report documents the findings, analyses, results, and suggestions of the updated study.

The City owns and operates a regional wastewater system that provides wastewater collection, conveyance and treatment services to the City and a number of Participating Agencies (PAs) outside the City. The City operates the regional wastewater system under two federal National Pollutant Discharge Elimination System (NPDES) permits that stipulate standards of discharge for the Pt. Loma Wastewater Treatment Plant and the South Bay Water Reclamation Plant. To comply with the discharge standards and to meet other requirements of the federal Clean Water Act, the City had to undertake various capital project initiatives including the enhancement of existing wastewater treatment facilities and the construction of new tertiary wastewater reclamation facilities. The City operates the wastewater system as a self-supporting enterprise and costs are accounted for separately under the wastewater enterprise fund.

To minimize the impact of the capital project initiatives on the City's users and its PAs, the City finances its eligible capital projects in part via a combination of federal loans and grants which are administered by the State Water Resources Control Board (SWRCB). As a recipient of various federal grants and state loans, the City is obligated to comply with SWRCB's Revenue Program Guidelines. The guidelines require that recipients of state-administered grants and/or loans establish a system of user charges that recovers operations, maintenance, and replacement costs from users on a basis proportionate to use. The guidelines specifically require a fair and equitable apportioning of costs based on each user class's contributions of flow and strength of wastewater pollutants discharged.

To comply with the revenue program guidelines, the City conducted a review of cost of service and developed a strength-based billing method to allocate costs among the various PAs and within the City retail system. The strength-based billing procedure is based on flow and the strength parameters of Total Suspended Solids (TSS) and Chemical Oxygen Demand (COD). The PAs are currently billed based on their contribution of flow, TSS and COD per the terms outlined in the service contracts between the City and the PAs and approved by the SWRCB in 1998. City retail users are also billed based on their customer class contribution of flow, TSS and COD as developed in a 2003 Cost of Service and Rate Study.

2.2 Objectives

Several related objectives need to be considered in the development of a financial plan and in the design of rates. This being the case, judgment plays a role in the final design of rate structures and rates. The major objectives of the study update are to:

- Ensure revenue sufficiency to meet the O&M and capital costs of the City's wastewater enterprise;

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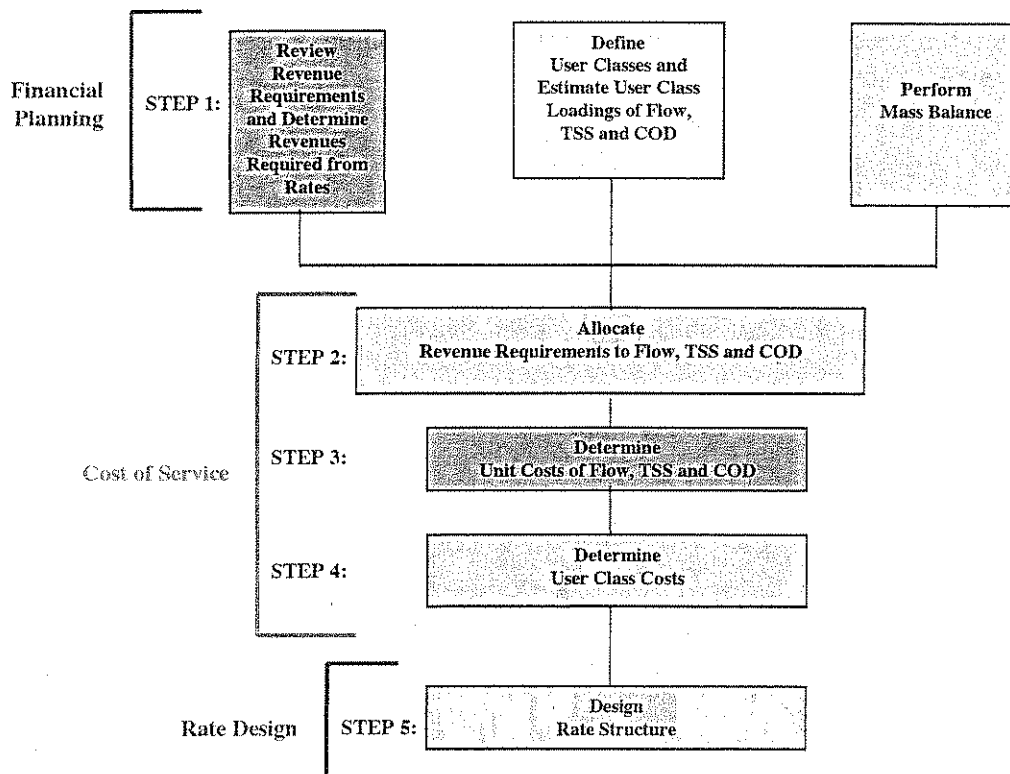
- Plan for revenue stability to provide for adequate operating and capital reserves and for the overall financial health of the wastewater enterprise;
- Maintain good financial ratings by providing for a stable and reliable financial position so that debt issuance can be achieved at the lowest cost;
- Ensure fairness and equitability in the development of a system of user charges;
- Minimize rate impacts to reduce financial hardship on the different user classes;
- Ensure compliance with regulatory requirements of the SWRCB; and
- Maintain eligibility for grants and loans.

2.3 Scope

The scope of this study update includes the determination of Wastewater User Rates through an update of system costs, flows, and loadings, review of rate design, determination of Capacity Fees, and compliance with SWRCB requirements. While User Rates facilitate the generation of adequate revenues to meet routine annual O&M and capital expenditures including debt service, Capacity Fees ensure that new users pay their fair share of costs so that existing users are not burdened with providing capacity for new users.

The comprehensive cost of service and rate design component includes three major processes. Figure 2-1 provides a graphical representation of the various steps involved in the comprehensive cost of service and rate design process.

Figure 2-1: Cost of Service and Rate Design Process



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The three major processes are as follows:

Financial Planning: Revenue requirements are projected for a five-year period from FY 2007 through FY 2011. Financial planning involves estimation of annual O&M and capital expenditures, annual debt service and reserve requirements, operating and capital revenue sources and the determination of required annual user revenues from rates and charges. User classification, annual user loadings estimation for the selected wastewater parameters, and system mass balance analysis are also performed concurrently.

Cost of Service: Cost of Service involves the apportioning of required annual revenues to the different user classes proportionate to their contributions of flow, TSS and COD to the wastewater system.

Rate Design: Rate Design involves the development of a fixed and variable schedule of rates for each of the different user classes to equitably recover the costs attributable to them.

The Capacity Fee development component includes the determination of wastewater infrastructure capacity and the associated costs required to accommodate new growth, and the design of one-time capacity fees for the different classes of new users.

2.4 Assumptions

Following are the assumptions used in the study:

1. Annual O&M and capital expenditures, annual revenues from the PAs, other revenue sources and reserve requirements, O&M inflation factors, and user account growth projections are all based on the City's Fiscal Year 2007 Rate Case.
2. Annual average wastewater system Flow and TSS/COD concentrations used in the system mass balance analysis are based on the Metropolitan Wastewater Department (MWW) 's annual report on projected flows and strength. The data used in the Study is from the Projected Flow and Strength Report.
3. TSS strength assignment for the different user classes is based on the City's Sewer Classification Program's Standard Industrial Classification (SIC) Guidelines List. See Appendix 2.
4. COD strength assignment for the different commercial/industrial SIC classes is based on information in the City's billing database. See Appendix 2.

SECTION 3: WASTEWATER SYSTEM

This section of the report presents a brief overview of the regional system, the relationship between the City and its PAs that discharge to the regional system, and the City's existing retail rate structures.

3.1 Regional Wastewater System

A brief description of the City's regional wastewater system and the relationship between the City and the PAs that discharge to the regional system is presented in this sub section.

3.1.1 Regional Infrastructure

The City-owned regional wastewater system includes both the Muni System and the Metro System. The Muni system is primarily a sewage collection system that serves the City's service area and includes trunk lines, collector mains, pump stations and stormwater interceptor pump stations.

The Metro system infrastructure, which services both the City and its PAs, currently includes three wastewater treatment plants that are operational, two ocean outfalls, a biosolids processing center, three major pump stations, and several miles of force mains and gravity flow interceptors. A brief description of some of the major Metro System facilities is provided below.

Point Loma Wastewater Treatment Plant (PLWTP): The PLWTP is the principal treatment facility in the Metro system, with a permitted treatment capacity of 240 mgd of average daily flow. The PLWTP provides advanced primary treatment. The plant currently achieves a TSS removal rate of nearly 85-87 percent through the use of enhanced chemical treatment and Bio-Chemical Oxygen Demand (BOD) removal of 58 percent. The PLWTP receives raw solids from the South Bay Water Reclamation Plant (SBWRP).

North City Water Reclamation Plant (NCWRP): The NCWRP provides tertiary treatment, has a permitted capacity of 30 mgd of average daily flow, and produces about 5 mgd of reclaimed water. The non-usable secondary effluent from this plant is conveyed to the PLWTP and the solids from NCWRP are processed at the Metropolitan Biosolids Center (MBC). The City was required to construct the NCWRP and the SBWRP as a condition of EPA's modified permit for the PLWTP.

South Bay Water Reclamation Plant (SBWRP): The SBWRP is a recently completed sewage treatment facility that is capable of processing sewage to both secondary and tertiary treatment levels. The SBWRP has a permitted capacity of 15 mgd average daily flow. Treated effluent from the facility flows to the ocean through the South Bay Ocean Outfall. Sludge from the SBWRP is pumped to the Point Loma Plant. The plant currently produces about 2 mgd of reclaimed water.

Point Loma Ocean Outfall (PLOO): The Point Loma Ocean Outfall is a 4.5-mile long outfall that discharges treated sewage effluent at a depth of 320 feet of water.

Metropolitan Biosolids Center (MBC): The MBC provides state of the art sludge processing. The facility receives raw sludge from NCWRP and digested sludge from PLWTP, and after processing, returns the centrate to PLWTP.

South Bay Ocean Outfall (SBOO): The South Bay Ocean Outfall is a 3.5 mile long outfall that discharges treated sewage effluent at a depth of 100 feet of water.

The PLWTP, NCWRP, SBWRP, SBOO, PLOO, and MBC are all parts of an integrated regional system. Due to the complex exchange of effluents, solids and centrates, sharing of one common outfall and

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receipt of flows from the participating agencies, the Metro System is viewed and operated as “a regional system” from a permitting, regulatory compliance and operational efficiency standpoint. The City as the owner and operator of the regional system holds NPDES permits that stipulate discharge limitations. Currently, as per the NPDES permit requirements, a Mean Monthly TSS Removal percentage greater than or equal to 80 percent, and a Mean Annual BOD Removal percentage greater than or equal to 58 percent apply to the undiluted effluent discharged through the PLOO. The percentage removal rates are calculated on a system-wide basis.

3.1.2 Relationship Between the City and Participating Agencies

The Metro system provides “wholesale” treatment services including some conveyance, treatment and sludge disposal operations to the City and 15 PAs that are outside the City’s jurisdiction. Services to the PAs are provided pursuant to the terms of the Regional Wastewater Disposal Agreement, which expires on December 31, 2050. The PAs and the City are responsible for sewage collection operations within their own respective jurisdictions, and for the conveyance of the collected sewage through trunk lines to the Metro system. Some of the key provisions of the Regional Wastewater Disposal Agreement are as follows:

- The City has full ownership and rights of operation of the Metro system.
- The PAs pay for the services through a system of Sewer System Charges including O&M and capital. The Sewer System Charge is an annual full cost recovery – based calculation which takes into consideration both the flow and strength of the wastewater conveyed to the Metro system.
- The PAs’ share of capital costs is determined based on the proportion of flows received and strength of the flows.
- The PAs’ share of Metro O&M costs is based on their proportionate flow into the Metro system and the strength of their wastewater.
- The City determines the Sewer System Charge unit rates by allocating net O&M and capital costs among parameters of Flow, COD, and TSS based on the approved Functional-Design Methodology of allocation.

3.2 Existing Rate Structure

The City’s existing wastewater rate structures for the SFR, MFR, and Commercial/Industrial user classes include a fixed Base Fee and a Usage Rate. While the base fee is charged to each water meter, the usage rate is applied to a user’s water usage or wastewater generated. SFR customers wastewater is estimated based on the lowest monthly winter water usage and is capped at 14 hcf per month assuming 100 percent return to sewer. The City’s existing rates for residential user classes are included in Table 3-1.

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Table 3-1: Existing Residential User Rates

Description	Usage Rate (\$/hcf of water use)	Base Fee (\$/account)
SFR Rates (1)	\$2.889	\$11.32
MFR Rates	\$3.721	\$11.32

(1) SFR rate based on a 14 hcf sewer cap and 100% return to sewer

3.2.1 Base Fee

In the existing rate structure the base fee is identical for every user class. The SFR, MFR, and Commercial/Industrial users have the same monthly base fee of \$11.32 per meter. The base charge was last increased in March, 2005.

3.2.2 Usage Rate

The usage rate for all user classes is based on the volume of wastewater flow and the strength of TSS and COD. The usage rate varies by user class. The usage rates for SFR, MFR, and Commercial/Industrial user classes are discussed below.

SFR Usage Rate: The current SFR usage rate, effective July 1, 2006, is \$2.889 per hcf of the SFR's 30-day minimum metered water consumption during the previous winter months of December 2005 through March 2006. The usage rate is based on a 100 percent return of winter water usage to sewer, up to the current 14 hcf cap. Water usage in excess of the 30-day minimum usage established on July 1 is assumed to be used for irrigation, and is not billed for sewer services. For each SFR, the 30-day minimum winter months' water usage is revised annually on July 1, and this usage is the basis for monthly sewer service charges until the following July 1. New users who do not have a winter water usage history pay a flat monthly charge until their winter water usage is established.

Under the existing rate structure, the maximum monthly sewer charge including base fee that a SFR user can be charged is \$51.77.

MFR Usage Rate: The current MFR usage rate, effective as of March 1, 2005, is \$3.721 per hcf of water usage. This usage rate is applied to a MFR user's actual monthly water usage and is based on a 95 percent return to sewer. Return to sewer is the percentage of water usage that is returned to sewer as wastewater.

Commercial/Industrial Usage Rate: Commercial/industrial users are classified based on Standard Industrial Classification (SIC) code and are assigned TSS and COD strengths and percent return to sewer that are characteristic of their type of business. The rate applied to a user's monthly water usage depends on the user's TSS and COD strength and percent return to sewer. The commercial /industrial rates are presented in Table 3-2.

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Table 3-2: Existing Commercial/Industrial User Rates

Flow (\$ per hcf of wastewater)	TSS (\$/lb)	COD (\$/lb)	Base Fee (\$/account)
\$2.7534	\$0.4294	\$0.1544	\$11.32

Rates for strengths greater than 1,000 mg/l TSS, 2000 mg/L COD, or flows to sewer greater than 25,000 gpd, are computed individually and adjusted for percent return to sewer. Rates are computed on the basis of \$2.7534 per hcf of flow, \$0.4294 per pound of TSS, and \$0.1544 per pound of COD and are in addition to the base fee.

SECTION 4: USER CLASSIFICATION AND LOADINGS

In addition to the 15 PAs, who are the City’s “wholesale” users, the City’s wastewater enterprise has a mix of “retail” users within the City’s service area. The City’s retail users primarily comprise regular water/sewer, sewer only, and the Department of Navy users. A review of the City’s existing user classifications are discussed in the following subsections.

4.1 Existing User Classifications

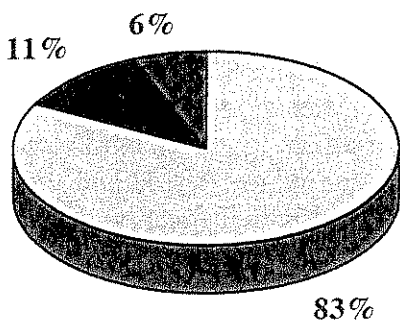
The City currently serves a population of nearly 1.2 million within the City’s service area. In July, 2006 it is estimated that the City had a total of 270,805 meters. The breakdown of the City’s sewer user classes and the number of meters associated with each class as of FY 2006, are as follows:

<u>User Class Description</u>	<u>Number of Meters</u>	<u>Average Daily Wastewater Usage</u>
Single Family Residential (SFR)	223,996	46.45 MGD
Multi-Family Residential (MFR)	30,395	34.06 MGD
Commercial/Industrial	16,414	30.44 MGD

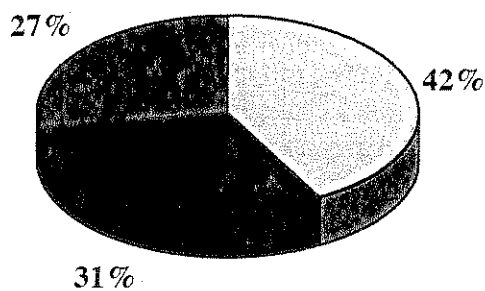
The percentage distribution of the meters is shown in Figure 4-1. Residential meters (SFR and MRF) comprise 94 percent of the total meters and 73 percent of total flow.

Figure 4-1 – Distribution of System by Class

Distribution of Meters by Class



Distribution of Flow by Class



- Single Family Residential
- Multi-Family Residential
- Commercial/Industrial

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Residential Classification: The residential classes, including SFR and MFR, are homogenous in that all the users are assumed to have the same TSS and COD strengths. Since all residential accounts use the same TSS and COD strengths, they each have a single wastewater rate that includes all three parameters and is based on metered water usage. However, the volume of wastewater flows can vary among the individual users depending on water usage. The residential users are therefore classified into SFR and MFR user classes since they differ in their water usage characteristics. SFR water usage includes significant irrigation usage due to yard and garden areas whereas MFR water usage includes very low irrigation usage since most MFR users have very little yard area, if any. Usually, MFR complexes that have large common green areas and pools have separate irrigation meters.

Commercial/Industrial Classification: Typically, there is significant variability in both the volume of wastewater flows and wastewater strengths, among the different types of commercial/industrial users such as food service establishments, retail stores, and supermarkets. Therefore, to ensure fair and equitable determination of wastewater service charges, the City uses separate unit rates applied to flow, TSS, and COD loadings of users.

4.2 Wastewater Flow Estimation

In order to perform a cost of service analysis, wastewater flow needs to be estimated and projected for each user class. Wastewater flow is not measured for most users because of cost and/or accuracy concerns. Typically, flows are estimated based on winter water usage for SFR users and as a percentage return of water usage for MFR and most Commercial/Industrial users. Actual wastewater flow is measured for only a few large commercial/industrial users.

4.2.1 Residential Class

RFC reviewed the methods that the City currently uses to estimate annual wastewater flows for the residential class. The City currently uses the minimum monthly winter water usage with a monthly usage cap of 14 hcf to estimate wastewater flows for the SFR users, and actual monthly water usage to estimate wastewater flows for the MFR users. The methods used in estimating wastewater flows differ between SFR and MFR users due to the differences in their water consumption patterns.

SFR Wastewater Flow Estimation: SFR water consumption includes two types of water usage: domestic use (water used inside the home) and irrigation use (water used in the yard). While the level of domestic water usage is expected to remain fairly stable throughout the year, fluctuation in irrigation usage could occur due to seasonal changes, which in turn causes significant variations in total monthly water usage during the year. Irrigation usage is at its minimum levels during the winter period and therefore the water used during the winter period can be associated with domestic usage. Typically, domestic water returns to the sewer system and irrigation water does not. Therefore, for SFR users it is appropriate to use winter water usage as a direct approximation of annual wastewater flows returned to the sewer. The four-month period from December through March is deemed as the SFR winter water usage period. The minimum monthly usage during this period is used for billing purposes.

In San Diego, weather conditions are moderately dry even during winter months, which would result in some level of irrigation water use even during the winter period. To account for winter irrigation usage that does not return to the sewer, the City currently has set a usage cap of 14 hcf per month in estimating and billing annual SFR wastewater flows. Any water usage beyond the usage cap level is deemed as not being returned to the sewer and hence is not considered in computing the sewer bill. As a part of this study, RFC performed a mass balance analysis that indicated it would be appropriate to employ a usage

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cap higher than the current 14 hcf level. Based on that analysis and direction from the SWRCB, RFC recommends adoption of a SFR usage cap of 20 hcf instead of the current 14 hcf. SWRCB does not preclude the use of a residential return factor to account for outdoor water use so RFC also recommends a 95 percent return factor be incorporated into the SFR usage rate. The issue of SFR usage cap is discussed in greater detail in Section 6.

MFR Wastewater Flow Estimation: MFR water consumption relates predominantly to domestic use with very little or no irrigation use, since most MFR complexes have small green areas. MFR complexes with very large green belts are likely to have separate irrigation water meters. Therefore, MFR water usage levels remain relatively stable throughout the year and it is appropriate to use actual monthly water usage in estimating wastewater flows. However, MFR complexes do have some minimum irrigation usage, which does not return to the sewer, and therefore generally the City estimates MFR annual wastewater flows to be 95 percent of their annual water usage. Users that have significant return rate variations from this standard may apply for and receive variances.

4.2.2 Commercial/Industrial Class

Wastewater flows for the commercial/industrial users are estimated based on actual monthly water consumption. Water usage patterns vary significantly among the different types of commercial/industrial businesses and therefore the City typically assigns to each user a percent return to sewer, based on SIC code and assuming no irrigation. Users whose return to sewer varies significantly from what has been assigned can take advantage of an appeals process to have the return to sewer factor and usage rate reduced.

