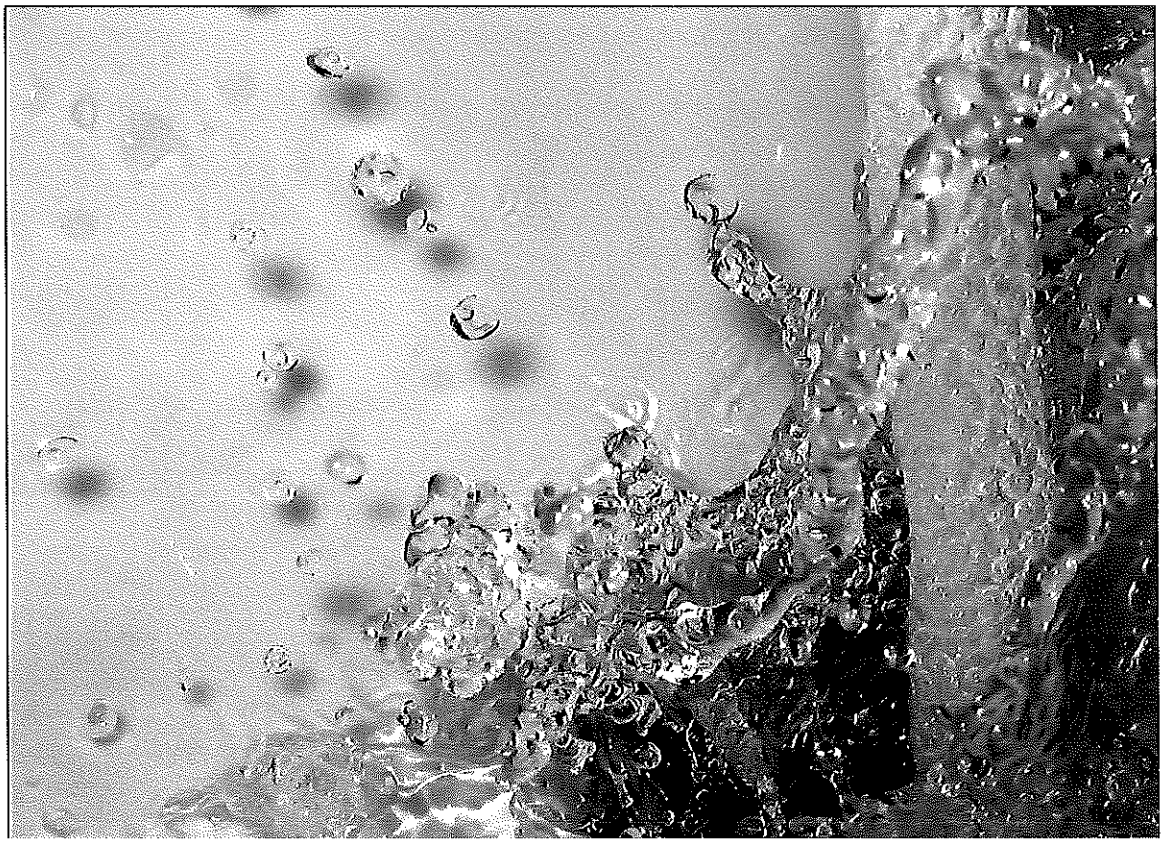


Updated Water and Wastewater Capital Facilities Fees Report

April 2012

Prepared for
El Toro Water District
by

RFC
RAFTELIS FINANCIAL CONSULTANTS, INC.

201 S. Lake Avenue
Suite 301
Pasadena, CA 91101

Phone: 626.583.1894
Fax: 626.583.1411
www.raftelis.com

RAFTELIS FINANCIAL CONSULTANTS, INC.
201 S. Lake Ave, Suite 803 Pasadena • CA • 91101
Phone 626•583•1894 Fax 626•583•1411
www.raftelis.com

April 17, 2012

Mike Grandy
Assistant General Manager
El Toro Water District
24251 Los Alisos Blvd.
Lake Forest, CA 92630

Subject: Updated Water and Wastewater Capital Facilities Fees Report

Dear Mr. Grandy:

Raftelis Financial Consultants (RFC) has prepared this *Updated Water and Wastewater Capital Facilities Fees Report* (Report) showing the capital facilities fees for water and wastewater customers of El Toro Water District (ETWD) . This report is based on our prior report titled *El Toro Water District Water and Wastewater Capital Facilities Fees Report* dated October 28, 2008.