4.3 TSS and COD Strength Assignments

Residential Strength Assignments: The Engineering and Program Management Division of MWWD provided strength for the SFR class. The estimated strength for residential customers, both SFR and MFR is at 280 mg/L of TSS and 505 mg/L of COD, respectively. These strengths are used in the development of the residential rates.

Commercial/Industrial Strength Assignments: The City's existing sewer user classification and rate structures are based on wastewater flows, TSS concentrations, and COD concentrations. The City currently assigns TSS and COD strengths to the different classes of commercial/industrial users based on SIC codes. The City's Sewer Classification Program Industrial Classification Guidelines List is included as Appendix B. No changes were made to the existing TSS or COD assignments.

4.4 System Mass Balance

RFC worked with City staff to analyze historical FY 2006 water consumption as the base data to estimate annual wastewater flows and TSS/COD loadings for all user classes. Data reliability is critical because these historical flows and loadings are used to project future user class annual flows and strength loadings. Projected flows and loadings are later used in the cost of service analysis (to derive the unit costs of service and user class costs). A mass balance analysis is usually performed to verify the appropriateness of the estimated flows and loadings.

Mass balance is the process of matching and reconciling calculated total annual flows and strength loadings in pounds with the quantities actually received at the treatment facilities. The mass balance analysis takes into consideration other non-user flows such as the inflow & infiltration (I&I) flows that enter the sewer system. I&I flows refers to water that enters a sewer system from other sources

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including cracked sewer mains, manholes and sewer vents. Variances between the actual flows and loadings received at the treatment facilities and the calculated historical flows and loadings are used to assess the validity of assumptions.

The City's share of total annual average flows including I&I flows for FY 2006 is estimated at 116.9 mgd of which 2.7 mgd is the estimated I&I flow. When the calculated annual City flow and loadings were compared with the actual City share (inclusive of I&I) received at the treatment facilities, the analysis indicated a 1.3 percent variance. The calculated flows were slightly lower than the actual City's share of flows received.

The City's measured annual average TSS and COD strengths are 287 mg/l and 511 mg/l respectively. The mass balance analysis on loadings indicated that calculated TSS (inclusive of I&I) was 2.0 percent lower than measured TSS. The calculated COD was 5.2 percent higher than measured COD.

The mass balance analysis supported a revision in the monthly SFR usage cap from 14 hcf to 20 hcf and 95% return to sewer, which follows SWRCB guidelines. The loadings are not completely balanced; this is not unusual given the number of assumptions and strength estimates used for the different user types. Results within about 5 percent are not unreasonable for this analysis. The differences in flows and strengths are apportioned to all classes proportionately. Results of the Mass Balance Analysis are presented in Table 4-1.

Table 4-1 – Results of FY 2006 Mass Balance Analysis

User Class Description	Annual Wastewater Flow (hcf)	Annual TSS Loading (lbs)	Annual COD Loading (lbs)	Annual Wastewater Flow (MGD)
Single Family Residential (SFR) (winter flow @ 20 hcf, 95% return)	22,372,214	39,069,940	70,465,428	45.85
Multi-Family Residential (MFR) (metered flow, 95% return)	16,621,614	29,027,303	52,352,850	34.06
Commercial/Industrial	9,022,562	16,473,959	35,883,086	18.49
Commercial/Industrial (very large users)	5,274,383	7,867,056	35,997,211	10.81
Inflow & Infiltration (I&I)	1,325,650	826,808	413,404	2.72
Net Flow from Other Sources	1,386,327	9,506,378	15,171,635	2.84
Calculated Flow & Loadings	56,002,750	102,771,064	210,283,613	114.77
Measured Flow & Loadings	57,027,184	105,424,123	200,861,767	116.87
Percentage Difference	1.8%	2.5%	-4.7%	1.8%

4.5 Annual Wastewater Flows and Loadings Projection

Annual wastewater flows and TSS/COD loadings need to be projected for each user class to determine each user class' cost of service and sewer rates. A brief discussion on the method used in estimating

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user class flows and loadings for FY 2007 follows. User class flows and loadings are projected for the fiscal year, for which cost of service allocations are made and rates are calculated. In this Study, cost of service analysis and rate design is performed for FY 2007.

Table 4-2 summarizes the historical and projected average number of customer meters for FY 2007 to FY 2011. The projection of customer meters shown in Table 4-2 is based upon the City's Rate Case model for FY 2007 and beyond.

Table 4-2: Projected Meters

Customer Class	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Single Family Residential (SFR)	230,156	233,171	236,225	239,320	242,455
Multi-Family Residential (MFR)	30,182	30,553	30,929	31,310	31,695
Commercial/Industrial	16,772	16,978	17,187	17,398	17,612
Total	277,110	280,703	284,342	288,028	291,762

The billable wastewater flows and loadings for FY 2007 for each user class are estimated based on the projected increase in the number of meters and the FY 2006 average annual billable wastewater flow and loadings per meter. Total user class billable flows are estimated to increase by about 3.2 percent between FY 2007 and FY 2011. A summary of projected estimates of user class billable wastewater flow is shown in Table 4-3.

Table 4-3: Projected User Class Flows

Customer Class	FY 2007 (hcf)	FY 2008 (hcf)	FY 2009 (hcf)	FY 2010 (hcf)	FY 2011 (hcf)
Single Family Residential (SFR) (At 20 hcf cap winter water use, 95% return)	22,987,450	23,288,586	23,593,666	23,902,743	24,215,869
Multi-Family Residential (MFR) (At 95% return metered flow)	16,505,263	16,708,278	16,913,790	17,121,829	17,332,428
Commercial/Industrial (At metered flow and assigned % return and strength)	15,857,492	16,052,539	16,249,986	16,449,861	16,652,194
Contract Customers (Navy)	1,056,398	1,069,392	1,082,545	1,095,861	1,109,340
Hauled Waste	82,769	83,787	84,818	85,861	86,917
Total	56,489,373	57,202,582	57,924,805	58,656,155	59,396,748

SECTION 5: REVENUE REQUIREMENTS

A review of a system's revenue requirements is a key first step in the rate design process. The review involves an analysis of annual operating revenues under existing rates, capital revenues, O&M and capital expenditures, transfers (if any) between operating and capital funds, and operating and capital reserve requirements. This section of the report provides a discussion of the projected revenues, O&M and capital expenditures, capital improvement financing plan, debt service requirements, and the revenue adjustments required to ensure the financial stability of the wastewater enterprise. The wastewater system revenues and expenditures are discussed from a regional system perspective and the discussion on required revenue adjustments relates exclusively to the City's users

5.1 System Revenues

The City's Metropolitan Wastewater Department (MWWD) operates the regional wastewater system. The City derives its required annual operating and capital revenues from a number of sources. The principal sources of operating revenues are the sewer service charges from the City's users and the full cost recovery revenues from the PAs per their cost sharing agreement with the City. Other revenue sources include miscellaneous operating revenues such as Shipboard Waste and Hauled Waste Revenues and other non-operating revenues including revenue transfers from the rate stabilization fund. Capital revenue sources include sewer connection fees, capital funds, bond proceeds, state and federal grants and loans, capacity fees from the City, pay-as-you-go revenues from the PAs, and interest earnings.

RFC reviewed the various sources of operating and capital revenues and the City's financing plan. Table 5-1 presents the details of the operating and capital related revenues including user and capital revenues. The footnotes explain the basis for the revenue projections during the study period. The table however does not reflect other available revenues such as interest earnings, rate stabilization transfers, bond proceeds and capital grant monies. The comprehensive operating and capital flow of funds statements presented at the end of this section includes all those other revenues.

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Table 5-1: Projected Operating and Capital Revenues

	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>
Revenue from Rates					
City User Charge Revenues (1)	\$231,602,945	\$235,942,100	\$238,956,600	\$242,010,700	\$245,105,200
Contract Customers (Navy) (2)	9,550,000	9,667,500	9,786,400	9,906,800	10,028,600
Other Operating Revenue					
Sewerage Treatment Service (3)	1,313,000	1,629,000	1,842,000	2,070,000	2,213,000
O&M Muni (4)	956,000	1,187,000	1,342,000	1,508,000	1,612,000
Transportation Charges Muni (5)	200,000	248,000	281,000	315,000	337,000
Sewer Service Charge - Misc (6)	2,238,000	2,329,000	2,423,000	2,520,000	2,620,000
Non-Operating Revenue (7)					
Services Rendered to Others	7,188,634	7,476,000	7,775,000	8,086,000	8,410,000
Sale of Power from Co-Generation	1,130,000	1,454,000	1,913,000	1,989,000	2,097,000
Other Non-Operating Revenues	9,000,000	2,080,000	2,163,000	2,250,000	2,340,000
Capital Revenue					
New Sewer Connections - City (8)	200,000	208,000	216,320	224,973	233,972
Capacity Charge Revenues (9)	14,000,000	14,560,000	15,142,400	15,748,096	16,378,020
Total Revenue	\$277,378,579	\$276,780,600	\$281,840,720	\$286,628,569	\$291,374,792

Notes:

- (1) SFR, MFR, and Commercial/Industrial rate revenue under existing rate structure
- (2) Contract Customer including Navy and hauled waste
- (3) Projected in Account RA-77553
- (4) Projected in Account RA-77556
- (5) Projected in Account RA-77566
- (6) Projected in Account RA-77585
- (7) Projections based on City's Prudent Rate Model
- (8) Based on projected connection costs and growth
- (9) Estimation of revenue under existing fees

5.2 System Expenditures

In order to provide for the continued operation of the City's regional wastewater system on a sound financial basis, revenues must be sufficient to meet the revenue requirements or cash obligations of the system. Revenue requirements include O&M expenses, capital improvement program (CIP) expenditures, principal and interest payments on existing debt, and other obligations. The wastewater enterprise's annual expenditures include two major components: the Muni expenditures and the Metro expenditures. Muni relates essentially to the collection system in the City's own retail service area and Metro relates to treatment and disposal services shared both by the City and the PAs.

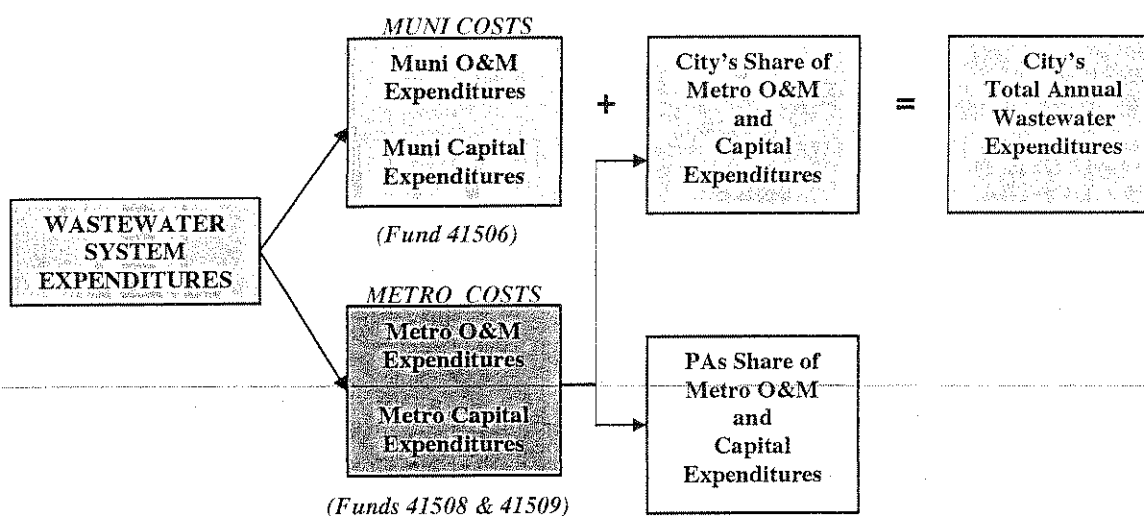
The MWWD Services and Contracts Division annually receives O&M and capital expenditures information for the Metro component from MWWD. The Services and Contracts Division incorporates these costs with the Muni annual O&M and CIP expenditures and develops comprehensive O&M and CIP cost projections for the entire wastewater enterprise as part of its financing plan development

The City maintains two types of O&M and three types of CIP funds for the wastewater enterprise: Muni Fund (41506) for the Muni component and, Metro Existing Facilities Fund (41508) and Metro New Construction Fund (41509) for the Metro component. The O&M funds include funds 41506 and 41509. The CIP funds include funds 41506, 41508, and 41509. Figure 5-1 provides a graphical representation

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of the different components and the relationship between them. Discussions on the different components of the wastewater system expenditures follow.

FIGURE 5-1: Components of the Wastewater System Expenditures



5.2.1 Operations and Maintenance Expenses

O&M expenditures include the costs of operating and maintaining wastewater collection, conveyance, treatment, ocean outfall and sludge disposal facilities. O&M Expenses also include costs incurred in providing technical services including laboratory services, cogeneration services, and other administrative and general costs of the wastewater system. These costs are a continuing normal obligation of the system, and are met from operating revenues as they are incurred.

The City is exclusively responsible for the Muni Fund 41506 annual O&M costs as they relate to the City's own retail service area. These Muni O&M expenditures include the City's pumping and collection costs, laboratory and other City wastewater-related administrative costs. Metro 41508 and 41509 O&M costs relate to the regional system operations shared by both the City and the PAs. Accordingly, the annual O&M costs of the Metro Funds 41508 and 41509 are allocated between the City and the PAs. These Metro annual O&M costs include:

- Metro pumping
- Metro treatment at PLWTP, NCWRP, MBC, and SBWRP.
- Technical Services including Wastewater Chemistry and Biology/Ocean Operations
- Ocean Outfalls
- Sludge Disposal
- Cogeneration
- Administrative and general costs including other City department services, data processing, general accounting and clean water program administration

RFC reviewed MWWD's allocation of annual Metro O&M expenditures between the City and the PAs. In deriving the annual Metro O&M costs allocable to the PAs, MWWD first identifies the billable and

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non-billable O&M costs. Non-billable costs include Muni O&M costs associated with central support facilities and maintenance. These costs are the exclusive responsibility of the City. Billable O&M is that portion of Metro annual O&M costs that is shared between the City and the PAs.

In order to allocate billable costs between the City and the PAs, MWWD first allocates the total billable O&M costs to the three parameters of Flow, TSS and COD. The allocation, which is discussed in detail in Section 6, is based on a cost of service allocation study that was conducted in 2003. Metro costs are, in turn, allocated between the City and the PAs in proportion to their contributions of Flow, TSS, and COD.

The comprehensive forecasted annual O&M expenditures for the study are based upon the City's budgeted FY 2007 expenditures, adjusted for anticipated changes in operations and the effect of inflation in future years. The City conservatively uses an inflationary factor of four percent in projecting all O&M expenditures. The City's projections of annual regional wastewater O&M expenditures are in the range of \$243-\$277 million (in inflated dollars) during FY 2007 through FY 2011. Table 5-2 presents the comprehensive annual O&M costs. O&M expenditures of Metro Funds 41508 and 41509 have been merged into one and the amounts are included in Metro fund 41509.

Table 5-2: Operating and Maintenance Expenditures

	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>
Municipal Sewer Fund - 41506					
Operation and Maintenance	\$5,816,294	\$5,846,694	\$5,927,094	\$6,007,494	\$5,967,894
Env Monitoring and Tech Services	5,142,435	5,142,435	5,142,435	5,142,435	5,142,435
Wastewater Collection	56,026,014	55,449,075	56,033,179	56,598,844	55,806,051
Others	46,176,439	40,909,703	43,024,038	45,994,707	46,083,663
Total 41506 (uninflated)	113,161,182	107,347,907	110,126,746	113,743,480	113,000,043
Total 41506 (inflated)	116,690,497	115,587,363	119,575,801	126,757,450	129,450,730
Metro Existing Facilities Fund - 41508	0	0	0	0	0
Metro New Construction Fund - 41509					
Administration	11,207,609	11,801,525	11,717,220	11,951,661	12,848,313
Program Management	0	0	0	0	0
Services & Contracts	9,586,093	8,289,602	12,577,712	12,530,538	12,487,186
Engineering & Water Reclamation	0	0	0	0	0
Engineering & Program Mgmt	5,232,787	5,232,787	5,232,787	5,232,787	4,882,787
Operations & Maintenance	78,547,666	78,855,657	79,205,157	79,554,657	79,544,157
Env Monitoring and Tech Services	14,697,768	14,197,768	14,197,768	14,197,768	14,197,768
Unallocated Reserve	2,100,557	3,564,452	(434,709)	(1,778,897)	(3,176,853)
Total 41509 (uninflated)	121,372,480	121,941,791	122,495,935	121,688,514	120,783,357
Total 41509 (inflated)	126,143,357	131,601,381	137,845,547	142,660,511	147,639,697
Less PA Share	(36,955,841)	(39,103,367)	(40,889,961)	(43,427,141)	(45,880,668)
Total Metro (City Share)	89,187,516	92,498,014	96,955,587	99,233,369	101,759,029
Total City Expenditures (inflated)	\$205,878,013	\$208,085,377	\$216,531,388	\$225,990,819	\$231,209,759

The City's annual O&M expenditures, which include its own service area-related Muni expenditures and its share of Metro annual O&M, are presented in Table 5-2. The City's retail service area O&M expenditure, which is the focus of this study, is estimated to be in the range of \$206 to \$231 million (in inflated dollars) during FY 2007 through FY 2011.

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5.2.2 Capital Improvement Program

The City has developed a comprehensive wastewater CIP to address both the Muni and Metro wastewater system needs. The Muni system CIP projects generally include rehabilitation or replacement of sewer mains, trunk lines and interceptors, and upgrade or expansion of pump stations. The Metro CIP projects include, but are not limited to:

- City's sewer main replacements and pump station upgrades;
- PLWTP site improvements and digester upgrades;
- PLWTP Grit Processing and sludge facilities;
- Outfall;
- Reclaimed water facilities;
- Otay River Pump Station;
- Metro Operations Center and other Metro projects; and,
- Environmental Monitoring and Technical Services projects.

The City maintains replacement and expansion funds for financing capital projects. Consistent with SWRCB revenue program requirements, the City distinguishes between replacement and expansion CIP costs. Similar to the O&M, the City maintains three CIP funds. The Muni Fund 41506 includes CIP that is associated exclusively with the City's retail service area collection and pumping needs. The City bears exclusive responsibility for the Fund 41506 CIP project costs. The Metro Funds 41508 and 41509 CIP relate to the regional system infrastructure shared by both the City and the PAs. Therefore, the City and the PAs share the responsibility for these Metro Funds CIP costs. The Muni Fund and Metro Fund CIP projects include both replacement and expansion related projects. A summary of planned wastewater CIP expenditures for each year during the study period is shown in Table 5-3. The total wastewater CIP estimated for the study period is \$644 million. A list of proposed CIP projects for both Muni and Metro funds as reflected in the City's Rate Case.

Table 5-3: Summary of Capital Improvement Plan

	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>
Municipal Sewer Fund - 41506	\$46,427,449	\$77,144,974	\$92,097,501	\$157,352,217	\$151,306,919
Metro Sewer Fund - 41508	3,335,592	1,190,134	2,203,381	9,726,253	17,039,610
Metro Sewer Fund - 41509	7,835,144	17,649,430	25,187,920	18,396,839	16,070,766
Regional Total	57,600,192	95,986,546	119,490,811	185,477,318	184,419,306
Less PA's Share	24,373,864	25,022,064	25,941,458	26,698,982	27,705,034
Total City Share	\$33,226,328	\$70,964,482	\$93,549,353	\$158,778,336	\$156,714,272

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Capital Improvement Financing Plan

The CIP is funded through a combination of system revenues and debt financing. The CIP funding sources include the following:

System Revenues:

- Capacity charges from the City;
- Pay-as-you-go revenues from PAs; and,
- City connection fees.

Capital Financing:

- Bond proceeds;
- State Revolving Fund Loans (SRF);
- Grant receipts; and,
- Interest earnings.

Table 5-4: Summary of Capital Financing Plan

Annual Debt Service	FY 2007 (Budgeted \$)	FY 2008 (Projected \$)	FY 2009 (Projected \$)	FY 2010 (Projected \$)	FY 2011 (Projected \$)
Debt Service	\$71,226,983	\$76,557,057	\$82,438,600	\$89,477,356	\$100,813,124
SRF Loans	<u>697,384</u>	<u>1,159,628</u>	<u>1,146,193</u>	<u>1,135,936</u>	<u>1,132,501</u>
Total Debt Service	71,924,367	77,716,684	83,584,794	90,613,292	101,945,625
Plus: Pay-As-You-Go Capital	<u>9,269,657</u>	<u>14,254,433</u>	<u>22,148,071</u>	<u>35,289,232</u>	<u>34,753,684</u>
Total Capital Financing	\$81,194,024	\$91,971,118	\$105,732,865	\$125,902,524	\$136,699,308

Debt Service Requirements

Debt service requirements are included in Table 5-4, and consist of principal and interest payments on existing and projected debt. The City currently has debt payments associated with outstanding parity bonds (Series 1993 and Series 1995), Series 1997A and 1997B bonds, Series 1999A and 1999B bonds, and State Revolving Fund (SRF) interest free loans. Debt service requirements during the study period include annual payments in the range of \$71.9 to \$101.9 million. Total capital costs range from \$81.2 to \$136.7 million over the same period.

Debt Service Coverage

The City needs to meet debt service coverage requirements on its existing outstanding bond issues and new issues. Typically, to meet debt service coverage requirements and obtain a good bond rating, the City needs to ensure that adequate revenues are available to meet its expenditures. Rating agencies use coverage as a measure of an agency's ability to repay debt and ensure financial stability.

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Coverage requirements typically vary between 1.10 and 1.25. The City also has some debt with only a 1.00 coverage requirement. The Parity Obligations stipulate that City's Net System Revenues shall amount to at least 1.20 times the Maximum Annual Debt Service on all Parity Obligations Outstanding.

The System Revenues include sewer service charges from the City's users and the PAs, Shipboard Waste and other Muni Revenues. In addition, system revenues include all other moneys derived from the ownership and operation of the system including sewer connection fees, capacity fee revenues from the City, Pay-as-You-Go revenues from PAs, anticipated Grant Funds, funds transferred from the Rate Stabilization Fund and other interest earnings on reserve funds. Maximum Annual Debt Service includes annual principal and interest payments on outstanding and anticipated bonds.

Higher debt service coverage generally results in lower interest rates on debt. The revenue requirements projected for the study period will help the City successfully meet its existing debt service coverage requirement, which is 1.20.

5.2.3 Reserves

The City needs to have adequate cash reserves to meet its operating, capital, and debt service requirements. Debt service reserves provide protection from defaulting on annual debt service payments in times of financial crisis. The annual debt service reserve amount is estimated to be in the range of \$63 to \$93.5 million during the study period.

Operating reserves may be used to meet ongoing cash flow requirements as well as emergency requirements. Typically, a balance in the range of 10 percent and 50 percent of annual operating expenses is considered appropriate. This represents one to six months of working capital. In the past, the City has maintained a 45-day operating reserve. However, this reserve is now being built to a 70-day reserve over several years. Increasing the Operating Reserve Fund balance through rate-generated contributions has an impact on projected rate increases over the planning period.

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Table 5-5: Cash Flow Statement

Description			Fiscal Year Ending June 30:				
			2007	2008	2009	2010	2011
			\$	\$	\$	\$	\$
Revenue							
Revenue Under Existing Rates			\$241,152,986	\$245,609,600	\$248,743,000	\$251,917,500	\$255,133,800
Additional Revenue Required:							
Year	Percent	Months Effective					
2007	8.75%	1	1,758,400	21,490,800	21,765,000	22,042,800	22,324,200
2008	8.75%	1		1,947,600	23,669,500	23,971,500	24,277,600
2009	7.00%	1			1,716,000	20,855,200	21,121,500
2010	7.00%	1				1,859,600	22,600,000
2011	4.00%	1					1,151,500
Total Revenue From Rates			242,911,386	269,048,000	295,893,500	320,646,600	346,608,600
Miscellaneous Revenue			4,707,000	5,393,000	5,888,000	6,413,000	6,782,000
Non Operating Revenue			17,318,634	11,010,000	11,851,000	12,325,000	12,847,000
Transfers from Other Funds/Reserves			19,494,437	14,768,000	15,358,720	15,973,069	16,611,992
Interest Income from Other Funds/Reserves			4,677,300	8,183,300	9,116,300	9,985,300	10,921,300
Total Revenue			289,108,757	308,402,300	338,107,520	365,342,969	393,770,892
Revenue Requirements							
O&M			209,188,511	212,542,949	218,809,171	228,516,479	237,192,098
Total Debt Service			71,924,367	77,716,684	83,584,794	90,613,292	101,945,625
Transfers to Other Funds/Reserves			1,777,720	4,035,537	10,243,718	10,485,765	18,963,818
Routine Capital Outlay			9,269,657	14,254,433	22,148,071	35,289,232	34,753,684
Total Revenue Requirements			292,160,255	308,549,604	334,785,753	364,904,768	392,855,225
Operating Fund Balance							
Net Annual Cash Balance			(3,051,498)	(147,304)	3,321,767	438,201	915,666
Beginning Working Capital Balance			5,000,000	1,948,502	1,801,199	5,122,965	5,561,166
Net Working Capital Balance			1,948,502	1,801,199	5,122,965	5,561,166	6,476,833
Working Capital Balance Goal [1]			24,291,139	26,904,800	29,589,350	32,064,660	34,660,860
Debt Service Coverage [2]			115%	130%	153%	155%	157%
Reserves Balance			95,434,164	109,059,627	127,595,953	145,119,168	163,085,429
Recommended Minimum Balance			\$64,848,439	\$65,888,314	\$67,830,843	\$70,840,108	\$73,529,551

[1] Cash balance goal of 10.0% revenues.

[2] Minimum bond coverage requirement is 115%. Includes transfers from rate stabilization and connection fees.

SECTION 6: STUDY ISSUES

In addition to the Cost of Service and Rate Setting process, this Study focused on three major areas:

- Adherence to SWRCB regulation and guidance on wastewater ratemaking;
- Modifications to rate design with respect to the SFR sewer cap and return factor; and,
- Options for cost allocations to the base fee.

These Study issues are discussed in the following subsections.

6.1 Compliance with Legal and Regulatory Requirements

The SWRCB provides direction on how sewer charges should be developed in California. Some of this direction is in the form of regulations contained in the Revenue Program Guidelines, while other direction is in the form of less formal guidance from SWRCB staff. The City's rate structure is in compliance with the revenue program guidelines, however, the SWRCB commented on the single family residential usage cap discussed below.

In addition Proposition 218 applies to water and sewer rates that require rates not exceed the cost of providing service and that rate revenues only be used for providing service. In addition, to comply with Proposition 218, the City must provide notices by mail to property owners and conduct a public hearing not less than 45 days after mailing the notice. At the public hearing, the City must consider all protests against the fee. If *written* protests against the proposed fee are not presented by a majority of owners of the parcels, the agency **may** impose the fee. Voter approval at an election is not required. The City intends to meet these requirements.

6.2 Impact on the Residential Sewer Cap

At the conclusion of the last study the City received notification from the SWRCB that the proposed cap on SFR customers must be set high enough to capture at least 95 percent of the users or all SFR customers with winter water use above the existing cap be surveyed to verify that each account is a SFR user and not multi-family or commercial user.

RFC performed an analysis of the winter water usage for the last five years and determined that the five-year average to cover 95 percent of the users resulted in a cap of 20 hcf per month. Using this cap and a 95% return factor, RFC conducted a mass balance as described in Section 4.4 of this report and obtained a reasonably good balance on the wastewater flow. The mass balance supports a revision of the monthly SFR usage cap from the current 14 hcf per month to 20 hcf and a 95% return factor.

6.3 Cost Allocation to the Base Fee

Another focus of this Study was to examine options for an equitable allocation of costs for recovery through the customer base fee. It is accepted practice in the utility ratemaking industry to identify costs that may be appropriately allocated to customer accounts and recover these costs through the customer base fee. RFC first examined Muni and Metro system O&M costs to isolate the types of expenditures typically allocated for base charge recovery. These costs fall into four categories:

- Customer service, billing, meter reading, and meter maintenance;
- A proportionate share of other administrative and general costs;

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- A proportionate share of costs associated with inflow and infiltration; and,
- A portion of costs associated with sewer lateral O&M.

In addition to O&M costs, a portion of capital costs may also be allocated for base fee recovery. It is common to include a portion of debt service, a component of capital cost, in the base fee since debt service is a fixed cost that must be recovered despite the level of billable flow through the system.

In order to allocate costs for a customer base fee, RFC developed a fourth wastewater parameter. Account based costs would become another parameter in addition to flow, TSS, and COD. Account based O&M and capital costs would then be allocated to the parameter and then to each customer class based on the number of accounts. This method of developing a base fee provides a more direct cost justification. In total, approximately \$41 million of costs were allocated for base fee recovery, which is comparable to the amount generated by the current base fee.

It was determined that since the SFR class represents over 80 percent of overall system accounts, this type of account-based allocation would disproportionately impact SFR users. In addition, the SWRCB guidance does not explicitly allow for cost allocation to functional parameters other than flow, TSS, and COD. Under SWRCB guidance, RFC believes the existing methodology for determination of the base fee is appropriate. For these reasons, the City has decided to continue with its existing methodology for development of the customer base charge.

SECTION 7: COST OF SERVICE

The determination of the City's user class flows and loadings discussed in Section 4 of this report, and the revenue requirements reviewed and finalized through the operating and capital cash flow analysis discussed in Section 5 of the report, provide the basis for performing the cost of service analysis. This section of the report discusses the allocation of operating and capital costs to the Flow, TSS and COD parameters, the determination of unit rates, and the calculation of user class cost responsibility.

The total revenue requirement net of miscellaneous revenue credits, by definition, is the net cost of providing service. This cost of service is then used as the basis to develop unit rates for the wastewater parameters and to allocate costs to the various user classes in proportion to the wastewater services rendered. The concept of proportionate allocation to user classes implies that allocations should take into consideration the quantity of wastewater a user contributes and the strength of wastewater.

In this study, wastewater rates were calculated for FY 2007, and accordingly FY 2007 revenue requirements are used in the cost allocation process.

7.1 Costs To Be Allocated

The annual revenue requirement or cost of service to be recovered from wastewater charges includes operation and maintenance expenses, costs associated with annual renewal and replacements, and other capital related costs. O&M expenses include costs directly related to the collection, treatment, and disposal of wastewater and maintenance of system facilities. Renewals and replacements represent the annual recurring capital outlay for minor system improvements and purchase of equipment.

The total FY 2007 net cost of service to be recovered from the City's retail users, as shown on line 14 in Table 7-1, is estimated at nearly \$262.3 million, of which \$225.6 million are operating costs and the remaining \$36.7 million are net capital costs. This is the amount that the City would expect to collect if the rates were in place for the full year. The cost of service analysis is based upon the need to generate annual revenues adequate to meet the estimated annual revenue requirement. As part of the cost of service analysis, revenues from other non-City user sources such as revenues from PAs are deducted from the appropriate cost elements. Additional deductions are made to reflect the use of rate stabilization fund and operating interest income. Adjustments are also made to account for cash balances.

To allocate the cost of service among the different user classes in proportion to their flow and strength contributions, costs first need to be allocated to selected wastewater parameters. The following subsection describes the allocation of the operating and capital cost of service amounts to the parameters of Flow, TSS, and COD.

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Table 7-1: Test Year COS

Revenue Requirements	Operating Cost (\$ Mil)	Capital Cost (\$ Mil)	Total (\$ Mil)
1 Operating & Maintenance Costs	\$205,878,013		\$205,878,013
2 Debt Service Requirements		71,924,367	71,924,367
3 Routine Capital Outlays		9,269,657	9,269,657
4 Transfers to Operating Fund	<u>5,088,218</u>		<u>5,088,218</u>
5 Subtotal	210,966,231	81,194,024	292,160,255
Less Revenue Requirements Met From Other Sources			
6 Miscellaneous Charges	4,707,000		4,707,000
7 Non-Operating Revenue		17,318,634	17,318,634
8 Transfers from Sewer Capital Fund		19,494,437	19,494,437
9 Interest – Capital Fund		<u>4,747,700</u>	<u>4,747,700</u>
10 Subtotal	4,707,000	41,560,771	46,267,771
Less Adjustments			
11 Adjustment for Annual Cash Balance		2,981,097	2,981,097
12 Adjustment to Annualize Rate Increase	<u>(19,342,400)</u>		<u>(19,342,400)</u>
13 Subtotal	(19,342,400)	2,981,097	(16,361,303)
14 Cost of Service Recovered Through Rates	\$225,601,631	\$36,652,155	\$262,253,786

7.2 Cost Allocation To Wastewater Parameters

The three cost allocation parameters are Wastewater Flow, TSS, and COD. TSS and COD constitute the strength components of the wastewater discharge. As discussed earlier, the percentages used to allocate the FY 2007 cost of service to the wastewater parameters are derived based on the functional-design method of allocation. The allocation of costs to the three parameters involves:

- Identification of functional areas and costs of the wastewater system.
- Apportioning of FY 2007 costs into O&M and Capital costs of service (from Table 7-1).
- Determination of O&M and CIP allocation percentages for the three parameters

7.3 Identification of Functional Areas

As described in Section 5, O&M costs can be categorized broadly into the functional areas of collection, treatment, laboratory, and administrative and general services. Different allocation bases are used to apportion each of these functional costs to the Flow, TSS, and COD parameters.

Under the functional-design method of allocation, both the function and the design of the facilities need to be considered in allocating costs to the parameters. The primary function of collection facilities such as trunk lines, sewer lines, and interceptors is to convey untreated influents to the treatment facilities and treated effluents from the treatment facilities to the final discharge location, which in the City's case is the ocean. These collection facilities are designed (sized) according to the volume of flows that they are expected to handle. Hence, based on the functional-design method, since both the functional and design elements of the collection facilities relate exclusively to flow, all capital and O&M expenditures related to collection facilities are usually allocated entirely to wastewater flows.

From a functional-design perspective, treatment facilities include processes that relate to all three wastewater parameters. For instance, the primary function of the City's PLWTP is the removal of TSS.

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In terms of design, the components in the plant including clarifiers and sedimentation basins are designed to handle expected volume of flows. With respect to operational performance, PLWTP removes TSS and is required to remove a significant portion of COD. Therefore, since the treatment facilities relate to all three parameters, capital and O&M expenditures associated with treatment facilities are allocated to Flow, TSS and COD parameters.

Laboratory services (also referred to as Technical Services) relate to both the flow and strength elements of wastewater and hence laboratory services related O&M costs are allocated to all three parameters.

Administrative and general services relate to indirect support activities necessary to operate a wastewater system and hence indirect costs are usually allocated to the parameters in proportion to the allocation of all other direct costs such as collection, treatment and technical services costs.

7.3.1 Determination of Allocation Percentages

As shown in Figure 5-1 in Section 5 of this report, the City's wastewater costs which are the focus of this Study include both Muni costs and the City's share of Metro costs. Available historical actual costs are usually used to derive allocation percentages. In this Study, FY 2007 Muni and Metro Annual O&M and FY 2007 Muni and Metro CIP total project costs are used as the basis to derive the allocation percentages. At the time this study was initiated, this was the most recent data available and the PAS and SWRCB had approved these allocations.

The Study performed the following steps to derive the allocation percentages for allocating the City's O&M and Capital costs.

- Reviewed MWWD's Metro O&M and Capital allocation percentages and made changes where necessary; and,
- Derived the overall cost allocation percentages for the City's O&M and Capital Costs.

The allocation percentages shown in Table 7-2 below are identical to those developed in the previous Cost of Service Study completed in 2003.

Table 7-2: Allocation Percentages to Parameters

Description	Total	Flow	COD	TSS
O&M	100.00%	65.96%	14.80%	19.24%
Capital	100.00%	76.72%	11.23%	12.05%

7.3.2 Apportioning of FY 2007 O&M and Capital Cost of Service

The O&M and Capital cost allocation percentages presented in Table 7-2 were used to allocate FY 2007 cost of service amounts to Flow, TSS and COD. Table 7-3 shows the allocation of FY 2007 cost of service to the three parameters.

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Table 7-3: Allocation of FY 2007 Costs

Description	Total \$	Flow \$	COD \$	TSS \$
O&M	\$225,601,631	\$148,806,836	\$33,389,041	\$43,405,754
Capital	<u>36,652,155</u>	<u>28,119,555</u>	<u>4,116,000</u>	<u>4,416,600</u>
Total Costs	\$262,253,786	\$176,926,391	\$37,505,041	\$47,822,354
Overall Allocation Percentages		67.46%	14.30%	18.24%

7.4 Unit Cost of Service

In order to allocate costs of service to the different user classes, unit costs of service need to be developed for Flow, TSS and COD. The unit costs of service are developed by dividing the total annual costs allocated to each parameter by the total annual loadings of the respective parameter (the projected annual Flows, TSS and COD loadings for FY 2007 were discussed in Section 4). Table 7-4 shows the development of the FY 2007 unit costs for each of the three wastewater parameters.

7.5 User Class Costs

The unit cost of Flows, TSS and COD shown in Table 7-4 is then applied to the projected FY 2007 flows and loadings of each user class to derive user class costs. Table 7-5 shows the FY 2007 user class loadings and cost responsibility for each user class.

Table 7-4: Unit Costs of Service

Description	Total \$	Flow Average Daily Wastewater Flow \$	COD Total loading \$	TSS Total loading \$
Net Operating Expense	\$225,601,631	\$148,806,836	\$33,389,041	\$43,405,754
Capital Costs	36,652,155	28,119,555	4,116,000	4,416,600
Total Cost of Service - \$	\$262,253,786	\$176,926,391	\$37,505,041	\$47,822,354
		67.46%	14.30%	18.24%
Total Units of Service		56,489,373	201,187,553	104,271,085
Units of Measure		hcf	lb/day	lb/day
Total Unit Cost of Service		\$3.1320	\$0.1864	\$0.4586

The SFR user class has the highest assignment of costs at \$103.9 million and the MFR user class costs are \$74.6 million. Together, these residential customer classes are responsible for 68 percent of the total cost of service. The non-residential user classes are responsible for the remaining 32 percent of the annual cost of service. Table 7-6 shows the projected distribution of each user class' meters, annual flows, TSS and COD loadings, and estimated FY 2007 revenues.

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Table 7-5: User Class Loadings and Cost Responsibility

<u>Customer Classification</u>	Flow		COD		TSS		Total
	Annual	Cost	Total	Cost	Total	Cost	Cost
	<u>WW Flow</u> hcf	<u>Responsibility</u> \$	<u>loading</u> lb	<u>Responsibility</u> \$	<u>loading</u> lb	<u>Responsibility</u> \$	<u>Responsibility</u> \$
SFR	22,987,450	\$71,997,376	\$72,403,227	\$13,497,286	\$40,144,364	\$18,411,605	\$103,906,267
MFR	16,505,263	51,694,973	51,986,380	9,691,213	28,824,131	13,219,751	74,605,937
Commercial/Industrial	15,857,492	49,666,136	61,672,797	11,496,938	25,804,868	11,835,012	72,998,086
Industrial	0	0	0	0	0	0	0
Shipboard Waste	1,139,167	3,567,906	15,124,784	2,819,537	9,497,357	4,355,819	10,743,261
Total	56,489,373	\$176,926,391	\$201,187,553	\$37,504,973	\$104,271,085	\$47,822,186	\$262,253,551

Table 7-6: User Class Distribution of Meters, Flow, Loadings, and Costs

<u>Customer Classification</u>	Meters	Flow	COD	TSS	Total
	Total	Annual	Total	Total	Cost
	<u>Number</u>	<u>WW Flow</u> hcf	<u>loading</u> lb	<u>loading</u> lb	<u>Responsibility</u> \$
SFR	230,156	22,987,450	72,403,227	40,144,364	\$103,906,267
MFR	30,182	16,505,263	51,986,380	28,824,131	74,605,937
Commercial/Industrial	16,772	15,857,492	61,672,797	25,804,868	72,998,086
Industrial	0	0	0	0	0
Shipboard Waste	0	1,139,167	15,124,784	9,497,357	10,743,261
Total	277,110	56,489,373	201,187,553	104,271,085	\$262,253,551

The cost of service allocations conducted in this study based on the functional-design method fully comply with the SWRCB's revenue program requirements since the City's FY 2007 revenue requirements are allocated to the different user classes proportionate to their use of the wastewater system. As mandated by SWRCB, allocations are based on the service parameters of flow, TSS, and COD. The cost of service allocation performed for the City's retail service area users is also consistent with the system-wide proportionate use approach used by MWW in allocating wastewater system revenue requirements between the City and the PAs.

SECTION 8: RATE DESIGN

The revenue requirements and cost of service analyses described in the preceding sections of this report provide a basis for the design of wastewater rates. Rate design involves the development of rate schedules for each user class so as to recover the annual cost of service determined for each user class. In this Study, the focus of rate design is on the development of rate schedules for each of the City's retail service user classes, which was accomplished with input from the stakeholders' group. This section of the report discusses suggested wastewater rate structures, presents a schedule of rates for the City's user classes, and analyzes the impact of the proposed changes in user classifications, cost allocation and rate design on the user classes.

8.1 Rate Structure

The primary emphasis in the design of rate structures is ordinarily placed on achieving fairness and equity, with the objective being to ensure that each customer class, and each user within those classes pays their fair share of costs. In addition, rate structures should be easy to understand, simple to administer, and comply with regulatory requirements. A review of the existing City wastewater rate structures provides insights into the equitability of the current methodology and the changes, if any, that should be considered. The existing rate structure was discussed in detail in Section 3. Recommended rate structure changes are discussed in the following subsections.

While the methodology for cost allocation to user classes for equitable cost recovery is covered in some detail by the SWRCB guidelines, the City has some flexibility to design a rate structure that best meets its needs. For example, many California agencies levy flat charges on their SFR customers; the City could take the total revenue recovery from SFR customers and spread it equally amongst all SFR customers. This would provide a stable source of revenues and all SFR customers would have the same flat charge per month. The City used this type of structure in the past and moved away from it to incentivize conservation and be more equitable by charging users in proportion to the amount of wastewater discharged.

8.1.1 Base Fee

The current rate structure includes a base fee and a variable rate. The base fee is a cost recovery mechanism that is ordinarily included in the rate structure to recover certain fixed and indirect costs. Base fees provide a stable source of revenues independent of usage. RFC recommends that the City continue its existing practice of applying a monthly base fee to all its users. Currently the City collects about 16 percent of rate revenue through base charges. This percentage of revenue recovery was approved during the last rate study by stakeholders and City Council. RFC has therefore retained this percentage of revenue collection from the recommended rate structure. In addition, RFC determined that this level of base fee revenue can be reasonably justified based on the current cost structure.