This Report presents the calculations of capital facilities fees for December 2007. These calculated fees are then updated to March 2011 using the Engineering News-Record (ENF) Construction Cost Index (CCI) for the Los Angeles area. The wastewater capital facilities fees for non-residential customers were based on the City of Los Angeles wastewater generation factors, modified for the District's usage characteristics.

We have provided this detailed analysis for your review. This Report summarizes the key findings and recommendations related to the water and wastewater capital facilities fees.

Introduction

Capital facilities fees are the one-time capital charges that ETWD imposes on customers for new or expanded connections to the ETWD water and wastewater system facilities. The fees should generally reflect the estimated reasonable cost of providing additional or available system capacity to new development. The fees are also commonly referred to as impact fees, system development fees, developer fees, capacity fees or connection fees.

The ETWD currently assesses a one-time capital facilities fee for new users that request connection to the ETWD's wastewater system. The charges are intended to reflect the cost of wastewater system capacity that is required to provide service to new customers, or increased demand for wastewater system capacity that results from renovations and/or additions to existing establishments. Since ETWD currently does not have a water capital facilities fee, as part of this study, ETWD also requested RFC develop a water capital facilities fee to reflect the cost of water system capacity required to provide service to new water customers.

The current method of assessing the wastewater capital facilities fees to new customers consists of applying the cost per gallon per day (gpd) of system capacity to the estimated daily volume of sewage to be discharged into the system by a new user. The cost of system capacity under the current approach is $4.75 per gpd. For residential dwelling units, the current capital facilities fee is $1,190 based on an estimated daily sewage volume of 250 gpd.

The current wastewater capital facilities fee for commercial and industrial developments is determined based on the $4.75 gpd cost of system capacity and the estimated daily volume of sewage to be discharged by each establishment within a development. The estimated daily volume of sewage discharged by an establishment is determined by ETWD using standard industry methods. These methods are based on number of fixture units for an establishment and the estimated flow rates per fixture unit for that establishment. The minimum capital facilities fee for any commercial or industrial establishment is $1,190. Table 1 summarizes the current wastewater capital facilities fee program incorporated by the ETWD.

TABLE 1

CURRENT WASTEWATER CAPITAL FACILITIES FEES

New Construction	Cost (gpd)	Daily Sewage (gpd)	Capital Facilities Fee
Residential Dwelling Unit	$4.75	250	$1,190
Commerical / Industrial			
Minimum Fee	$4.75	250.00	$1,190
Above Minimum Fee (Sample)	$4.75	3,857	$18,321

Sample Establishment Fixtures and Sewage Estimate

Total Fixture Units			126
a Flow Rate Per Fixture Unit (gallons per minute)			50
Hours of Operation per Week			90
Total Hours Per Week			168
b Weighting Factor (% of use)			0.5357
c Peaking Factor			10
		0.5357	GPM
Average Flow Rate =	50	10	**2.679**
	GPM	Min/Day	GPD
Average Daily Flow =	2.679	1,440	**3,857**

Economic and Legal Framework for Capital Facilities Fees

In publicly owned water and wastewater systems, most of the assets are typically paid for by the contributions of existing customers through rates, charges, and taxes. In service areas that incorporate new customers, it is generally true that the infrastructure developed by previous customers is extended towards the service of new customers. It is the investment of existing customers in the existing system capacity, which allows newly connecting customers to take advantage of unused surplus capacity. In order to further economic equality among new and existing customers, new connectors will typically refund the value of the existing system capacity they use effectively putting them on par with existing customers.

Economic Framework

The basic economic philosophy behind capital facilities fees is that the costs of providing water and wastewater service should be paid for by those that receive utility from the product. Accordingly, many utilities make this one of their principal objectives when administering capital facilities fees. In order to achieve a fair distribution of the value of the system, the fee should reflect a reasonable estimate of the cost of providing capacity to new users, and not unduly burden existing users.

The philosophy that service should be paid for by those that receive utility from the product is often referred to as "growth-should-pay-for-growth." The principal is summarized in the American Water Works Association (AWWA) Manual M26, Water Rates and Related Charges:

> *"The purpose of designing customer-contributed-capital system charges is to prevent or reduce the inequity to existing customers that results when these customers must pay the increase in water rates that are needed to pay for added plant costs for new customers. Contributed capital reduces the need for new outside sources of capital, which ordinarily has been serviced from the revenue stream. Under a system of contributed capital, many water utilities are able to finance required facilities by use of a 'growth-pays-for-growth' policy."*

In this excerpt, customer-contributed-capital is equivalent to capital facilities fee.

Legal Framework

RFC does not practice law and does not provide legal advice. The following discussion is to provide a general review of apparent state institutional constraints and is labeled "legal framework" for literary convenience only. The ETWD should consult with its counsel for clarification and/or specific review of any of the following or other matters.

The ETWD has broad authority to price water and wastewater capital facilities fees. The most salient limitation on this authority is reflected by the requirement that recovery costs on new development bear a reasonable relationship to the needs and benefits brought about by the development. Courts have long used a standard of reasonableness to evaluate the legality of capital facilities fees.

- Local agencies must follow a process set forth in the law, making certain determinations regarding the purpose and use of the fee; they must establish a nexus or relationship between a development project and the public improvement being financed with the fee.

- The revenue must be segregated from the general fund in order to avoid commingling of capital facilities fees and the general fund.

The basic statutory standards governing water and wastewater capital facilities charges are embodied by Government Code Sections 66013, 66016, 66022 and 66023. In particular, Government Code 66013 contains requirements specific to pricing water and wastewater capacity charges. Section 66013 maintains:

> *"Notwithstanding any other provision 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 charge is imposed, unless a question regarding the amount the fee or charge 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."*

The salient features of Section 66013 suggest that a capital facilities fee may not exceed the reasonable costs of providing service. The ETWD should inquire with counsel as to the nature and relevance of the law on its own capital facilities fee program.

Approach

There are several methodologies for calculating capital facilities fees. The various approaches have largely evolved on the basis of changing public policy, legal requirements, and the unique and special circumstances of every local agency. However, there are two general approaches that are widely accepted and appropriate for water and wastewater capacity facilities fees.

Equity Buy-in Approach

The equity buy-in approach rests on the premise that new customers are entitled to service at the same price as existing customers. However, existing customers have already developed the facilities that will serve new customers, including the costs associated with financing those services. Under this approach, new customers only pay an amount equal to the net investment already made by existing users, based on replacement cost less depreciation. This net equity investment is then divided by the current demand of the system number of customers (or customer equivalents) to determine the fee of the new user.

If the existing system has 100 units of average usage and the new connector uses an equivalent unit, then the new customer would pay 1/100 of the total value of the existing system. By contributing this capital facilities fee, the new connector has bought into the existing system. The user has effectively acquired a financial position on par with existing customers and will face future capital challenges on equal financial footing

with those customers. This approach is suited for agencies that have capacity in their system and are essentially close to build-out.

Incremental-Cost Approach

When new users connect to a water or wastewater system, they use either surplus capacity from the existing system, which must then be replaced, or they require new capacity that must be added to the system to accommodate their needs. Under the incremental-cost approach, new customers pay for additional capacity requirements, irrespective of the value of past investments made by existing customers.

If it costs some amount of dollars (X$) to provide 100 additional units of capacity for average usage and a new connector uses one of those equivalent units, then the new user would pay X$/100 to connect to the system. New customers pay the incremental cost of capacity. Similar to an equity buy-in approach, new connectors will effectively acquire a financial position on par with existing customers. This approach is best suited for growing communities where additional facilities are needed to accommodate growth.

Approach to the ETWD Capital facilities Fees

Since the El Toro Water District is essentially built-out and will continue to incorporate few new customers into the current water and wastewater systems; these new customers will largely be served by existing infrastructure. The existing ETWD customers have invested a considerable amount of economic resources in the capital development of this system. Given the significance of this trend, an equity buy-in approach to capital facilities fees is the most appropriate method.

The basic methodology for this approach is to take the current total values of the ETWD's water and wastewater systems and divide each by the appropriate current system demands. This will render an equivalent unit of capacity per dollar, which may be translated in terms of the various levels of average actual usage for different types of customers of the ETWD water and wastewater systems.

Current Value of the ETWD's Systems

There are numerous methods that can be used to determine the current value of the ETWD's wastewater system. However, a very common approach is to determine replacement cost (historical costs escalated to current dollars) adjusted for depreciation.