In section 6.3, RFC identified the cost components that could be included in the base fee that can be collected from all users. The recommended base fee will generate about \$41 million and can reasonably be justified as shown in Table 8-1.

Because the indirect costs are common to all users, these costs should be shared equally by all the City's user meters. The monthly base fee is therefore obtained by dividing the FY 2007 indirect costs by the total number of annual City's user meters. The estimated monthly base fee of \$12.31 for FY 2007 is shown below.

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Table 8-1: Estimation of Monthly Base Fee

Cost Description	Allocation (\$ millions)
Billing, Collections, Customer Service, and Meter Reading Costs	15.4
Allocated Administrative and General Costs	1.3
Sewer Lateral O&M (Allocated from other City Departments)	2.5
Infiltration and Inflow Costs	5.4
Debt Service (25% of annual payments)	16.4
Total	41.0
Monthly Cost per Customer Account	\$12.31

8.1.2 Usage Rate

The usage rate recovers the City's direct costs, and is separately determined for each user class. Usage rates are developed based on the principle of maintaining inter-class revenue neutrality. This means that each user class would pay only its proportionate share of the costs of service (Refer to Table 7-5 for revenues required from each user class). Since a portion of the revenues required from each user class would be recovered through uniform monthly base fees, each user class' usage rate needs to be designed to recover only that portion of revenues that is not recovered through the base fee.

Annual base fee revenues for each user class for FY 2007 are estimated based on the number of meters in a given class and the suggested monthly base fee of \$12.31. The portion of revenues to be recovered through usage rates is then determined by deducting the annual base fee revenues from the user class's FY 2007 cost of service, as shown in Table 8-2.

Table 8-2: User Class Cost of Service, Base Fee Revenue, and Usage Revenue

User Class Description	Total COS	Base Fee Revenues	Usage Revenues	Unit Rate
	\$	\$	\$	Based on total COS
Single Family Residential	\$103,906,360	\$33,998,628	\$69,907,732	\$4.520
Multiple Family Residential	74,606,004	4,458,520	70,147,484	\$4.520
Commercial/Industrial	72,998,151	2,477,534	70,520,617	
Contract Services (Navy)	10,743,271	-	10,743,271	
Total Annual User Revenues	\$262,253,786	\$40,934,682	\$221,319,105	

The sewer usage rates for each user class are based on the user class' required annual usage revenues and the estimated annual volume of wastewater flows.

The SFR and MFR user classes are a homogenous group with the same strength characteristics; therefore, uniform sewer usage rates can be established for these classes. Note that because the SFR and MFR classes have the same return factor (95%) and strength, the unit rate, in \$/hcf of wastewater, based

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on total costs to be recovered, is the same for both classes. However, this is not the case with respect to commercial/industrial users. Commercial/industrial users vary significantly in terms of both metered water return factor and strength characteristics. Therefore, unit costs are used to develop usage rates for the non-residential class. In addition, SWRCB rules require that usage rates be computed individually for each of the Large Users. The design of usage rates for the various user classes is discussed in the following subsections.

SFR Usage Rate and Calculation of Monthly Wastewater Charge

The suggested SFR sewer usage rate is determined based on annualized average winter water usage with a usage cap of 20 hcf and an assumed return factor of 95 percent. The SFR usage rate for FY 2007 is \$2.890 per hcf of water, and was computed by dividing the estimated SFR FY 2007 usage revenue requirement by the annualized billable winter water usage estimated using a 20 hcf usage cap, as shown in Table 8-3.

Table 8-3: SFR Usage Rate

User Class Description	Usage Revenue Requirement \$	Winter Flow 20 hcf cap hcf	Unit Rates Flow (20hcf cap, 95% return) \$/hcf of wwater	Unit Rates Flow (20hcf cap, Metered use) \$/hcf of water
Single Family Residential	\$69,907,732	22,987,450	\$3.0411	\$2.8900

RFC recommends that the City should retain its existing method of computing monthly SFR wastewater charges. RFC also recommends changing the monthly usage cap to 20 hcf instead of the existing monthly usage cap of 14 hcf and changing the assumed return factor to 95 percent instead of the existing return factor of 100 percent. As in the existing method, winter water usage during the months of December through March would be monitored, and the 30-day lowest average usage would be computed. The \$2.890 per hcf of water use (\$3.0411 per hcf of wastewater with 95% return factor applied) rate would then be applied to this 30-day minimum water usage to determine a SFR user's monthly usage charge. However, the portion of the 30-day average usage that exceeds the 20 hcf monthly cap would not be billed. For instance, a SFR user with a 10 hcf, 30-day minimum water usage would be billed a monthly SFR usage charge of \$28.90. The total monthly SFR wastewater charge for that user including the monthly base fee of \$12.31 would be \$41.21. With the proposed usage cap set at 20 hcf, the maximum monthly wastewater charge (including the monthly base fee) a SFR user could be billed would be \$70.11 (20 hcf x \$2.890 + \$12.31)

MFR Usage Rate and Calculation of Monthly Wastewater Charge

The MFR Usage Rate is computed based on annual MFR usage revenues required and estimated annual water use. Typical MFR wastewater flow is 95 percent of annual metered water usage. The computed MFR usage rate for FY 2007 is \$4.0380 per hcf of water use (\$4.2500 per hcf of wastewater). Table 8-4 shows the determination of MFR usage rate per hcf of water.

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Table 8-4: MFR Usage Rate

User Class Description	Usage Revenue Requirement \$	Metered Water Flow hcf	Unit Rates Flow (95% return) \$/hcf of wwater*	Unit Rates Flow (Metered use) \$/hcf of water
Multiple Family Residential	\$70,147,484	16,505,263	\$4.2500	\$4.0380

* Wastewater flow is assumed to be 95% of metered water

To compute monthly wastewater charges, the usage rate of \$4.038 per hcf of water is directly applied to the user's water consumption if the user is assigned a 95 percent return to sewer. For example, for a MFR user with monthly water usage of 20 hcf of water and a 95 percent return to sewer, the usage charge is \$80.76. With the inclusion of the \$12.31 monthly base fee, the total monthly wastewater charge would be \$93.07.

For a MFR user with a return rate different than 95 percent return to sewer, the usage rate would be:

$$(\$4.2502) \times \text{Return factor} \times \text{Water Usage}$$

For an MFR user with 50 units of water use per month and a return factor of 90 percent the usage charge would be:

$$(\$4.2502) \times 0.90 \times 50 = \$191.26$$

With the inclusion of the \$12.31 monthly base fee, the total monthly wastewater charge would be \$203.57.

Commercial/Industrial Usage Rate and Calculation of Monthly Wastewater Charge

The development of sewer usage rates for the commercial/industrial users involves a two-step process. The unit costs of flow, TSS and COD for FY 2007 are first determined for the commercial/industrial user class as a whole and then, based on those unit costs, sewer usage rates are determined for Commercial/Industrial Users.

Determination of Commercial/Industrial User Loadings: The annual TSS and COD loadings are determined based on the users' annual water usage, assigned percent return factors, and assigned or measured TSS/COD strengths. For Large Users, the annual TSS/COD loadings are computed based on their actual assigned or measured strengths and estimated annual flows.

Determination of Commercial/Industrial User Unit Costs: The unit costs for flow, TSS and COD are determined based on the commercial/industrial annual flows, TSS/COD loadings, and estimated FY 2007 usage revenues required. The estimated FY 2007 annual usage revenue required is first allocated to flow, TSS and COD parameters. The cost allocated to each parameter is then divided by annual flows and loadings to derive the unit costs. Table 8-5 shows the development of commercial/industrial unit costs for the three parameters.

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Table 8-5: Commercial/Industrial Unit Costs for Flow, TSS, and COD

	<u>Base Fee</u>	<u>Flow</u>	<u>TSS</u>	<u>COD</u>
Allocated Costs (\$)	\$2,477,534	\$47,980,526	\$11,433,346	\$11,106,745
Units	201,262	15,857,492	25,804,868	61,672,797
	\$/bill	\$/hcf of wwater	\$/lb	\$/lbs
Unit Cost (\$)	\$12.31	\$3.0257	\$0.4431	\$0.1801

Determination of Sewer Usage Rates and Monthly Charges for Commercial/Industrial Users: For each meter, wastewater usage rates are computed based on the assigned percent return factor, and the analyzed or assigned strength values for TSS and COD, using the unit costs determined for the Commercial/Industrial user class. Where actual percent return and or strength has not been determined, default values are assigned as shown in Appendix B. In the case of most users, the rates are computed for the assigned TSS/COD strength range based on the mid-point strength of the range shown in Table 8-6.

Table 8-6: Strength Range Determination

COD TABLE			TSS TABLE			FLOW TABLE					
CD	PPM	FCTR	CD	PPM	FCTR	CD	PERCENT	FCTR	CD	PERCENT	FCTR
A	0000-0200	100	A	000-0100	50	A	100.0	1.00	K	50.0-54.9	0.52
B	0201-0400	300	B	101-0200	150	B	95.0-99.9	0.97	L	45.0-49.9	0.47
C	0401-0600	500	C	201-0300	250	C	90.0-94.9	0.92	M	40.0-44.9	0.42
D	0601-0800	700	D	301-0400	350	D	85.0-89.9	0.87	N	35.0-39.9	0.37
E	0801-1000	900	E	401-0500	450	E	80.0-84.9	0.82	O	30.0-34.9	0.32
F	1001-1200	1100	F	501-0600	550	F	75.0-79.9	0.77	P	25.0-29.9	0.27
G	1201-1400	1300	G	601-0700	650	G	70.0-74.9	0.72	Q	20.0-24.9	0.22
H	1401-1600	1500	H	701-0800	750	H	65.0-69.9	0.67	R	15.0-19.9	0.17
I	1601-1800	1700	I	801-0900	850	I	60.0-64.9	0.62	S	10.0-14.9	0.12
J	1801-2000	1900	J	901-1000	950	J	55.0-59.9	0.57	T	05.0-09.9	0.07
K	2001-2200	2100									

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Table 8-7 shows sample monthly sewer charge calculation for a user with a monthly water usage of 25 hcf, an assigned return to sewer of 80 percent, TSS of 380 mg/l and a COD of 620.

Table 8-7: Sample Calculation of Monthly Wastewater Charges

Type Charge	Water Use hcf	Return %	WW Flow hcf	Strength (1) Midpoint mg/l	Unit Rates	Charge \$
Flow	25	80	20		\$3.0257 per hcf	60.51
TSS (2)				350	\$0.4431 per lb	19.34
COD (2)				700	\$0.1801 per lb	15.73
Base Fee						12.31
Total						\$107.89

(1) TSS and COD strength midpoints are developed from table 8-6

(2) Mg/l of TSS and COD are converted to pounds using a conversion factor of 0.006237

Determination of Sewer Usage Rates and Monthly Charges for Large Users: For the Large Users, sewer usage rate is computed individually for each user based on the commercial/industrial unit costs. A sample monthly wastewater charge calculation for a Large User with measured TSS strength of 640 mg/l and COD strength of 2,520 mg/l is shown in Table 8-8.

Table 8-8: Sample Calculation of Monthly Wastewater Charges for Large Users

Type Charge	Water Use hcf	Return %	WW Flow hcf	Measured (1) Strength mg/l	Unit Rates	Charge \$
Flow	2,000	80	1,600		\$3.0257 per hcf	4841.17
TSS (2)				640	\$0.4431 per lb	2829.75
COD (2)				2520	\$0.1801 per lb	4528.87
Base Fee						12.31
Total						\$12,212.09

(1) TSS and COD strength for Large Users is determined through monitoring

(2) Mg/l of TSS and COD are converted to pounds using a conversion factor of 0.006237

8.2 Adequacy of Suggested Rates and Charges

The rates presented in this report should generate adequate wastewater user revenues to meet projected requirements for FY 2007. We recommend that the City conduct a financial review at the end of FY 2007 to review program changes and adjustments, and the adequacy of expected revenues for FY 2008 and subsequent years.

8.3 Customer Impact Analysis

RFC performed an impact analysis to evaluate the impact of the recommended changes to the rate structure and the changes to the SFR usage cap level. The impacts of each of these changes among user classes and within user classes are discussed below.

8.3.1 SFR Impacts

SFR customers will experience a range of impacts depending on their usage level. Impacts range from increases of about 2 percent to increases of about 35 percent. The maximum bill increases from \$51.77

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to \$70.11, predominantly because of the increase in the sewer cap. Table 8-9 shows the monthly bill impacts at different SFR usage levels.

Table 8-9: Sample SFR Rate Impacts

Metered Water (hcf)	Existing Base \$/bill	Existing Rate \$/hcf of water	Existing Bill \$	Proposed Base \$/bill	Proposed Rate \$/hcf of water	Proposed Bill \$	Change %
0	11.32	2.889	11.32	12.31	2.890	12.31	8.7%
2			17.10			18.09	5.8%
4			22.88			23.87	4.3%
6			28.65			29.65	3.5%
8			34.43			35.43	2.9%
9*			37.32			38.32	2.7%
10			40.21			41.21	2.5%
20			51.77			70.11	35.4%
30			51.77			70.11	35.4%
50			51.77			70.11	35.4%

* Average SFR Customer

8.3.2 MFR Impacts

MFR impacts are consistent at about 8.5%. Table 8-10 shows the monthly bill impacts at different MFR usage levels.

Table 8-10: Sample MFR Rate Impacts

Metered Water (hcf)	Existing Base \$/bill	Existing Rate \$/hcf of water	Existing Bill \$	Proposed Base \$/bill	Proposed Rate \$/hcf of water	Proposed Bill \$	Change %
20	11.32	3.721	85.74	12.31	4.038	93.07	8.5%
50			197.37			214.21	8.5%
100			383.42			416.11	8.5%
500			1,871.82			2,031.31	8.5%

8.3.3 Commercial/Industrial Impacts

Commercial/Industrial customer impacts vary based on the amount of usage and the strength of discharge. Table 8-11 shows the bill component cost increases Commercial/Industrial customers. As a class the revenues from these users increases by 9.7 percent over current revenues as a result of changes in the cost structure, i.e., the relative distribution of collection system, treatment and capital costs.

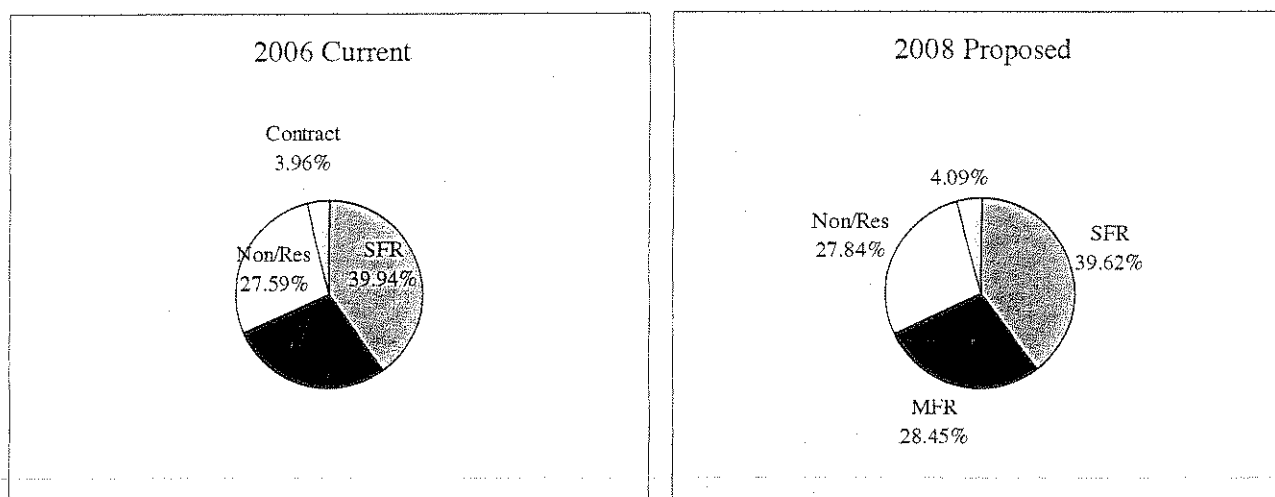
Table 8-11: Sample Commercial/Industrial Rate Impacts

		<u>Current</u>	<u>Proposed</u>	<u>Change</u>
Base	\$ per account	\$11.32	\$12.31	8.7%
Flow	\$/hcf of wwater	\$2.7534	\$3.0257	9.9%
TSS	\$/lb	\$0.4294	\$0.4431	3.2%
COD	\$/lb	\$0.1544	\$0.1801	16.6%

The relative difference in revenue generation from the different customer classes under the current rates and proposed rates is very minimal as shown in Figures 8-1 below.

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Figure 8-1 Relative Revenue Generation Under Current and Proposed Rates



8.3.4 Revenue Program

The revenue program developed as part of this Study is designed to meet all aspects of SWRCB guidelines including identification of costs, user classification, allocation of costs, and design of rate structures which recover costs on a basis proportionate to use.

RFC compiled and reviewed the City's financial information to ensure that annual O&M costs including replacement costs are identified and aggregated by wastewater functions. Other costs including capital costs related to expansion of system facilities, debt service costs and operating and capital requirements were also reviewed to ensure that they are aggregated and maintained in accordance with SWRCB guidelines.

The City's user classification was reviewed. Users and their associated flows and loadings were identified to ensure compliance with SWRCB revenue program requirements. In this Study, users with the same characteristics have been identified and grouped so that the costs of the system could be allocated to the classes in proportion to the user classes' demand on the wastewater system.

In accordance with the revenue program requirements, the City's annual costs were identified and allocated to the parameters of flow, TSS and COD in proportion to the percentage of costs that these three parameters represent. The functional-design method has been used to allocate the City's retail service area costs to the parameters. The allocation of costs is consistent with the proportional and system-wide allocation approach which has been approved by the SWRCB and which is currently applicable to the existing contractual agreements between the City and its PAs.

The rate structures presented in this study incorporate Flow, TSS, and COD parameters as mandated by the SWRCB and provide for a system of user charges that results in fair and equitable recovery of costs from the various user classes and users within each class.

The preceding sections of this report discussed all aspects of the study, from financial planning through development of wastewater rates. The overall user charge system that is designed to recover the costs of the system includes not only wastewater user rates but also one time capacity fees that are charged to new users that join the system. RFC reviewed the City's capital projects, capacity of various facilities, the existing capacity fee design and the adequacy of the City's existing capacity fees. The capacity fee review is discussed in the final section of this report.

SECTION 9: CAPACITY FEE REVIEW

As indicated in Section 5, one of the sources of system revenues is the one-time capacity (developer) fee that is applied to all users that connect to the City's Regional Wastewater System. This section of the report outlines the existing capacity fee structure, the regulatory requirements, computational methods, and the approach used in this Study to compute capacity fees and the capacity fee schedule.

The City applies two types of one-time fees to its wastewater system users: Capacity Fees and Connection Fees. A capacity fee is a one-time fee which is charged for new, additional or larger connections to the City's wastewater system. Capacity Fees recover the costs associated with providing additional facility capacity to new users and existing users requiring additional capacity. Connection fees are used to recover costs associated with the physical installation of lateral connections to sewer mains, and can be thought of as "plumbing charges". The scope of this study is limited to a review of the Capacity Fees.

9.1 Existing Capacity Fees

The City's existing capacity charge, based on Equivalent Dwelling Units (EDU), is a one-time charge determined per the City's Municipal Code Section 64.0410. An EDU is defined in terms of volume of wastewater flow discharged or the number of plumbing fixture units, which equate to an EDU. The City's EDU's are defined as follows:

- 280 gallons per day of wastewater flows = 1 EDU for single family residences
- Twenty Plumbing Fixture Units = 1 EDU for non residential users

The minimum capacity assigned to any sewer connection is one EDU. MFR units having individual, City-read water meters are charged one EDU per unit, while MFR units that share a common water meter are charged based on a density-adjusted formula. The formula is based on the theory that the more units per acre, the smaller the unit and therefore the less sewer capacity needed.

The City's present sewer capacity fee is \$3,710 per EDU and has been in effect since 2004. For commercial and industrial users meeting the eligibility criteria contained in Council Policy 900-12 (referred to as the Council Policy 900-12 Rate), and for affordable housing units and residential units constructed in redevelopment districts (referred to as the Preferential Rate), the City applies a reduced fee of \$1,500 per EDU. Though capacity fees are a form of user charge, they are not treated as operating revenues and are instead considered capital expansion revenues.

9.1.1 Philosophical Objective and Regulatory Requirements

The primary objectives of establishing a full cost recovery capacity fee are to achieve equity in distributing costs and to provide a mechanism by which new users can pay for the cost of the facilities required to serve them without burdening existing users. In short, the goal of a full cost recovery capacity fee is to ensure that growth pays its own way.

9.1.2 AB 1600

In California, the basic statutory standards governing water and sewer system development fees are embodied in Government Code Sections 66013, 66016, and 66022. Government Code 66013, which codifies AB 1600, provides:

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66013. (a) Notwithstanding any other provisions of law, when a local agency imposes fees for water connections or sewer connections, or imposes capacity charges, those fees or charges shall not exceed the estimated reasonable cost of providing the service for which the fee or charges is imposed, unless a question regarding the amount of the fee or charge imposed in excess of the estimated reasonable cost of providing the services or materials is submitted to, and approved by, a popular vote of two-thirds of those electors voting on the issue.
- (b) As used in this section:
- (1) "Sewer connection" means the connection of a building to a public sewer system.
 - (2) "Water connection" means the connection of building to a public water system, as defined in subdivision (e) of Section 4010.1 of the Health and Safety Code.
 - (3) "Capacity charges" means charges for facilities in existence at the time the charge is imposed or charges for new facilities to be constructed in the future which are of benefit to the person or property being charged.
 - (4) "Local agency" means a local agency as defined in Section 66000.
- (g) Any judicial action or proceeding to attack, review, set aside, void, or annul the ordinance, resolution, or motion imposing a fee or capacity charge subject to this section shall be brought pursuant to Section 66022.

The essence of Section 66013 is that a capacity fee may be no higher than the estimated reasonable cost of providing a service to new customers unless the voters have specifically approved a higher level for the fee.

9.2 Methods for Capacity Fee Determination

There are several methods that could be used to calculate capacity fees. Three approaches are discussed in this subsection.

9.2.1 System Buy-In Method

The buy-in concept is based on the premise that new users are buying into an existing system that already has the capacity to serve them, and by doing so they achieve a financial position on par with the existing users of the system who originally provided and paid for that capacity.

To foster equity between existing and new users under the buy-in method, the new users pay for the cost or value associated with the portion of existing system capacity that they use. If the existing system has 100 units of capacity for average usage or peak usage and the new user requires one unit of capacity, then the new user pays for 1/100 of the value of the existing system. Together, the new users (once paid up) and the existing users will face future capital challenges on equal footing since equivalent investments have been made. This method is applicable in situations where the existing system has adequate surplus capacity and does not require major upgrades or improvements.

9.2.2 Incremental Cost Method

The incremental-cost pricing method is based on the premise that new users should pay for the incremental portions of both existing reserve capacity which must be replaced, plus any new capacity which must be added to the system to meet their needs. The goal of this method is, once again, to eliminate or minimize the need to raise existing user rates in order to replace needed reserve capacity or fund new facilities to accommodate growth. This method is applicable under circumstances in which reserve capacity presently exists but must be replaced if used.

9.2.3 Specific Capacity Method

The specific capacity method determines capacity fees based on the cost to construct the incremental capacity required. For example, if it costs X dollars to construct Y units of new capacity, then the capacity fee per unit is determined to be X/Y. This method does not take into account the value of surplus capacity in existing facilities, and is therefore most applicable in situations where there is no available capacity in the existing facilities and new users have to be served entirely through the creation of additional capacity.

9.2.4 Approach for Determination of City Capacity Fees

The approach used in determining capacity fees should reflect system characteristics in addition to meeting regulatory requirements and policy considerations. In determining City capacity fees, RFC will continue to utilize a hybrid approach that incorporates some of the characteristics of the Buy-in and Specific Capacity methods. The hybrid approach has the advantage of including components which would not be considered otherwise, such as existing buildings, treatment plant, laboratories, etc. which may not necessarily need to be expanded for new users, but which benefit them. For example, capacity in the collection system and in the treatment and disposal systems would typically benefit a future user. Thus, the hybrid approach combines the value of the existing and future facilities and spreads them over the ultimate demand (including current and future capacity) to be met, and the ultimate demand provides the denominator needed for the calculation of the capacity fee. We believe that the hybrid approach is superior for the following reasons:

- Some elements of capacity are available in the existing system to meet the needs of future users. At the same time, the City is adding capacity to other elements where needed. The hybrid approach will fairly apportion the cost of both, and result in a reasonable fee which will ensure that existing users do not bear any part of the burden of providing capacity to new users.
- Although the incremental-cost method could be utilized, the absence of a formal system master plan outlining additional capacity added and the associated costs makes it difficult to estimate unit costs for facilities such as collector sewers. Lacking such estimates, use of the incremental-cost method would preclude capturing the cost of existing capacity to be used by new users.

9.3 Calculation of the City's Capacity Fees

The computation of Capacity Fees included the following steps:

- Estimation of costs of existing facilities benefiting future users
- Identification of outstanding principal on replacement debt

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- Identification of existing reserves
- Identification of expansion related CIP projects and their associated total capacity
- Estimation of grants used for expansion projects
- Estimation of interest on the debt used to finance future expansion projects
- Derivation of unit capacity cost and capacity fee per EDU

Table 9-1 shows the calculation of the capacity fees. We have used the original cost less depreciation (OCLD) method to determine the system buy-in value of existing facilities including general plant. For the buy-in component, the asset value is reduced by the outstanding principal on replacement debt to determine equity of the existing users to ensure that new users are not paying twice for the same capacity; once through payment of capacity fees and a second time through user fees which include debt service payments. By deducting the principal value of the replacement debt from the cost of the facilities, new users pay only for the equity portion of the existing facilities via the capacity charge. It is expected that new users will be sharing in the cost of the principal on the replacement debt once they join the system. Cash from operating, capital, and debt service reserves are added to derive the net buy-in equity.

A 10-year outlook was used in identifying future CIP projects. The CIP projects identified were classified into functional categories including large mains, treatment and disposal, ocean outfall, and general plant. Administration and General CIP projects such as laboratory, portable equipment, and miscellaneous assets were classified as General Plant. Costs for future projects were based on the CIP provided by the City. Future debt financing costs related to expansion projects are included in the expansion portion of the capacity fee so that existing users are not burdened with having to pay the costs of expansion related projects or related debt service. Expected grants for future facilities are credited towards the respective projects they will fund.

9.4 Unit Capacity Cost and Capacity Fee Per EDU

The unit capacity cost for each project is derived by dividing the total estimated cost of the project by the estimated average flow capacity of that project. Metro capacity considers the total capacity of the Metro system, 255 mgd; and Muni facilities consider only the City capacity in the system, 170 mgd. In this study, project capacity is estimated in terms of average flow per day. Although it is more prevalent to express project capacity in terms of peak flow units, use of average flow units can be substantiated. Peak flow capacity is more appropriate for water facilities, since they are designed for peak flow conditions. Wastewater treatment facilities are designed to handle peaks mostly resulting from infiltration and inflow rather than discharge from water use. Sewer pipes generally provide enough capacity to even out the peaks normally associated with customer use.

Since the capacity fee is expressed in terms of a fee per EDU, the average flow per EDU needs to be defined. The City defines the average flow of a sewer EDU as 280 gpd, and this value is used in determining the capacity fee per EDU. The system unit cost is applied to the estimated average flow per EDU to derive the capacity cost per EDU. The total capacity fee is merely the summation of these costs per EDU as shown in Table 9-1. Based on our analysis, the estimated full cost recovery capacity fee per EDU for projects constructed through 2012 is \$4,124. Implementation of the higher capacity fee results in additional capacity fee revenue. Since these additional dollars would replace funds that would otherwise be supplied by current system users, and assuming the increase in cost per EDU does not result in a reduction in the number of EDU's sold, the funds from current system users could be utilized

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to reduce the magnitude of future capital replacement borrowings, offset operations and maintenance expenses, augment the rate stabilization fund, or for other appropriate purposes.

Table 9-1: Wastewater Capacity Fee Calculation

Line No.		<u>System Buy-in</u>		<u>Total</u>	Existing Capacity (MGD)	Unit Cost		EDU (gpd)	Cost (\$/EDU)
		Existing OCLD (\$)	Expansion CIP (\$)			Asset Base (\$)	Buy-in (\$/gpd)		
Muni									
1	Mains >=16"	\$ 1,232,682,236	\$ 169,408,952	\$ 1,402,091,188	170	7.25	1.41	280	\$ 2,426
2	Treatment and Disposal	32,247,376	0	32,247,376	170	0.19	0.00	280	53
3	General Plant	4,424,564	6,014,287	10,438,850	170	0.03	0.04	280	17
Metro/Clean Water									
4	Mains	371,440,765	11,534,104	382,974,869	255	1.46	0.04	280	420
5	Treatment and Disposal	833,336,248	173,613,227	1,006,949,474	255	3.27	0.61	280	1,086
6	General Plant	25,740,410	19,481,358	45,221,767	255	0.10	0.04	280	41
7	Ocean Outfall	4,890,736	0	4,890,736	255	0.02	0.00	280	5
Replacement Debt Service Principal									
8	Muni Principal	(119,192,535)	0	(119,192,535)	170	(0.70)		280	(196)
9	Metro (City Portion)	(263,005,620)	0	(263,005,620)	170	(1.55)		280	(433)
9	Expansion Debt Interest	0	333,044,228	333,044,228	170	0.00	1.96	280	549
10	Reserves	95,434,164	0	95,434,164	170	0.56	0.00	280	157
11	System Buy-in Fee	\$ 2,217,998,342	\$ 713,096,155	\$ 2,931,094,497					\$ 4,124
Summary									
		<u>Calculated Cost</u>	<u>Existing Cost</u>						
		(\$/EDU)	(\$/EDU)						
12	Total Capacity Fee	\$4,124	\$3,710						

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APPENDIX A - LIST OF ACRONYMS

BOD	Biochemical Oxygen Demand
CIP	Capital Improvement Plan
COD	Chemical Oxygen Demand
EDU	Equivalent Dwelling Unit
hcf	One Hundred Cubic Feet
I&I	Infiltration and Inflow
MBC	Metro Biosolids Center
Metro	Metropolitan Wastewater System
MFR	Multi-Family Residential
MGD	Million Gallons Per Day
Muni	Municipal Wastewater System
MWWD	Metropolitan Wastewater Department
NCWRP	North City Water Reclamation Plant
NPDES	National Pollution Discharge Elimination System
OCLD	Original Cost Less Depreciation
O&M	Operations and Maintenance
PAs	Participating Agencies
PLOO	Point Loma Ocean Outfall
PLWTP	Point Loma Wastewater Treatment Plant
TSS	Total Suspended Solids
RFC	Raftelis Financial Consultants, Inc.
SBOO	South Bay Ocean Outfall
SBWRP	South Bay Water Reclamation Plant
SFR	Single-Family Residential
SIC	Standard Industrial Classification
SQC	Sewer Quality Code
SRF	State Revolving Fund
SWRCB	State Water Resources Control Board

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APPENDIX B - COD, TSS, AND RETURN FACTORS BY SIC CODE

The table below shows how Commercial/Industrial customers are charged based on their flow (return to sewer), TSS, and COD. Very large users (wastewater flows above 25,000 gpd) are assigned default flow and strength factors based on their SIC code; Large industrial users are sampled and their actual flow and strength factors are determined. Actual flow and strength factors are used for billing thereafter. Unless site specific data is available or COD or TSS values exceed ranges identified in Table 8-6, all other Commercial/Industrial customers are assigned a Sewer Quality Code (SQC), based on their SIC code. Flow and strength billing factors are then established based on the midpoint of the SQC range shown in Table 8-6.

TABLE 250 VERSION 01

PG 0001

SIC CODE TABLE WITH SQC

WATER DEPT U21

SIC CODE	DESCRIPTION	SQC (CD	COD	TSS	FLOW
0100	AGRICULTURAL CROPS/FARMING	CBB	00600	00135	0.9500	
0740	VETERINARY SERVICES	CCB	00600	00300	0.9500	
1500	CONSTRUCTION/TRADE CONTRACTORS	BCB	00300	00300	0.9500	
2010	MEAT PRODUCTS - PACKING, FREEZING, COOKING	JJB	02000	00920	0.9500	
2040	TORTILLA FACTORIES	JIE	02000	00850	0.8000	
2050	BAKERIES - CAKE, DONUT, PASTRIES, BREAD W/GRE	EEC	00850	00420	0.9000	
2055	BAKERIES - CAKE, DONUT, PASTRIES, BREAD WO/GRE	JIC	02000	00900	0.9000	
2080	BEVERAGES - BOTTLING COMPANIES	BCK	00300	00215	0.5000	
2090	MISC FOOD PRODUCTS - PACKING, FREEZING OF SEAFOOD	BED	00300	00500	0.8500	
2300	APPAREL & OTHER PRODUCTS MADE FROM FIBERS	BCB	00300	00250	0.9500	
2500	FURNITURE & FIXTURE MAKING, WOOD, METAL, PLASTIC	BCB	00300	00300	0.9500	
2600	PAPER PRODUCTS - CARDBOARD, BOXES, BAGS	BCB	00300	00300	0.9500	
2700	PRINTING, PUBLISHING, ENGRAVING, BOOKBINDING	BCB	00300	00270	0.9500	
2759	SILKSCREENING SERVICES	BCB	00300	00270	0.9500	
2810	INDUSTRIAL INORGANIC CHEMICALS	BBB	00300	00170	0.9500	
2820	PLASTICS, RESINS, MANMADE FIBERS	BBB	00300	00130	0.9500	
2830	DRUGS, PHARMACEUTICALS, BIOLOGICAL PRODUCTS	BCB	00300	00250	0.9500	
2840	SOAPS, CLEANING PREPS, PERFUME, COSMETICS	BDB	00300	00340	0.9500	
2850	PAINTS, VARNISHES, ENAMELS	BCB	00300	00280	0.9500	
2860	INDUSTRIAL ORGANIC CHEMICALS	EFB	00840	00600	0.9500	
2890	MISC CHEMICAL PRODUCTS	BBB	00300	00200	0.9500	
3000	RUBBER & MISCELLANEOUS PLASTICS PRODUCTS	BEB	00300	00450	0.9500	
3200	STONE, CLAY, GLASS & CONCRETE PRODUCTS	BCB	00300	00250	0.9500	
3400	PRIMARY & FABRICATED METAL PRODUCTS	BCB	00300	00250	0.9500	

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3500	FABRICATED MACHINERY	FCB	01200	00470	0.9500
3570	COMPUTERS & OFFICE EQUIPMENT	CCB	00600	00250	0.9500
3600	ELECTRICAL & ELECTRONIC EQUIPMENT	BCB	00300	00250	0.9500
3670	CATHODE RAY TUBES, CIRCUIT BRDS, SEMI CONDUCTORS	BCB	00300	00100	0.9500
3700	VEHICLES & OTHER TRANSPORTATION	BCB	00360	00250	0.9500
3800	INSTRUMENTS - OPTICAL, MEDICAL, SURGICAL	BCB	00300	00250	0.9500
3900	MISC MANUFACTURING INDUSTRIES	BCB	00300	00250	0.9500
4000	TRANSPORTATION & RELATED SERVICES	BCB	00360	00250	0.9500
4220	PUBLIC STORAGE - SELF, REFRIG, AUTO, COM/HOME GOODS	BCB	00360	00300	0.9500
4300	U.S. POSTAL SERVICE SITES & FACILITIES	CCB	00600	00250	0.9500
4400	WATER TRANSPORTATION - BOAT YARDS, MARINAS	CCB	00600	00300	0.9500
4500	AIR TRANSPORTATION, AIRPORTS, TERMINALS, SERVICES	CCB	00600	00250	0.9500
4800	COMMUNICATION SERVICES - PHONE, TV, RADIO, CABLE, WIRE	CCB	00600	00250	0.9500
4900	PETROLEUM - DISTRIBUTION CENTERS, PIPELINES, REFINER	CCB	00600	00300	0.9500
4930	GAS & ELECTRIC COMPANIES	CCB	00600	00300	0.9500
4940	WATER - CITY SD WTR, PUMP STA, DISTRIB, FILTRATION	CCB	00600	00300	0.9500
4950	WASTEWATER-CITY MWD, PUMP STA, COLLECTION, TREATMENT	CCB	00600	00300	0.9500
4953	SOLID WASTE-COLLECT & DISPOSAL OF REFUSE, LANDFILLS	CCB	00600	00300	0.9500
4955	WATER RECLAMATION PLANTS, PUMP STATIONS, TANKS	CCB	00600	00300	0.9500
4959	GROUNDWATER REMEDIATION - WATER DISPOSAL TO SEWER	CCB	00600	00300	0.9500
4961	COOLING TOWERS, COGENERATION, STEAM, AIR CONDITIONING	CCF	00600	00300	0.7500
4971	RECYCLED WATER METER ACCTS - IRRIGATION ONLY	N/A	00001	00001	0.0001
4972	RECYCLED WATER METER ACCTS - DISCHARGED TO SEWER	CCB	00600	00250	0.9500
4999	POTABLE IRRIGATION METER ON FUTURE RECYCLED MAIN	N/A	00001	00001	0.0001
5000	DURABLE GOODS - WHOLESALE DISTRIB CTRS, OUTLETS	CCB	00600	00300	0.9500
5100	NONDURABLE GOODS - WHOLESALE DISTRIB CTRS, OUTLETS	CCB	00600	00300	0.9500
5200	BUILDING SUPPLIES - RETAIL LUMBER, PAINT, NURSERY	CCB	00600	00300	0.9500
5300	DEPARTMENT STORES - RETAIL	CCB	00600	00300	0.9500
5400	FOOD STORES - GROCERY WITH G.R.E. COMPLIANCE	EEB	00850	00420	0.9500
5410	CONVENIENCE STORES - NO PRODUCE, MEAT/BUTCHER	CCB	00600	00250	0.9500
5420	FOOD STORES - GROCERY WITHOUT G.R.E. COMPLIANCE	IIB	01700	00850	0.9500
5600	APPAREL & ACCESSORY STORES SHOES, SPECIALTY, UNIFORM	CCB	00600	00300	0.9500
5700	HOME FURNISHING-APPLIANCE, FURNITURE, FLOOR COVERING	CCB	00600	00300	0.9500
5800	RESTAURANTS & FAST FOOD WITH G.R.E. COMPLIANCE	EDB	00850	00320	0.9500
5813	BARS & NIGHT CLUBS	BCB	00400	00240	0.9500
5820	RESTAURANTS & FAST FOOD WITHOUT G.R.E. COMPLIANCE	JGB	02000	00640	0.9500
5900	MISCELLANEOUS RETAIL STORES & SHOPS	CCB	00600	00250	0.9500

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6000	FINANCE SERVICES-REAL ESTATE, INVESTMENT, PROP MGMT	CCB	00600	00250	0.9500
6500	RESIDENTIAL - MULTIPLE LIVING UNITS, APTS, CONDOS	CCB	00600	00250	0.9500
7000	HOTELS, MOTELS, LODGING WITH RESTAURANT/KITCHEN	CDB	00600	00400	0.9500
7010	HOTELS, MOTELS, LODGING WITHOUT RESTAURANT/KITCHEN	CCB	00600	00300	0.9500
7210	DRY CLEANING, GARMENT SERVICES	BCB	00300	00250	0.9500
7215	COIN OPERATED LAUNDRIES	BBC	00300	00110	0.9000
7218	COMMERCIAL LAUNDRY SERVICES - LINENS, UNIFORMS	GGE	01340	00700	0.8000
7230	BEAUTY SERVICES-HAIR SALONS, BARBER SHOPS, SCHOOLS	CCB	00600	00250	0.9500
7260	MORTUARIES WITH EMBALMING SERVICES	HIB	01600	00850	0.9500
7334	PHOTOCOPYING & BLUEPRINTING	BCB	00300	00250	0.9500
7340	DISINFECT, EXTERMINATE, CLEAN & JANITORIAL SERVICES	BCB	00300	00280	0.9500
7384	PHOTOFINISHING-FILM DEV, SLIDES, DIGITAL, ENLARGEMENT	BCB	00300	00210	0.9500
7389	WATER VENDING MACHINES, BOTTLED WATER, ICE MAKING	BBI	00300	00150	0.6000
7399	MISCELLANEOUS SERVICES - NO EATING OR DRINKING	BCB	00300	00250	0.9500
7400	FIRE SERVICE ONLY - CIS ACCOUNTS	N/A	00001	00001	0.0001
7435	FIRE SERVICE & IRRIGATION - CIS ACCTS	N/A	00001	00001	0.0001
7530	AUTOMOBILE SALES, RENTALS, REPAIR, GAS STATIONS	CCC	00600	00280	0.9400
7540	CAR WASHES	CBC	00600	00150	0.9000
7549	AUTO STEAM CLEANING	FHE	01200	00800	0.8000
7900	AMUSEMENT & RECREATION SERVICES	CCB	00600	00250	0.9500
7999	RESIDENTIAL REC BLS, LAUNDRY RMS, CABANAS, GUARDS	CCB	00600	00250	0.9500
8000	HEALTH SERVICES	CCB	00600	00250	0.9500
8050	CONVALESCENT HOMES, EXTENDED NURSING	CCB	00600	00250	0.9500
8060	HOSPITALS	CCB	00500	00200	0.9500
8070	MEDICAL & DENTAL LABORATORIES	DCB	00700	00250	0.9500
8100	LEGAL & SOCIAL SERVICES, MEMBERSHIP ORGS	CCB	00600	00250	0.9500
8200	EDUCATIONAL SERVICES - SCHOOLS, COLLEGES	CCB	00600	00250	0.9500
8400	MUSEUMS, BOTANICAL, ZOOLOGICAL GARDENS	CCB	00600	00250	0.9500
8660	CHURCHES	CCB	00600	00250	0.9500
8730	RESEARCH & DEVELOPMENT - TEST LABS, NEW TECHNOLOGY	DCB	00700	00250	0.9500
8900	PROFESSIONAL OFFICES	CCB	00600	00300	0.9500
8999	COMBINED COMMERCIAL & RETAIL	DCB	00800	00250	0.9500
9100	PUBLIC ADMIN - POLICE, FIRE, SAFETY, JUSTICE	CCB	00600	00250	0.9500
9700	ARMED FORCES, NATIONAL SECURITY	CCB	00600	00250	0.9500
9900	NONCLASSIFIABLE - SHELL & VACANT BLS, VACANT LOTS	CCB	00600	00250	0.9500



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Office of the Mayor
City of San Diego

Independent Accountant's Report on Agreed-Upon Procedures
Applied to Use of Wastewater Fund Bond Proceeds

We have applied the procedures enumerated below to the City of San Diego's Wastewater Fund bond proceeds. These procedures, which were agreed to by the City of San Diego were performed solely to assist the City in determining the allowability of the uses of bond proceeds.