To accomplish this, ETWD provided fixed asset records on the original costs of the utility systems. Replacement (or escalated) cost was then estimated by adjusting original costs to reflect what might be expected if a similar facility was constructed today. This is achieved by escalating the original construction costs by a construction cost index. The Construction Cost Index for Los Angeles (LACCI) is published by Engineering News-Record and is commonly used for this purpose. It reflects the average costs of a particular basket of construction goods over time. RFC used a CCI value of 9,182 for December 2007 to estimate the replacement costs.

To determine current value, the replacement costs were then adjusted for depreciation. The ETWD provided accumulated depreciation associated with the original cost for each of its fixed asset accounts. Once the original costs were adjusted by the LACCI to reflect replacement costs today, RFC used the ratio of the replacement cost to the original cost for each fixed asset account to similarly adjust the accumulated depreciation for those asset accounts. The accumulated depreciation was then deducted from the replacement costs to determine a replacement cost less depreciation.

The fixed asset accounts and associated replacement cost less depreciation were then allocated to the water and wastewater systems to determine the water and wastewater system assets to be used in the calculation of the capital facilities fees. The total 2007 value of the water system assets is $45,533,128; while the total 2007 value of the wastewater system assets is $35,732,437. The allocation of the total utility system assets to water and wastewater systems and determination of the current value of these assets used to calculate the capital facilities fees are shown in Table A-1 of Appendix A.

In addition to the current value of the fixed assets, appropriate reserve fund balances, which represent equity of the current users, and in which the new users will acquire equity, was added for both water and wastewater. As of June 30th 2008, the total reserves amounted to $15,640,000 and are allocated 50% to water and 50% to wastewater funds.

The value of the eligible water and wastewater system assets to be recovered through water and wastewater capital facilities fees is shown in Table 2 below.

TABLE 2

TOTAL VALUE OF ELIGIBLE ASSET CALCULATION

Utility Fixed Assets - Escalated Cost Less Depreciation	Total Utility	Water	Wastewater
Equipment	$39,168,047	$21,953,468	17,214,579
Collection & Impound Reservoirs	13,483,240	13,465,629	17,611
Structures & Improvements	28,614,278	10,114,031	18,500,247
Total Fixed Assets Recovered Through Fees	$81,265,565	$45,533,128	$35,732,437
Reserve Funds	$15,640,000	$7,820,000	$7,820,000
Total Value of Eligible Assets	$96,905,565	$53,353,128	$43,552,437

Current Capacity of the ETWD's Systems

The second step in calculating the capital facilities fees is to determine the current usage of the water and wastewater systems. There are numerous approaches to estimating system capacity.

One approach is to determine the number of existing customers, expressed as equivalent meters. For water systems, capacity is usually expressed in meter equivalents rather than actual service connections. The benefit of using meter equivalents is that it relates the relative capacity of service connections with meters of various sizes. For instance, a 1" meter is 1.67 equivalent ¾" meters.

Another approach is to express capacity in terms of the amount of water usage by customers of the water system and wastewater flow within the wastewater system, expressed in gallons per day (GPD). This method is used to determine the unit cost of capacity for the water and wastewater system.

For water, ETWD provided billing data by customers categorized by meter size and their corresponding billed water usage for FY 2008, expressed in hundreds of cubic feet (HCF). Table 3 summarizes these results and converts the meters into equivalent meter units (EMU) and the billable water usage into units of 1,000 gallons. Based on District records, ETWD's average wastewater flow of 4.32 million gallons per day is used to determine unit capacity cost of the wastewater system.

TABLE 3

ANNUAL USAGE BY METER SIZE

Line	Meter Size	Capacity Ratio [1]	Number of Meters	Equivalent Meter Units [2]	Usage (ccf)	Usage (1,000 gallons)
1	5/8"	1.00	2,391	2,391	440,171	329,248
2	3/4"	1.00	4,902	4,902	996,582	745,443
3	1"	1.67	447	746	95,195	71,206
4	1.5"	4.06	720	2,923	540,776	404,500
5	2"	10.19	1,500	15,285	2,866,899	2,144,440
6	Total		9,960	26,248	4,939,623	3,694,838

Average Water Usage Per Day (Gallons)	**10,122,844**
Average Water Usage Per Day (MGD)	**10.12**

[1] Capacity ratio based on previous report Capital Facility Charge Water
[2] Represents the total equivalent 5/8" meters assuming conversion of larger meters by capacity ratio.

Calculating Capital Facilities Fees

The final step in determining the capital facilities fees for the ETWD is to divide the total current value of the water and wastewater systems by the appropriate system capacities for water and wastewater.