This engagement to apply agreed-upon procedures was performed in accordance with attestation standards established by the American Institute of Certified Public Accountants. The sufficiency of the procedures is solely the responsibility of the specified users of the report. Consequently, we make no representations regarding the sufficiency of the procedures described below either for the purpose for which this report has been requested or for any other purpose.

The procedures performed and the results of those procedures were as follows:

ANALYSIS OF SOURCES AND USES OF DEBT PROCEEDS
SEWER REVENUE BONDS

1. We reviewed the Indenture of the \$152,000,000 Public Facilities Financing Authority of the City of San Diego Non-Transferable Subordinated Sewer Revenue Bonds, Series 2004. We compared the bond proceeds per the Indenture to a detailed listing of capital projects funded by the bond proceeds (Project Status Report).

Results: The bond proceeds per the indenture were \$152,000,000. The expended bond proceeds per the Project Status Report were \$152,219,032. The expended amounts exceeded the original proceeds of the bonds due to additional resources generated through investment earnings on unspent bond proceeds.

2. We agreed the total expenditures per the Project Status Report (\$152,219,032) to the cumulative expenditures recorded in the Public Facilities Financing Authority construction fund.

Results: No exceptions were noted.

3. We reviewed the Master and Supplemental Installment Purchase Agreements to identify the listing of bond approved capital projects. We also reviewed the Master Installment Purchase Agreement to identify the procedures for modifying the listing of capital projects.

Results: Exhibit A of the Installment Purchase Agreement defines the components of the bond funded project as follows:

The 2004 components consist of certain capital improvements to (1) the City's Metropolitan System including improvements to certain interceptor lines, the Point Loma Treatment Facility, North City System, South Bay System, Wastewater Management Computer Network (COMNET) and the City's wastewater laboratory facilities and (2) the City's Municipal System including replacement and upgrading of certain pipelines, sewer mains, trunk sewer lines and pump stations.

The Master Installment Purchase Agreement, dated September 1, 1993, describes the procedures for changing projects as follows:

From time to time and at any time, the City may modify or amend the description of the project, to eliminate any part thereof and/or substitute another project or projects, all without obtaining any consent, by filing an amended Exhibit A with the Authority and the Trustee; provided however, that no such amendment shall substitute a project or projects which are not to be owned by the Sewer Revenue Fund.

The City has interpreted Exhibit A to include all capital projects listed in the City Council approved CIP budget for the Sewer Revenue Fund and all capital projects funded with the Muni and Metro interim financing proceeds. Accordingly, the City did not file an amended Exhibit A with the Corporation and the Trustee. The bond documents did not specifically provide for this interpretation of the substitution requirement. We recommend that future debt issuances explicitly acknowledge the acceptability of this interpretation in the list of authorized projects for that debt issue..

4. We obtained the Project Status Report for the bonds that lists actual expenditures, by project, funded with bond proceeds. We compared the list of bond approved projects to the list of actual expenditures by project (*Schedule 1*). We differentiated between those projects originally identified as eligible for debt financing versus (Muni and Metro 2004 capital projects) those projects included in the annual CIP budget for the Sewer Fund, projects included in amendments to the annual CIP budget, and other projects. We also identified the portion of each project's expenditures that were "debt financed" versus the portion that was "financed with other funding sources."

Results: Schedule 1 provides the above detail by project. The following is a summary of Schedule 1:

Muni and Metro 2004 projects	\$ 70,773,464	46.49%
Annual CIP budget projects	81,111,239	53.29%
Other expenditures	<u>334,329</u>	<u>.22%</u>
Total	<u>\$152,219,032</u>	<u>100.00%</u>

The "other expenditures" of \$334,329 noted on the previous page are for legal fees associated with the abandoned issuance of the 2003 Sewer Bonds. The City obtained documentation from the 2004 Sewer Bonds' council, Hawkins Delafield & Wood, LLP, stating that since the 2004 bonds were being issued for the same purpose as the 2003 bonds, the costs associated with the 2003 bonds are eligible for reimbursement by the 2004 bonds.

5. We selected a sample of 10 projects (accounting for 33% of total expenditures) for additional testing. The sample included all projects with expenditures of over \$5 million and four projects selected judgmentally. From the sample of 10 projects, we selected 37 transactions (accounting for over \$9 million and 6% of total expenditures) and performed the following procedures:
 - a. We determined that the project description noted on the vendor invoice agreed to the project description noted on the Project Status Report.
 - b. We determined that the amount of bond expenditures per the Project Status Report agreed to the amount the City paid to the vendor.
 - c. We determined that the documentation was sufficient to support the charge to the bond.

Results: One charge totaling \$132,908 was a journal voucher correcting a misposting to another project. The journal voucher was supported by an e-mail from an Associate Management Analyst.

Recommendation: We recommend that the individuals initiating correcting journal entries provide documentation supporting the amount of the adjustment. The documentation should be attached to the journal voucher. The documentation for transactions posted to the general ledger should stand on its own without further explanation from staff.

* * * * *

We were not engaged to, and did not, perform an audit, the objective of which would be the expression of an opinion on the procedures referred to above. Accordingly, we do not express such an opinion. Had we performed additional procedures, other matters might have come to our attention that would have been reported to you.

This report is intended solely for the use of the City of San Diego, California and is not intended to be and should not be used by those who have not agreed to the procedures and taken responsibility for the sufficiency of the procedures for their purposes.

Mary Hoffman Melara R.C.

CITY OF SAN DIEGO
Wastewater CIP Listing

Project No.	Subproject		Total CIP	CIP Funded by	
	No.	Description		Bond Proceeds	Other Sources
<i>Projects listed on Muni and Metro financing document:</i>					
41-927.9		Pump Station 64 Odor Scrubber Rehabilitation	29,702	-	29,702
41-927.8		Standby Electrical Power system	296,799	144,006	152,793
41-928.1		Value Engineering For Pump Station 64, 65, Penasquitos & East Mission Gorge	80,004	13,246	66,758
41-928.2		Pump Station 65 Cathodic Protection	251,325	-	251,325
41-928.3		Pump Station 65 Auto Transfer Switch	322,821	155,091	167,730
41-928.4		Removal Second Stage Pump At Penasquitos	262,161	28,320	233,841
41-928.5		Screens Design Replacement PS 64, 65, Penasquitos	117,187	64,477	52,710
41-928.6		Pump Station 64 Large Valve	36,838	-	36,838
41-928.7		Pump Station 64 Flow Meter Replacement Project	78,418	-	78,418
41-928.8		East Mission Gorge Electrical Room Cooling	85,436	-	85,436
46-139.2		Home Avenue T. S. Contract III	3,632,304	14,445	3,617,859
46-162.1		East Linda Vista Trunk Sewer Phase 2	2,798,133	2,264,299	533,834
46-196.1		Maintenance Facilities Relocation: MOC 1 Office Improvements	2,867,194	258,060	2,609,134
46-196.3		Maintenance Facilities Relocation: MOC 6 WWC Warehouse	115,723	31,983	83,740
40-910.2		Chollas Valley Trunk Sewer*	7,616,658	5,687,546	1,929,112
40-920.4		East Mission Gorge Trunk Sewer Rehabilitation*	12,890,910	16,938	12,873,972
40-927.0		Centre City sewer Improvements*	2,327,745	-	2,327,745
40-928.0		South Pacific Highway Trunk Sewer*	3,672,612	1,859,587	1,813,025
40-930.0		Otay Mesa Trunk Sewer*	11,701,289	5,244,545	6,456,744
40-931.0		South Mission Valley Trunk Sewer*	1,426,304	-	1,426,304
40-932.0		Camden Redevelopment	71,127	-	71,127
41-929.0		Pump Station Upgrades*	2,173,745	-	2,173,745
45-934.0		Vactor Cleanings Disposal Site	392,511	-	392,511
45-936.0		Sewer System Canyon Access*	3,480,898	-	3,480,898
45-938.0		Beach Area Low Flow Storm Drain Diversion	2,251,176	-	2,251,176
45-946.0		South Bay Reclaimed Water Storage Tank*	1,423,127	283,682	1,139,445
46-117.0		Pump Station 65 - Expansion and Force Main*	22,936,927	992	22,935,935
46-120.0		Penasquitos Trunk Sewer Relief*	57,672,440	-	57,672,440
46-122.0		Carmel Valley Trunk Sewer Replacement - Sewer Pump Station 65*	8,295,608	-	8,295,608
46-136.0		Carmel Valley Trunk Sewer E/O I-5*	8,290,397	-	8,290,397
46-138.0		Highland Park Estates Trunk Sewer - Phase II*	1,305,399	-	1,305,399
46-139.0		Home Avenue Trunk Sewer - Contracts 1, 2 And 3*	2,144,069	-	2,144,069
46-142.0		Sewer Pump Station 24*	5,333,176	295,929	5,037,247
46-168.0		Telemetry Control Systems - SCADA*	8,528,858	1,597,572	6,931,286
46-188.0		Pump Station 64 - Improvement Project* <i>Formerly Pump Station 64 - HPO Injection</i>	1,719,301	-	1,719,301
46-191.0		Brine Management Force Main and Pump Station	967,553	-	967,553
46-194.2		La Jolla/Pacific Beach Trunk Sewer - Chelsea Street Relocation*	8,260,042	5,836,890	2,423,152
46-195.0		Belt Street Trunk Sewer*	891,583	-	891,583
46-195.8		Miramar Road Trunk Sewer*	702,181	179,779	522,402
46-196.6		Balboa Trunk Sewer*	563,479	277,845	285,634
46-196.9		Montezuma Trunk Sewer*	566,418	-	566,418
46-197.0		Sorrento Valley Trunk Sewer Relocation*	10,972,214	614,095	10,358,119
46-197.6		USIU Trunk Sewer*	1,071,202	825,045	246,157
46-197.9		Lake Murray Trunk Sewer In Canyon*	798,732	628,123	170,609
46-198.0		UCSD Trunk Sewer*	2,377,221	34,470	2,342,751
46-199.0		West Linda Vista Trunk Sewer*	1,558,945	-	1,558,945
46-200.0		Sewer Pump Station 30A Relocation*	9,045,821	2,832,548	6,213,273
46-205.0		Harbor Drive Trunk Sewer Replacement*	622,510	311,302	311,208
46-208.0		San Pasqual Effluent Disposal	857	-	857
46-506.0		Pipeline Rehabilitation In The R.O.W. And Easments - Phase A*	17,299,996	14,175,688	3,124,308
46-601.6		Sewer Pump Station 45*	12,340,027	7,569,095	4,770,932
46-602.6		Sewer Pump Station 79*	1,265,056	-	1,265,056
41-926.1		Pump Station 2 Odor Control System	357,694	70,919	286,775
41-926.2		P.S. 1 Liquid Rheostats	314,358	161,558	152,800
41-926.3		P.S. 2 Liquid Rheostats	298,202	144,334	153,868
41-926.4		Pump Station 2 Parking Lot Construction	60,646	-	60,646
41-926.5		P. S. 1 Bleach Tank Replacement	32,722	-	32,722

41-926.6	P. S. 1 & 2 Sump Pumps/Well Transfer Pumps & Venturi Replacement	1,256,916	1,000,062	256,854
41-926.7	Design of Pump Station 1 Sluice Gates	707,836	614,072	93,764
41-926.9	P. S. 2 Heat Exchangers Modifications	432,545	24,545	408,000
41-929.1	P. S. 1 & 2 New Pumps Actuation System Design	196,794	35,748	161,046
41-929.2	P. S. 1 & 2 Power Reliability Investigation & Design	570,703	269,863	300,840
41-929.5	P. S. Liquid Nat Gas Pre-Design	65,285	-	65,285
41-929.6	P. S. Security Fence and Gate	171,583	25,766	145,817
41-929.7	P. S. 1 & 2 Design And Installation Level Indicators	65,627	14,223	51,404
41-929.8	P. S. 1 & 2 Screens Design & Installation	118,300	99,356	18,944
41-929.9	Screening Room Liner Improv	30,470	13,564	16,906
41-930.0	P. S. 1 & 2 Fiber Optic Installation	961,026	742,722	218,304
41-930.1	P. S. 2 Concrete Work	14,102	11,449	2,653
41-930.3	P. S. 2 Restroom Relocation	115,520	-	115,520
42-913.1	MBC Plant Imp. Centrifuges Digesters	4,587,513	500	4,587,013
42-913.3	MBC Plant Improvements Centrifuges Digesters	61,773	-	61,773
42-913.4	MBC Access Road	80,706	8,388	72,318
42-913.5	MBC Air Release Valve	10,149	-	10,149
42-913.6	MBC Access To Valves In	15,500	-	15,500
42-913.7	MBC Sump Pumps	70,050	2,921	67,129
42-913.8	MBC Digester Viewport REM	24,906	1,035	23,871
42-913.9	MBC Duct Cleaning Access	39,971	-	39,971
42-914.2	MBC Boiler Gas Meter Inst.	5,188	-	5,188
42-914.4	MBC Wash System For Militrone	569	-	569
42-914.5	MBC Design Modification	79,197	22,264	56,933
42-914.6	MBC Clarifier Access Station	10,649	4,545	6,104
42-914.7	Storm Drain	407,006	211,891	195,115
42-914.8	MBC Grit Teacups Access Platform	942,370	56,459	885,911
42-914.9	MBC Odor Control Modifications	215,082	-	215,082
42-915.1	MBC TC Wetwell Mixer	1,307	-	1,307
42-915.2	MBC Foul Air Duct U-Trap	273,046	182,067	90,979
42-915.3	MBC Heat Exchanger	200	-	200
42-915.4	MBC Misc. Concrete Work	32,171	-	32,171
42-915.7	MBC Reclaimed Water To Digester Trsr Pumps	130,542	93,172	37,370
42-915.8	MBC RW Centrate Cathodic Protection	17,911	16,570	1,341
42-915.9	MBC Dewatering Transfer Pumps	733,417	1,752	731,665
40-911.1	South Bay Pump Station and Conveyance System- Phase 1	1,003,649	6,456	997,193
40-911.3	South Bay Water Reclamation Sewer and Pump Station* Formerly South Bay Water Reclama	31,135,912	45,054	31,090,858
40-924.0	Metropolitan Operations Center MOC II Buildout*	8,140,451	594,246	7,546,205
41-924.0	Otay River Pump Station*	12,266,990	896,808	11,370,182
41-925.0	Fourth Sludge Pump and Other Modifications*	4,938,289	724,055	4,214,234
42-910.1	North City Reclamation Plant*	205,494,493	178,461	205,316,032
42-910.6	South Bay Water Reclamation Plant* Formerly South Bay Water Reclamation and Secondary Pla	143,119,157	1,398,388	141,720,769
42-911.3	North City Raw Sludge and Water Pipelines*	19,683,829	10,865	19,672,964
42-911.4	Metro Biosolids Center*	254,088,040	71,616	254,016,424
42-915.0	NCWRP Permanent Demineralization Facility*	3,664,194	422,753	3,241,441
45-920.0	Wastewater Operations Management Network (COMNET)* Formerly Metro System Control	58,677,657	5,159,212	53,518,445
45-960.0	Point Loma - South Access Road Protection Project*	238,153	58,034	180,119
46-055.0	FIRP Pump Station* Formerly Fiesta Island Replacement Project	46,594,010	5,796	46,588,214
46-170.0	Point Loma - Digester Facility Upgrade and Expansion*	72,855,330	351,356	72,503,974
46-218.0	Point Loma - Digesters S1 & S2 Upgrades*	14,800,481	1,404,608	13,395,873
46-192.1	Point Loma Concrete Restorations Sed. Basins 9-12	1,020,254	134,676	885,578
46-192.4	Point Loma HVAC Upgrades Air Conditioning	373,417	104,399	269,018
46-192.5	Point Loma Odor Control Scrubber Fans	242,814	59,175	183,639
46-192.7	Point Loma 84-inch Penstock Improvement	184,549	42,246	142,303
46-192.8	Submersible Actuator Replacement	2,420	4	2,416
46-192.9	Gas utilization Facility I&C Startup	598,439	392,630	205,809
46-193.1	Bin Storage and Truck Wash	109,750	104,558	5,192
46-193.2	Hydro Road Storm Water Diversion	36,982	32,520	4,462
46-193.4	FIRP Phase B, C, & D Cathodic Protection	519,532	175,966	343,566
46-193.7	Point Loma NEOC Slide Gate	142,672	76,823	65,849
46-193.8	Point Loma NEOC Sludge Gates & Hydro P.	25,420	22,353	3,067
46-193.9	Point Loma Lower Hydro Road Piping	59,298	49,362	9,936
46-600.6	Pump Station 1 Electrical Upgrade	155,186	143	155,043
40-922.0	MOC Central Repair Facility*	6,099,789	192,365	5,907,424
45-911.0	South Metro Rehabilitation*	10,704,430	482	10,703,948

45-937.0	Point Loma Site Improvements*	403,321	1,468	401,853
45-941.0	South Metro Downtown Tunnel Rehabilitation*	6,777,568	1,864,977	4,912,591
45-942.0	Metropolitan Operations Center Expansion Phase II*	4,406,246	16,719	4,389,527
45-943.0	Point Loma Grit Processing Improvements*	2,601,090	245,154	2,355,936
46-104.0	North Metro Interceptor*	64,379,512	533,889	63,845,623
46-110.0	Point Loma - Scum Removal System*	18,010,752	9,000	18,001,752
46-175.0	Point Loma - Headworks, Odor Control and Grit Processing Facilities*	19,680,607	28,526	19,652,081
46-177.0	Point Loma - Sedimentation Basins 11 and 12+ (This project has been completed)	22,936,927		22,936,927
46-179.0	Point Loma - Power Generation and Distribution Upgrade*	25,217,175	237,307	24,979,868
46-182.0	Point Loma Chemical Feed Systems Upgrade*	6,061,874	45,671	6,016,203

Projects listed on CIP Budget:

41-927.3	Annual Allocation - Pump Stations 64, 65, Pensquitos and Mission Gorge	172,095	118,667	53,428
41-927.6	Annual Allocation - Pump Stations 64, 65, Pensquitos and Mission Gorge	401,261	57,078	344,183
46-194.3	Annual Allocation - Trunk Sewer Rehabilitaitaions	788,529	24,066	764,463
46-194.7	Annual Allocation - Trunk Sewer Rehabilitaitaions	1,401,645	74,689	1,326,956
46-195.5	Belt Street Trunk Sewer	439,384	96,641	342,743
46-195.7	Belt Street Trunk Sewer	2,546,675	1,509,093	1,037,582
46-195.9	Belt Street Trunk Sewer	327,678	24,212	303,466
46-601.0	Pump Station #45	7,660,249	726,332	6,933,917
46-601.3	Pump Station #45	5,118,582	2,195,455	2,923,127
46-601.8	Pump Station #45	2,507,211	905,789	1,601,422
46-601.9	Pump Station #45	4,168,383	2,220,561	1,947,822
41-928.9	Pump Stations #1 and #2 Large Valve Replacement	65,250	62,511	2,739
46-602.0	Sewer Pump Station 79	1,110,654	286,739	823,915
46-602.1	Sewer Pump Station 79	2,282,261	1,535,666	746,595
46-602.2	Sewer Pump Station 79	1,835,271	153,806	1,681,465
46-602.3	Sewer Pump Station 79	1,317,326	769,093	548,233
46-602.4	Sewer Pump Station 79	914,018	513,742	400,276
46-602.5	Sewer Pump Station 79	1,177,448	79,524	1,097,924
46-602.7	Sewer Pump Station 79	3,895,417	2,416,202	1,479,215
46-602.8	Sewer Pump Station 79	1,074,427	750,376	324,051
46-602.9	Sewer Pump Station 79	907,952	528,248	379,704
46-197.5	Sorrento Valley Trunk Sewer Relocation	342,225	40,091	302,134
40-911.4	South Bay Pump Station and Conveyance System - Phase I	16,383	1,405	14,978
40-928.1	South Pacific Highway Trunk Sewer	2,642,157	2,299,685	342,472

Projects listed on CIP Budget (Project ID/Subproject ID):

41-926.0	41-930.2	PS #1 Lighting Upgrade	113,773	23,377	90,396
41-927.0	41-935.1	PS 64 Bleach Tank Replacement	85,841	41,455	44,386
42-911.3	42-911.5	North City Raw SL & Water Pipelines Revveg Sublet	4,935	4,935	-
42-911.3	42-911.6	Northern Sludge Processing Facility PH II	44,420	27,461	16,959
44-001.0	44-105.0	Sewer Group 90	2,129,321	8,676	2,120,645
44-001.0	44-107.9	Sewer Group 653	1,671,366	1,312,530	358,836
44-001.0	44-108.2	Sewer Repl Group 649-Kensington	263,673	19,355	244,318
44-001.0	44-108.4	Sewer Repl Group 651 Kensington	3,300,596	2,465,145	835,451
44-001.0	44-108.5	Sewer Repl Group 652 Kensington	3,634,544	404,824	3,229,720
44-001.0	44-109.6	Sewer Repl Group 663-Mission Hills	3,384,128	368,414	3,015,714
44-001.0	44-109.7	Sewer Repl Group 664-Mission Hills	300,441	18,608	281,833
44-001.0	44-109.8	Sewer Repl Group 665	458,620	8,071	450,549
44-001.0	44-210.1	Sewer Group 667 Ocean Beach - So Mstr Repl	2,040,045	712,312	1,327,733
44-001.0	44-210.2	Sewer Group 668 Ocean Beach - So Mstr Repl	215,365	15,847	199,518
44-001.0	44-210.5	Sewer Group 670 Ocean Beach - So Mstr Repl	1,661,286	636,328	1,024,958
44-001.0	44-210.6	Sewer Group 633 Main Repl	2,797,799	876,749	1,921,050
44-001.0	44-211.2	Sewer Group 672 Main Repl	1,568,182	859,170	709,012
44-001.0	44-211.3	Sewer Group 673 Main Repl	2,067,260	207,824	1,859,436
44-001.0	44-212.9	Sewer Group Job 682	719,508	83,900	635,608
44-001.0	44-213.0	Sewer Group Job 677	1,405,158	282,216	1,122,942
44-001.0	44-213.2	Sewer Group Job 676	341,805	52,198	289,607
44-001.0	44-213.5	Sewer Group Job 681	3,467,406	148,622	3,318,784
44-001.0	44-213.6	Sewer Group Job 680	4,492,422	2,963,417	1,529,005
44-001.0	44-213.9	Cather Ave/Florey St/Florey Cl Rerouting	1,176,421	19,073	1,157,348
44-001.0	44-214.2	Sewer Group Job 627B	932,505	509,310	423,195
44-001.0	44-214.9	City Heights: Grp 683	3,478,780	1,749,254	1,729,526

44-001.0	44-215.0	City Heights: Grp 684	696,279	10,904	685,375
44-001.0	44-215.1	City Heights: Grp 685	540,997	7,228	533,769
44-001.0	44-215.2	City Heights: Grp 686	2,820,534	344,706	2,475,828
44-001.0	44-215.4	University Heights-GJ 687	792,915	7,295	785,620
44-001.0	44-215.5	University Heights-GJ 690	3,225,521	1,167,352	2,058,169
44-001.0	44-215.6	University Heights-GJ 688	1,654,395	1,303,600	350,795
44-001.0	44-215.7	University Heights-GJ 689	606,007	31,091	574,916
44-001.0	44-215.8	Del Rey Street 3.0" Sewer Main	1,851,022	219,226	1,631,796
44-001.0	44-217.1	Sewer Group 634 B	2,771,926	1,787,553	984,373
44-001.0	44-217.2	Sewer Group 683 A	452,329	20,564	431,765
44-001.0	44-217.3	Sewer Group 623 B	3,966,979	3,101,543	865,436
44-001.0	44-217.8	Sewer Group Job 726	296,740	66,634	230,106
44-001.0	44-217.9	Sewer Group Job 727	252,186	78,478	173,708
44-001.0	44-218.0	Sewer Group Job 728	296,509	69,587	226,922
44-001.0	44-218.1	Sewer Group Job 729	286,422	38,990	247,432
44-001.0	44-218.3	Sewer Group 731	207,636	15,858	191,778
44-001.0	44-218.6	La Jolla Shores Dr/Ardath Road	2,268,682	1,027,134	1,241,548
44-001.0	44-218.7	Group Job 545	1,697,805	27,792	1,670,013
44-001.0	44-218.9	Sewer & Water Group Job 544	159,216	5,005	154,211
44-001.0	44-219.0	Sewer Group 735	285,605	78,686	206,919
44-001.0	44-219.1	Sewer Group 737	2,070,830	301,531	1,769,299
44-001.0	44-219.2	Sewer Group 697 A	119,340	3,446	115,894
44-001.0	44-219.4	Group Job 740	219,013	19,459	199,554
44-001.0	44-219.6	Group Job 741	333,333	42,672	290,661
44-001.0	44-219.8	Sewer Group 742	922,220	218,720	703,500
44-001.0	44-219.9	Sewer & Water Group 743	521,988	200,544	321,444
44-001.0	44-220.0	Sewer Group 744	4,203,261	1,311,062	2,892,199
44-001.0	44-220.1	Sewer Group 745	678,228	404,232	273,996
44-001.0	44-220.2	Sewer Group 746	2,471,235	189,288	2,281,947
44-001.0	44-220.3	Sewer & Water GJ 747	642,485	184,061	458,424
44-001.0	44-220.4	Sewer Group 748	601,636	314,826	286,810
44-001.0	44-220.5	Sewer Group 749	1,379,484	224,186	1,155,298
44-001.0	44-220.6	Sewer Group Job 687A	157,868	7,088	150,780
44-001.0	44-220.7	Sewer Group Job 738	192,389	15,851	176,538
44-001.0	44-220.9	Sewer Repl GJ 750	450,131	132,647	317,484
44-001.0	44-221.0	Sewer Repl GJ 751	388,499	157,475	231,024
44-001.0	44-221.1	Water & Sewer Repl 752	417,443	36,144	381,299
44-001.0	44-221.2	Water & Sewer GJ 753	264,491	113,411	151,080
44-001.0	44-221.3	Water & Sewer GJ 754	315,570	131,064	184,506
44-001.0	44-221.4	Sewer & Water GJ 756	263,985	3,793	260,192
44-001.0	44-221.5	Sewer Repl GJ 757	209,576	11,683	197,893
44-001.0	44-221.6	Sewer & Water GJ 758	173,541	29,535	144,006
44-001.0	44-221.9	Sewer & Water Group Job 760	196,008	10,102	185,906
44-001.0	44-222.1	Sewer & Water Group Job 764	74,265	37,774	36,491
44-001.0	44-222.2	Sewer & Water Group Job 765	175,662	66,755	108,907
44-001.0	44-222.3	Sewer Group Job 767	262,334	111,753	150,581
44-001.0	44-222.4	Sewer Group Job 768	463,730	274,800	188,930
44-001.0	44-222.5	Sewer & Water Group Job 761	260,491	126,395	134,096
44-001.0	44-222.6	Sewer Group Job 762	441,828	206,923	234,905
44-001.0	44-222.7	Sewer & Water Group Job 763	429,440	115,344	314,096
44-001.0	44-222.8	Sewer & Water Group 766	502,676	261,070	241,606
44-001.0	44-222.9	Sewer Group Job 900	49,523	33,229	16,294
44-001.0	44-223.0	Sewer Group Job 901	330,261	274,078	56,183
44-001.0	44-223.1	Sewer Group Job 902	167,611	153,577	14,034
44-001.0	44-223.2	Sewer Group Job 903	354,343	337,898	16,445
44-001.0	44-223.3	Sewer Group Job 904	321,067	305,754	15,313
44-001.0	44-223.5	Sewer Group 742 A	216,350	8,421	207,929
44-001.0	44-223.6	Sewer Group 747 A	1,755,050	1,461,467	293,583
44-001.0	44-224.0	Sewer & Water GJ764A	223,687	90,654	133,033
44-001.0	44-224.1	Sewer & Water GJ789	146,436	41,752	104,684
44-001.0	44-224.7	Sewer & Water Group Job 774	367,265	82,891	284,374
44-001.0	44-224.8	Sewer & Water Group Job 775	160,349	53,411	106,938
44-001.0	44-224.9	Sewer Group Job 776	103,077	25,982	77,095
44-001.0	44-225.0	Sewer & Water Group Job 778	143,033	32,571	110,462
44-001.0	44-305.8	Sewer Group 516	455,038	221,216	233,822

44-001.0	44-305.9	Sewer Group 616	3,290,573	2,460,254	830,319
44-001.0	44-306.2	Sewer Group 619	2,486,641	444,317	2,042,324
44-001.0	44-309.6	Sewer Group 640	4,941,885	3,403,274	1,538,611
44-001.0	44-309.7	Sewer Group Job 632 Sewer Main Replacement	5,051,638	2,240,093	2,811,545
44-001.0	44-309.8	Sewer Main Group 626A Sewer Main Replacement	1,044,240	536,441	507,799
44-001.0	44-310.1	Sewer Group 691	531,220	61,148	470,072
44-001.0	44-310.2	Sewer Group 692 Sewer Replacement Main	2,395,769	1,886,817	508,952
44-001.0	44-310.3	Sewer Group 693 Sewer Main Replacement	436,573	8,754	427,819
44-001.0	44-310.5	Sewer Group 695 Sewer Main Replacement	131,896	5,824	126,072
44-001.0	44-310.6	Sewer Group 725 Sewer Main Replacement	459,338	4,151	455,187
44-001.0	44-310.7	Sewer Group 697 Sewer Main Replacement	2,231,825	663,850	1,567,975
44-001.0	44-310.8	Sewer Group 698 Sewer Main Replacement	607,406	8,325	599,081
44-001.0	44-310.9	Sewer Group 699 Sewer Main Replacement	3,777,590	824,466	2,953,124
44-001.0	44-311.0	Sewer Group 700	1,546,827	609,693	937,134
44-001.0	44-311.2	Sewer Group 702 Sewer Main Replacement	858,160	350,427	507,733
44-001.0	44-311.4	Sewer Group 704 Sewer Main Replacement	1,689,056	1,059,680	629,376
44-001.0	44-311.6	Sewer Group 706 Sewer Main Replacement	1,445,964	715,086	730,878
44-001.0	44-311.7	Sewer Group 707 Sewer Main Replacement	2,827,303	2,332,836	494,467
44-001.0	44-311.8	Sewer Group 708 Sewer Main Replacement	2,153,825	609	2,153,216
44-001.0	44-311.9	Sewer Group 539 Sewer Main Replacement	3,899,122	2,702,189	1,196,933
44-001.0	44-312.2	Sewer Group Job 714	378,640	1,802	376,838
44-001.0	44-312.3	Sewer Group Job 715	423,699	15,763	407,936
44-001.0	44-312.4	Sewer Group Job 716	542,510	20,700	521,810
44-001.0	44-313.0	Sewer Group 718	2,176,157	659,106	1,517,051
44-001.0	44-313.1	Sewer Group Job 719	3,312,481	2,392,208	920,273
44-001.0	44-314.0	Sewer Group 722	1,682,468	1,222,222	460,246
44-001.0	44-314.1	Sewer Group 723	270,411	77,290	193,121
46-180.0	46-180.1	Point Loma Admin Building Interior Improvment	621,112	17,106	604,006
46-180.0	46-181.2	Force Main 1 Inspection and Repair PH 3	1,827,320	1,001,764	825,556
46-194.0	46-198.1	Pacific Bch - La Jolla TS#3	274,254	20,525	253,729
46-106.0	46-600.1	Sewer Pump Station #61	7,660,249	92,627	7,567,622
46-106.0	46-603.0	Sewer Pump Station #49	2,116,210	310,645	1,805,565
46-106.0	46-603.1	Sewer Pump Station #39	1,251,185	278,416	972,769
46-106.0	46-603.2	Sewer Pump Station #59	1,212,463	713,264	499,199
46-106.0	46-603.4	SP STA# 52, 53, 55, 56, 58	1,133,865	15,885	1,117,980
46-106.0	46-603.6	Sewer Pump Station #42	2,834,577	1,711,908	1,122,669
46-106.0	46-603.7	Sewer Pump Station #50	2,022,023	974,618	1,047,405
46-106.0	46-603.8	Sewer Pump Station 3-23	1,475,039	813,879	661,160
46-106.0	46-604.0	Pump Station 63 Replacement	381,518	104,325	277,193
46-106.0	46-604.1	Sewer Pump Station 25, 31, 32, 33, 40	1,898,644	1,320,685	577,959
46-106.0	46-604.2	Cottontail Canyon Swr PS	71,405	23,764	47,641
Projects not listed in CIP Budget:					
00-100.2		Hawkins, Delafield & Wood LLP	-	90,358	(90,358)
00-100.3		Orrick, Herrington & Sutcliffe	-	194,520	(194,520)
00-100.4		CDIAC Reporting Fees	-	3,000	(3,000)
00-100.5		Wells Fargo Trustee Fees	-	2,800	(2,800)
00-100.6		White & Case	-	25,000	(25,000)
00-100.7		Webster & Anderson	-	18,651	(18,651)
Total			\$ 1,536,859,306	152,219,032	1,384,640,274



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Office of the Mayor
City of San Diego

Independent Accountant's Report on Agreed-Upon Procedures
Applied to Proposed Wastewater Rate Increases

We have applied the procedures enumerated below to the City of San Diego's proposed wastewater rate increases. These procedures, which were agreed to by the City of San Diego were performed solely to assist the City in evaluating the proposed wastewater rate increases.

This engagement to apply agreed-upon procedures was performed in accordance with standards established by the American Institute of Certified Public Accountants. The sufficiency of the procedures is solely the responsibility of the specified users of the report. Consequently, we make no representations regarding the sufficiency of the procedures described below either for the purpose for which this report has been requested or for any other purpose.

For purposes of comparisons referenced in this report, amounts are considered to be consistent if the difference between the compared amounts is less than \$1 million and also less than 15%.

BACKGROUND

The Wastewater rate model was developed by outside consultants. The rate model contains projections of future expected revenues, operating costs, and capital costs. The model requires the rate increases to be sufficient to cover net operating costs and 20% of annual capital costs while not violating certain constraints. The model's constraints include maintaining \$10 million in unrestricted, undesignated equity and maintaining a debt coverage ratio of at least 125% through fiscal year ending June 30, 2017. The model projects the following rate increases beginning:

May 1, 2007	8.75%
May 1, 2008	8.75%
May 1, 2009	7%
May 1, 2010	7%

PROCEDURES PERFORMED

The procedures performed and the results of those procedures were as follows:

1. We agreed the beginning unrestricted, undesignated equity balance at June 30, 2006 to unaudited accounting system reports.

Results: The unaudited accounting system reports supported the amounts included in the rate model.

2. The rate model projects revenues based on historical trends and projections of future demand. The rate model includes the following revenue projections (in thousands):

	Fiscal Year Ending June 30,				
	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>
Service Charge Revenues	\$ 238,538	261,769	293,274	316,409	337,207
Sewage Treatment Plant Services	70,389	73,916	77,518	81,142	84,705
Interest Earnings	3,963	4,867	5,358	6,134	6,482
Capacity Charge	14,984	15,139	15,294	15,450	15,607
Other Revenue	<u>17,507</u>	<u>10,794</u>	<u>11,093</u>	<u>11,404</u>	<u>11,728</u>
	<u>\$ 345,381</u>	<u>366,485</u>	<u>402,537</u>	<u>430,539</u>	<u>455,729</u>

- We agreed the 2003 to 2006 revenues to unaudited accounting system reports. These revenues are used in the model to calculate historical trends.

Results: For the years ended June 30, 2003 through 2006, the revenues are consistent with unaudited accounting system reports.

- We agreed the 2007 revenue amounts to the 2007 Annual Budget.

Results: The 2007 Annual Budget is consistent with the projected revenues used in the rate model calculation.

- For *Service Charge Revenues*, we analytically tested the projected revenues for the years ending June 30, 2007 through 2011 by calculating revenues as a percentage of the sewerred population as projected by San Diego Association of Governments. We also reviewed Service Charge Revenues by comparing future increases to historical increases.

Results: Projected revenues as a percentage of the population are consistent with historical years. Additionally, projected revenues, excluding inflation and projected rate increases, are consistent with historical revenues.

- For *Interest Income*, we calculated the rate of return using unaudited accounting system reports.

Results: The projected rate of return is consistent with current market interest rates.

- For *Sewage Treatment Plant Services, Capacity Charges, and Other Revenues* we compared each projected year to the prior year, beginning with the fiscal year ended June 30, 2005.

Results: Projected revenues did not significantly vary from prior year data except for Other Revenues during 2007 to 2008. This is a result of a one-time refund to the Wastewater Department from the Motive Equipment Fund. The refund is attributed to the Wastewater Department's accumulation of funds in the Motive Equipment Fund which exceeds projected fleet vehicle requirements in operations over a 30-year period. The action is currently in the process of being approved by City Council.

3. The rate model projects other sources of funding based on long-term budgeting expectations. The rate model includes the following projections of other sources (in thousands):

	For the years ended June 30,				
	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>
Bond Proceeds	\$ 199,345	80,270	95,590	148,380	147,534
Other Sources	<u>14,435</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
Total	<u>\$ 213,780</u>	<u>80,270</u>	<u>95,590</u>	<u>148,380</u>	<u>147,534</u>

- *Bond Proceeds* are issued to fund 80% of expected capital project expenditures. Wastewater revenues are used to fund the remaining 20% of capital projects. We recalculated 80% of the capital project expenditures to determine if the amount of bond proceeds is accurate.

Results: Bond proceeds reported in 2007 are equal to 60% of eligible capital project expenditures, a reimbursement of 2007 eligible capital project expenditures, and \$152 million of proceeds to be used to refund outstanding debt. Bond proceeds reported in 2008 through 2011 are consistent with 80% of eligible capital project expenditures.

- We inquired about significant changes in *Other Sources*.

Results: The \$14 million of Other Sources in 2007 represents known grant funding in 2007 that is unknown for future years.

4. The rate model projects operating expenses based on historical trends and projections of future demand. The rate model includes the following expense projections:

	Fiscal Year Ending June 30,				
	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>
Debt Service	\$ 95,947	99,248	105,747	113,477	125,492
Operating & Maintenance	<u>245,158</u>	<u>247,709</u>	<u>265,865</u>	<u>281,359</u>	<u>292,308</u>
	<u>\$ 341,105</u>	<u>346,957</u>	<u>371,612</u>	<u>394,836</u>	<u>417,800</u>

- We agreed the 2003 to 2006 expenditures to unaudited accounting system reports. These expenditures are used in the model to calculate historical trends.

Results: For the years ended June 30, 2003 through 2006, expenditures per the unaudited accounting system reports are consistent with expenditures in the rate model.

- We agreed the 2007 expenditure amounts to the 2007 Annual Budget.

Results: The 2007 expenditures per the model are consistent with the approved expenses in the 2007 Annual Budget.

- For *Operating & Maintenance Expenditures* we compared each projected year to the prior year starting with the fiscal year ended June 30, 2005. Operating and maintenance expenses did not increase by more than 15% in any year and are consistent with historical amounts. We obtained a detailed listing of what makes up the operating and maintenance expense amounts. For significant fluctuations between fiscal years, we obtained an explanation from management.

Results: The major changes in Operating & Maintenance Expenditures are as follows:

- Increase in Pension Contribution – We agreed the increase to projections provided by the Office of the Mayor.
- Increase in Retirement Health Benefits – We agreed the increase to projections provided by the Office of the Mayor.
- Increase in General Government Services – We agreed the increase to detailed reports of the General Governmental Service Allocation.
- Decrease in use of Service Level Agreements – We agreed the decrease to the Mayor’s response to the Grand Jury findings.

- For *Operating & Maintenance Expenditures*, we calculated expenditures as a percentage of flow as reported and projected by the San Diego Association of Governments for both historical and future years.

The results are as follows:

	For the years ended June 30,				
	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>
Ratio of Flow to Operating & Maintenance Expenditures	0.08%	0.08%	0.07%	0.07%	0.07%

Historical Average for 2003 - 2006 = 0.08%

- For *Debt Service Expenditures*, we agreed principal and interest payments to bond maturity schedules on outstanding debt. We also agreed debt service payments to the City's bond model that projects debt service on bonds that have not yet been issued.

Results: No exceptions were noted.

5. The rate model projects capital expenditures based on specific project start dates and cost estimates. The capital project expenditures include a 3.5% contingency cost and an inflation factor of 4%. We compared the capital project expenditures in the rate model to the City's Capital Improvement Budget.

Results: The capital improvement budget included in the 2007-2011 annual budget report totals \$979 million. The capital improvement expenses from 2007-2011 in the rate model total \$643 million. The variance of \$336 million is mainly attributed to management's decision to schedule certain projects in later years than previously budgeted for in the capital projects budget. The modified projects are as follows:

<u>Project Number</u>	<u>Project Name</u>
44-001.0	Annual Allocation - Sewer Main Replacements
46-194.0	Annual Allocation - Trunk Sewer Rehabilitations
46-206.0	Annual Allocation - Accelerated Projects
40-933.0	Annual Allocation - MWWWD Trunk Sewers
45-940.0	Wet Weather Storage Facility
42-933.0	NCWRP - Ultrafiltration and EDR Upgrade
41-933.0	Pump Station 2 Screens
42-930.0	SBWRP Demineralization Phase 1 and 2
46-502.0	Pooled Contingency
46-505.0	Annual Allocation - Unscheduled Projects

* * * * *

We were not engaged to, and did not, perform an audit, the objective of which would be the expression of an opinion on the subject matter. Accordingly, we do not express such an opinion. Had we performed additional procedures, other matters might have come to our attention that would have been reported to you.

This report is intended solely for the use of the City of San Diego, California and is not intended to be and should not be used by those who have not agreed to the procedures and taken responsibility for the sufficiency of the procedures for their purposes.

Mayer Hoffman Malana A.C.

Irvine, California
November 17, 2006



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Office of the Mayor
City of San Diego

Independent Accountant's Report on Agreed-Upon Procedures
Applied to Wastewater Fund Transfers to Other Funds

We have applied the procedures enumerated below to the City of San Diego's transfers out and interfund charges (including Service Level Agreement charges) paid by the Wastewater Fund for the fiscal year ended June 30, 2003. These procedures, which were agreed to by the City of San Diego were performed solely to assist the City in determining whether or not interfund charges and transfers applied to the Wastewater Fund were in accordance with generally accepted accounting principles.