For water, in December 2007 dollars, the total value of eligible assets ($53,353,128) is reduced by the current amount of outstanding developer agreements related to the water system ($8,146) to determine the total value of the water system ($53,344,982). This total value of the water system is then divided by the system capacity expressed in equivalent meter units (EMUs) (26,248) to determine a full cost capacity facilities fee of $2,032.27 per EMU. Next, a ($69.91 per EMU) credit is provided for the present value of all remaining debt principal payments related to the water assets included in the calculation. This debt principal credit per EMU is deducted from the full unit cost capacity facilities fees to ensure new customers are not double charged for the costs of these assets through their user rates and the capital facilities fees. This results in a net water capacity facilities fee per EMU of $1,962.46 in December 2007 dollars. Using the ENR CCI for Los Angeles in March 2011, the updated water capacity facilities fees per EMU is 2,145. The detailed water capacity facilities fee calculation is show in Table 4.

TABLE 4

WATER CAPITAL FACILITIES FEE CALCULATION

	RCNLD Water
Utility Fixed Assets[1]	
Equipment	$21,953,468
Collection & Impound Reservoirs	13,465,629
Structures & Improvements	10,114,031
Total Value of Fixed Assets	$45,533,128
Plus: Reserve Funds[2]	7,820,000
Total Value of Eligible Assets	$53,353,128
Less: Adjustments[3]	(8,146)
Total Value of Water System	$53,344,982
Equivalent Meter Units ("EMU")	26,248
Full Cost Per Equivalent Meter Unit	$2,032
Less: Debt Principal Credit Per EMU	($69.91)
Net Unit Cost Per EMU in 2008	**$1,962**
Updated Net Unit Cost Per EMU in 2011 [4]	**$2,145**

[1] From Table A-1.

[2] From Mike Grandy email on 9/24/08 - 6/30/08 total reserves $15,640,000 with 50% to water, 50% to wastewater

[3] Represents the June 30, 2007 outstanding balance of developer agreements for water line extensions that ETWD is obligated to repay.

[4] Inflated by using ENR CCI Los Angeles Data from Dec 2007 to Mar 2011

One EMU represents the typical residential customer with a 5/8" meter. Since larger water meters have a greater flow capacity, this water capacity facilities fee per EMU, or 5/8" meter must be escalated to reflect the flow ratio of each of the larger meter classes in relation to the 5/8" meter. All customers with meters larger than 5/8 inches are assessed a water capacity facilities fee based on the appropriate number of EMU shown in Table 3. For instance, a 2" meter which is equivalent to 10.19 5/8" meters would pay a fee of $21,856. The water capacity facilities fee per meter size is presented in Table 5 below.

TABLE 5

WATER CAPITAL FACILITIES FEE PER METER SIZE

Meter Size	Capacity Ratio	2011 Capital Facilities Fees
5/8"	1.00	$2,145
3/4"	1.00	$2,145
1"	1.67	$3,582
1.5"	4.06	$8,708
2"	10.19	$21,856

Since ETWD does not currently assess water capital facilities fees, no comparison with current fees is needed.

For wastewater, in 2007 dollars, the wastewater system fixed assets ($43,552,437) are divided by the system capacity expressed in average daily wastewater system flows (4.32 MGD). The result is a full unit cost of $10.082 per GPD. Next, a ($1.562 per GPD) credit is provided for the present value of all remaining debt principal payments related to the wastewater assets included in the calculation. This results in a net unit cost of $8.520 per GPD as shown in Table 6. Using the ENR CCI for Los Angeles in March 2011, the updated net unit cost per GPD is $9.311.

The appropriate wastewater capital facilities fee is then determined by applying the net unit cost to the wastewater generated by various user classes. The City of Los Angeles has established usage from various user classes after much research and we recommend ETWD use this data to determine the capital facilities fee. For instance, an average single family residential dwelling unit (RDU) has a sewage generation factor of 200 GPD. Recognizing that conservation has reduced the wastewater generated for customers, the residential wastewater generation is reduced from the current 250 GPD to 200 GPD. Applying the updated net unit cost of $9.311 per GPD to the 200 GPD of residential wastewater, the capital facilities fee for the new connector is $1,862per RDU and is shown in Table 6.

The proposed $1,862 per RDU sewer capital facilities fees are approximately 56% higher than the existing $1,190 per RDU wastewater capital facilities fees assessed to ETWD's residential customers.