This engagement to apply agreed-upon procedures was performed in accordance with attestation standards established by the American Institute of Certified Public Accountants. The sufficiency of the procedures is solely the responsibility of the specified users of the report. Consequently, we make no representations regarding the sufficiency of the procedures described below either for the purpose for which this report has been requested or for any other purpose.

The procedures performed and the results of those procedures were as follows:

1. We obtained a summary of expenses by account name for the Wastewater Fund. We identified accounts that were likely to include charges from other funds and transfers to other funds.

Results: Interfund activities were recorded as either transfers or expenses of the Wastewater Fund. The expense charges can be further broken into Service Level Agreement (SLA) charges and other charges initiated by journal entries. The following summarizes the universe of interfund activities evaluated for the year ended June 30, 2003:

Service Level Agreements – Operating	\$13,275,065
Service Level Agreements – Capital	21,575,156
Transfers to Other Funds	2,189,849
General Government Service Allocation	<u>3,395,658</u>
Total	<u>\$40,435,728</u>

2. We obtained a list of the transfers out of the Wastewater Fund for the year ended June 30, 2003 totaling \$2,189,849. We tested 100% of the transfers to determine whether the transfer resulted in a benefit to the Wastewater Fund and to determine whether the allocation methodology was reasonable in those instances where costs were allocated among various funds of the City.

Results: The transfers tested benefited the Wastewater Fund and were allocated equitably between the funds of the City for \$1,761,157 or 80% of the transfers, with the exception of the following:

- a. \$254,302 Transfer to General Fund: This transfer allocated the cost of the Equal Opportunity Contracting Program. The program pays for compliance, research, and other costs associated with small capital improvement projects allowing an equal opportunity for small construction companies to participate. The Wastewater Fund paid 49% of the project costs for the year ended June 30, 2003. However, City personnel estimate that approximately 5% of these projects were Wastewater Fund projects (based on number of projects since inception of program). The 49% allocation was determined many years ago and has not been adjusted to reflect a more equitable allocation.

Recommendation: We recommend that the City allocate costs of this program based on the number of participating project from each department. The allocation base should be reevaluated and adjusted annually.

- b. \$87,353 Transfer to General Fund: This transfer allocated 21.36% of the cost of lobbying contracts. The lobbying costs were allocated to the following City funds that are regularly engaged in lobbying activities: General Fund, Airport Fund, Environmental Services, Wastewater Fund, Development Services, and the Water Fund. The allocation was based on each participating fund's expenditure budget as a percentage of the whole. The allocation does not appear to align the benefits received by each fund with the cost of the program.

Recommendation: The allocation should be based on specific lobbying activities based on information received from the lobbyist.

- c. \$73,407 transfer to the Special Training Fund: This was a budgeted transfer for reimbursement of the Career Development & Mentoring Program. Per discussions with City personnel, the program was specifically for "field employees" and is only charged to four enterprise funds (Wastewater, Water, Development Services, and Environmental Services). The four enterprise funds account for 46% of the transfers in to fund the program. These funds appear to have been overcharged for the benefits to the funds with other field employees. Additionally, the share of costs between the four funds does not appear to be supported by the number of field employees in each fund.

Recommendation: We recommend that the City evaluate the current allocation methodology and modify it to better align with the benefits to the Wastewater Fund.

- d. \$13,630 Transfer to Special Training Fund: This transfer allocated certain costs of the Equal Employment Opportunity Program. These costs were only funded by six of the City's enterprise funds. The Wastewater Fund paid 37% of the

costs. The allocation does not appear to be reflective of the benefits provided to the Wastewater Fund since employees of non-enterprise funds were not charged for the cost of the program. The program is funded through user charges based on employee attendance at seminars. However, this additional charge (totaling \$36,403 for all six enterprise funds), was intended to partially pay for the salary of the Human Resources' Director's assistant who provided training services.

Recommendation: Since the program is already funded through user charges based on employee attendance, additional transfers should not be made to cover other unfunded portions of the program. Instead, the City should change the user rates to cover the costs of the program

3. We obtained a list of all SLA agreements for the year ended June 30, 2003 and selected the three largest agreements for testing (amounting to over 55% of total expenditures for all SLA's). We obtained a copy of the three SLA agreements, met with personnel responsible for development of the SLA, and determined whether the benefit received by the Wastewater Department was sufficient to justify the costs of the SLA's.

Cities utilize fund accounting to track specific functions or activities of the government. It is common for an employee's payroll costs to be charged to multiple funds based on the benefits received by each fund. There are several ways to allocate employee costs to various funds of the City. An employee's costs could be recorded in one fund of the City and a journal entry could be generated to charge another fund a portion of that employee's payroll costs based on an estimate of time spent benefiting the other fund. A more accurate way to allocate employee costs is to have employees keep track of their time on a daily basis and directly charge the benefiting fund based on the employee's timesheet entries.

Results: The City of San Diego utilizes the timesheet method for allocating labor between funds which conforms to the "best practices" method of documentation of allocation of personnel costs. The three SLA agreements selected and the results of our testwork are as follows:

General Services / Facilities Maintenance

Budgeted expenditures -	\$1,398,121
Actual expenditures -	2,106,783

The SLA provides fourteen full-time positions to provide preventative maintenance, general repair and maintenance, and improvements as required and necessary for the efficient operation of City facilities and related equipment (elevators, heating, air conditioning systems, boilers, etc.). All of the charges to the Wastewater Fund were based on employee timesheet charges. Employees working on specified projects covered by the SLA tracked actual time spent on the project on their timesheets. The payroll

system allocates a percentage of the employees' payroll costs based on the employee timesheets.

We selected two employees who charged their time through this SLA. We selected a pay period and tested the two employee's time cards. We traced the labor charge under the SLA to the employee time cards.

Recommendation: City documentation policies conform to accepted methodologies. In response to community concerns, we recommend that the Facilities Maintenance Division augment this standard level of documentation with monthly reports describing in detail the benefits provided to the Metropolitan Wastewater Department.

Engineering & Capital Projects / Water & Sewer Design

Budgeted expenditures -	\$19,331,769
Actual expenditures -	15,451,134

The purpose of the SLA is to establish collaborative supportive roles of each division for different phases of capital improvement projects including sewer main replacements, trunk sewers, sewer pump stations, and unscheduled accelerated projects. The Water & Sewer Design division provided project management, engineering and design, construction management, and contract support services to the Metropolitan Wastewater Department. The SLA budgeted costs are divided into 72% timesheet driven labor costs and 28% non-labor charges (totaling \$5,413,858). The Water & Sewer Design division was 100% reimbursable by the Water and Wastewater SLAs. All costs of the division were allocated to Water and Wastewater based on the percentage of capital expenditures related to the managed projects. For the year ended June 30, 2003, the Wastewater Fund paid 67% of the costs of this division.

The SLA agreement covers the following non-labor costs: training, transportation, workstations, computers, printers, office space, supplies, telephone, mainframe usage, network access, hardware/software purchases, computer maintenance, and San Diego Data Processing labor charges. When reviewing the types of charges covered by the SLA, we noted that additional expenses were charged that were not specifically covered in the SLA such as the general government indirect cost allocation of approximately \$518,000 and legal fees of almost \$390,000. While we found no evidence that these costs were inappropriately charged to the Wastewater Fund, these particular cost categories were not specifically set forth in the service level agreement as authorized costs to be charged to the Wastewater Fund.

We selected twenty transactions accounting for over \$800,000 of the total non-labor charges for additional testing. Each of these twenty transactions were allowable non-labor costs under the SLA agreement.

We selected four employees who charged their time through this SLA. We selected a pay period and tested the four employee's time cards. We traced the labor charge under the SLA to the employee time cards.

We interviewed two employees who charged their time to the SLA. We inquired with each employee if they were encouraged to overcharge time on their time cards for time spent on Wastewater projects. In each interview, the employee stated that only actual hours spent on each Wastewater project were charged, and that they were unaware of any other employee or department that was encouraged to overcharge Wastewater projects.

Recommendation: City documentation policies conform to accepted methodologies. In response to community concerns, we recommend that the Water & Sewer Design division augment this standard level of documentation with monthly reports describing in detail the benefits provided to the Wastewater Department. The SLA agreement should also be modified to include all allowable non-labor costs that are intended to be charged through the SLA.

Development Services Department

Budgeted expenditures -	\$2,511,895
Actual expenditures -	1,558,123

The SLA provides for the coordination of environmental requirements resulting from Wastewater emergencies and urgent repairs, environmental reviews to support Wastewater projects, and ensuring that any new development is meeting the Wastewater design guide minimums. All of the charges to the Wastewater Fund were generated by direct personnel charges.

We selected three employees who charged their time through this SLA. We selected a pay period and tested the three employee's time cards. We traced the labor charge under the SLA to the employee time cards.

We interviewed two employees who charged their time to the SLA. We inquired with each employee if they were encouraged to overcharge time on their time cards for time spent on Wastewater projects. In each interview, the employee stated that only actual hours spent on each Wastewater project were charged, and that they were unaware of any other employee or department that was encouraged to overcharge Wastewater projects.

Recommendation: City documentation policies conform to accepted methodologies. In response to community concerns, we recommend that the Development Services Department augment this standard level of documentation with monthly reports describing in detail the benefits provided to the Wastewater Department.

City Attorney's Office

While the service level agreement between the City Attorney's Office and the Wastewater Fund was not one of the top three service level agreements impacting the Wastewater Fund in 2002-03 (in terms of dollars charged) and therefore was not selected for testing for the purposes of testing charges to the Wastewater Fund, the reader is referred to issues of inaccurate timekeeping practiced by the City Attorney's Office during fiscal 2002-03 that are described further in our report concerning interfund charges to the Water Fund.

4. For other charges to the Wastewater Fund that were neither a Transfer nor a SLA, we selected a sample of transactions and obtained the journal entry for testing. We determined whether the transaction resulted in a benefit to the Wastewater Fund and determined whether the allocation methodology was reasonable in those instances where costs are allocated amongst various funds of the City.

Results: The City allocates indirect costs of the General Fund to other City Funds through the General Government Services Charge. For the year ended June 30, 2003, the charge to the Wastewater Fund was \$3,395,658. The charge is broken into General Fund departments. We selected the largest departmental charges to the Wastewater Fund, Auditor-Comptroller's Office and City Treasurer's Office, and evaluated the allocation base and methodology as noted below.

Auditor-Comptroller's Office

The Auditor-Comptroller's indirect costs charged to the Wastewater Fund were \$656,718 for the year ended June 30, 2003. We obtained the *Departmental Allocable Costs* report from the accounting system that details the Auditor-Comptroller's costs by department and expense type. This report includes all costs of the Auditor-Comptroller's office. To determine the allocation base, the total of the report is reduced by the SLA charges. The remaining costs not funded through SLA's were totaled and allocated to other City Funds based on each Fund's personnel costs as a percentage of budgeted expenditures, excluding capital expenditures. This methodology is an acceptable practice under generally accepted accounting principles. We recalculated the SLA charges noted on the *Departmental Allocable Costs* report for the Wastewater Fund and agreed them to the SLA charges per the accounting system, without material exception, to test that the Auditor-Comptroller's Office costs were not double charged both through the SLA and the general government services allocation.

City Treasurer's Office

The City Treasurer's indirect costs charged to the Wastewater Fund were \$521,220 for the year ended June 30, 2003. We obtained the *Departmental Allocable Costs* report from the accounting system that details the City Treasurer's costs by department and expense type. This report includes all costs of the City Treasurer's Office. To determine the allocation base, the total of the report is reduced by the SLA charges. The remaining

costs not funded through SLA's were totaled and allocated to other City Funds based on each Fund's cash receipts as a percentage of total cash receipts. This methodology is an acceptable practice under generally accepted accounting principles. The City Treasurer's Office costs associated with the general government services allocation are not also associated with an SLA.

* * * * *

We were not engaged to, and did not, perform an audit, the objective of which would be the expression of an opinion on the subject matter. Accordingly, we do not express such an opinion. Had we performed additional procedures, other matters might have come to our attention that would have been reported to you.

This report is intended solely for the use of the City of San Diego, California and is not intended to be and should not be used by those who have not agreed to the procedures and taken responsibility for the sufficiency of the procedures for their purposes.

Maya Holtzman McClain P.C.

Irvine, California
August 2, 2006

CITY OF SAN DIEGO

Independent Accountant's Report on
Agreed-Upon Procedures
Applied to Water Fund Rate Increases



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City of San Diego

Independent Accountant's Report on Agreed-Upon Procedures
Applied to Wastewater Fund Rate Increases

On October 16, 2001, the San Diego City Council adopted resolution number R-295587 authorizing the increase of sewer service charges by 7.5% per year each year beginning March 1, 2002, for a period of four years through February 28, 2006. We have applied the procedures enumerated below to the City of San Diego's sewer service charge increases from March 1, 2002 through June 30, 2005. These procedures, which were agreed to by the City of San Diego were performed solely to assist the City in determining the uses of the revenue generated by the rate increases.

This engagement to apply agreed-upon procedures was performed in accordance with attestation standards established by the American Institute of Certified Public Accountants. The sufficiency of the procedures is solely the responsibility of the specified users of the report. Consequently, we make no representations regarding the sufficiency of the procedures described below either for the purpose for which this report has been requested or for any other purpose.

The procedures performed and the results of those procedures were as follows:

1. We obtained a summary of revenues and expenses for the fiscal years ended June 30, 2001 through 2005. We traced the revenues and expenses schedules to the City's accounting system to verify accuracy of the reports.

Results: The summary of revenue and expenses are presented in *Schedule 1*.

2. We obtained a calculation of revenues generated by the rate increase. We recalculated the rate increase schedule and traced the total revenues presented on the schedule to the billing system *Detailed Revenue by Rate* schedule. We also performed analytical procedures on the revenues generated by the rate increase by multiplying the amount of annual sewer revenues in *Schedule 1* by the compounded effect of the rate increases.

Results: The revenues generated by the rate increase were as follows for the years ended (in thousands):

June 30, 2002	\$ 4,517
June 30, 2003	17,540
June 30, 2004	34,983
June 30, 2005	<u>51,388</u>
Total	<u>\$108,428</u>

3. We reviewed the City Council resolution approving the sewer service charge increases for limitations on the use of the revenues.

Result: The City Council resolution specifies that a minimum of 2.5% of the annual sewer rate increase be used for sewer and pipe replacement and rehabilitation.

4. Generally, there is a relationship between sewer system uses and water consumption. Accordingly, we analytically compared the changes in operations and maintenance expenses to the changes in purchased water for the years ended June 30, 2002 through 2005.

Results: The increases and decreases in operations and maintenance expenses were materially consistent with the increases and decreases in purchased water for all years tested, except for fiscal years ended June 30, 2002 and 2003. For the year ended June 30, 2002, purchased water costs increased 3% while operations and maintenance costs increased 20%. As a result, additional procedures were performed, as set forth in procedure number five below.

5. We compared individual expenses accounts that make up "operations and maintenance" for the years ended June 30, 2002 and 2003 to identify significant fluctuations. We obtained explanations and supporting documentation to verify that the change between fiscal years did not represent a material misstatement.

Results: Significant fluctuations between the fiscal years ended June 30, 2002 and 2003 were as follows:

- Retirement expenses increased from \$3.5 million to almost \$5.5 million as a result of a 21% increase in salaries due to added staff and salary increases and an increase in the required retirement contribution rate from 6.68% of salaries to 10.94% of salaries.
- Engineering department charges related to Service Level Agreements increased from \$5.5 million to \$7.2 million due an increased effort to reduce sewer spills. City Council requested the Metropolitan Wastewater Department to replace 45 miles of sewer main per year starting in the fiscal year ending June 30, 2003. The previous average was only 15 miles per year. City Council approved a 30% increase in staffing for the Wastewater Collection Division to attain this goal.
- Chemical purchases increased from \$5.9 million to \$7.7 million primarily as a result of cost increases in the ferric chloride used to treat wastewater at the Point Loma Wastewater Treatment Plant.
- Equipment repairs and maintenance increased from \$2.8 million to \$3.8 million. Maintenance and minor repairs vary from year to year. In 2003, contractual welding services increased at Pump Station 2 due to increased efforts to prevent sewage spills.

- Fire insurance costs increased from almost \$1 million to \$2.2 million because of post 911 increases in insurance premiums, increased premiums in earthquake insurance, and the addition of new Metropolitan Wastewater Department facilities.

The explanations provided for significant fluctuations are reasonable.

6. We obtained accounting system reports to determine the amount of capital project expenditures in the years ended June 30, 2002 through 2005. We also obtained accounting system reports to determine the amount of capital project expenditures that were funded by bond proceeds. The difference between these reports represents the amount of capital project expenditures that were funded by sewer rates and other available wastewater fund resources.

Results: The following summarizes capital project activity for the years ended June 30, 2002 through 2005:

	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>Total</u>
Capital projects:					
Internal costs	\$ 18,954,555	20,837,702	22,862,691	11,519,719	74,174,667
Payments to 3rd party vendors	<u>105,398,310</u>	<u>114,009,703</u>	<u>112,718,735</u>	<u>96,442,906</u>	<u>428,569,654</u>
Total capital projects	124,352,865	134,847,405	135,581,426	107,962,625	502,744,321
Less: Bond funded projects	<u>-</u>	<u>-</u>	<u>(121,735,724)</u>	<u>(30,483,308)</u>	<u>(152,219,032)</u>
Projects funded by water revenues	<u>\$ 124,352,865</u>	<u>134,847,405</u>	<u>13,845,702</u>	<u>77,479,317</u>	<u>350,525,289</u>

7. We compared the revenues generated by the rate increases to the increase in expenditure activity.

Results: Operating and Capital expenses incurred by the Wastewater Fund exceeded the revenues generated by the rate increase, as demonstrated in the following schedule. Additionally, at least 2.5% of the rate increase was spent on capital improvement projects, as required by the City Council Resolution.

Additional revenues created through rate increases		<u>\$ 108,428</u>
Increase in operating expenditures from base year		90,459
Increase in debt service expenditures from base year		8,633
Capital project expenditures	502,744	
Less: Capital projects funded by bond proceeds	<u>(152,219)</u>	
Capital projects not funded by bond proceeds		<u>350,525</u>
Total increase in expenditures from base year		<u>449,617</u>
Excess (deficiency) of revenues from rate increase		<u>\$ (341,189)</u>

* * * * *

We were not engaged to, and did not, perform an audit, the objective of which would be the expression of an opinion on the subject matter. Accordingly, we do not express such an opinion. Had we performed additional procedures, other matters might have come to our attention that would have been reported to you.

This report is intended solely for the use of the City of San Diego, California and is not intended to be and should not be used by those who have not agreed to the procedures and taken responsibility for the sufficiency of the procedures for their purposes.

Maya Hoffman Melan P.C.

Irvine, California
August 2, 2006

CITY OF SAN DIEGO
Wastewater Utility Fund - Analysis of Rate Increases
For the Years Ended June 30 (Unaudited)
(In Thousands)

	2001	2002	2003	2004	2005
Operating Revenues:					
Charges for services	\$ 212,386	247,130	235,895	226,897	232,344
Charges for services-rate increase	-	4,517	17,540	34,983	51,388
Other	2,045	5,085	3,511	4,621	2,833
Total operating revenues	<u>214,431</u>	<u>256,732</u>	<u>256,946</u>	<u>266,501</u>	<u>286,565</u>
Operating Expenses:					
Maintenance, operations and admin	168,027	170,461	197,391	195,572	199,143
Depreciation	37,776	51,328	59,559	59,409	72,835
Total operating expenses	<u>205,803</u>	<u>221,789</u>	<u>256,950</u>	<u>254,981</u>	<u>271,978</u>
Operating income	<u>8,628</u>	<u>34,943</u>	<u>(4)</u>	<u>11,520</u>	<u>14,587</u>
Nonoperating Revenues (Expenses):					
Earnings on investments	29,059	18,634	17,021	2,463	7,193
Grant assistance	199	4,431	1,173	687	3
Gain (loss) on sale of capital assets	(2,937)	(272)	(1,801)	(2,692)	(13,413)
Debt service interest payments	(54,605)	(55,013)	(54,531)	(52,997)	(54,917)
Other	5,258	841	5,390	2,888	7,403
Total nonoperating revenues (expenses)	<u>(23,026)</u>	<u>(31,379)</u>	<u>(32,748)</u>	<u>(49,651)</u>	<u>(53,731)</u>
Income (loss) before contributions and transfers	(14,398)	3,564	(32,752)	(38,131)	(39,144)
Capital contributions	-	100,614	58,034	62,794	21,017
Transfers in	134	-	130	-	-
Transfers out	(960)	(5,167)	(3,959)	(1,900)	(1,592)
Change in net assets	(15,224)	99,011	21,453	22,763	(19,719)
Net assets at beginning of year	720,510	705,286	1,710,039	1,731,492	1,754,255
Prior period adjustment	-	905,742	-	-	-
Net assets at end of year	<u>\$ 705,286</u>	<u>1,710,039</u>	<u>1,731,492</u>	<u>1,754,255</u>	<u>1,734,536</u>

CITY OF SAN DIEGO

Independent Accountant's Report on
Agreed-Upon Procedures
Applied to Use of Water Fund
Bond Proceeds

Table ES-5: National Comparison of Monthly Wastewater Bills