TABLE 6

WASTEWATER CAPITAL FACILITIES FEES CALCULATION

	RCNLD Wastewtater
Utility Fixed Assets[1]	
Equipment	$17,214,579
Collection & Impound Reservoirs	17,611
Structures & Improvements	18,500,247
Total Value of Fixed Assets	$35,732,437
Plus: Reserve Funds[2]	7,820,000
Total Value of Eligible Assets	$43,552,437
Average Wastewater System Flows (MGD)[3]	4.32
Full Unit Cost Per GPD	$10.08
Less: Debt Principal Credit Per GPD[4]	($1.56)
Net Unit Cost Per GPD	**$8.52**
Updated Net Unit Cost Per GPD in 2011 [5]	**$9.31**
Estimated Daily Wastewater Flow Per RDU	200
Wastewater Capital Facilities Fee Per RDU	$1,862

1 From Table A- 1.

2 From Mike Grandy email on 9/24/08 - 6/30/08 total reserves $15,640,000 with 50% to water 50% to wastewater

3 From email from Mike Grandy on Sept 24, 2008

4 From Table A-2B.

5 Inflated by using ENR CCI Los Angeles Data from Dec 2007 to Mar 2011

Estimating wastewater generation factors for non-residential customers

Wastewater capital facilities fees for non-residential customers were recommended to be based on the wastewater generation factors used by the City of Los Angeles (LA) for non-residential customers as shown in Appendix B. Based on the data provided by the District, RFC reviewed the water usage and corresponding wastewater generated by various users in the District and compared that to the wastewater estimated using the LA data. RFC reviewed the annual usage of several non-residential accounts from 2007 to 2009 to compare with the LA data.

The District provided RFC the monthly water usage in 2007, 2008 and 2009 of the following non-residential accounts:

- 27 restaurants
- 37 commercial offices
  - 3 health spas
  - 6 medical offices
  - 12 office building
  - 2 banks
  - 8 retail stores
  - 2 supermarkets
  - 2 counseling center
  - 1 storage
  - 1 mortuary

Assuming a 90 percent return factor, RFC compared the District's estimated maximum wastewater generation (gallons per day – gpd) with LA's estimated wastewater generation for restaurants in Table 7 and for other commercial users in Table 8 below.

TABLE 7

Wastewater Generation Comparisons for Restaurants

Business Name	Meter Size	Area (sq ft)	Area (1000 sq ft)	ETWD Consumption (GPD) 2007	2008	2009	Max	ETWD Water consumption per 1000 sq ft	ETWD Wastewater flows (gpd) est. per 1000 sq ft	LA's Est. Wastewater (gpd) per 1,000 sq ft	% ETWD/LA	Type
AAA Self Storage	1 - inch	83,000	83.0		516	478	516	6	6	20	28%	storage
Bally's Total Fitness	2 - inch	20,000	20.0		4,493	4,092	4,493	225	202	600	34%	health spa
Elite 10 Nail & Spa	3/4 - inch	1,000	1.0		275	245	275	275	248	600	41%	health spa
Total Woman Spa	2 - inch	10,000	10.0		0	1,729	1,729	173	156	600	26%	health spa
Town Center	2 - inch	40,000	40.0		2,808	3,925	3,925	98	88	250	35%	medical office
Valencia Center	3/4 - inch	1,600	1.6		177	134	177	111	100	250	40%	medical office
McCORMICK MORTUARY	1 1/2 - inch	8,037	8.0	1,879	1,469	1,307	1,879	234	210	80	263%	mortuary
STATER BROS	2 - inch	41,802	41.8	4,447	3,713	3,287	4,447	106	96	150	64%	supermarket
HOME DEPOT (LAGUNA WOODS)	2 - inch	105,000	105.0	3,963	3,967	2,713	3,967	38	34	80	43%	retail store
LAGUNA HILLS SENIOR CENTER	1 1/2 - inch	7,500	7.5	578	592	584	592	79	71	150	47%	counseling center
SCOS ORTHOPEDICS	2 - inch	35,228	35.2	2,709	2,808	3,914	3,914	111	100	250	40%	medical office
TOWN CENTRE	2 - inch	48,758	48.8	779	959	853	959	20	18	250	7%	medical office
LAGUNA WOODS COMMUNITY CENTER	2 - inch	220,701	220.7	1,633	1,615	1,687	1,687	8	7	150	5%	counseling center
LANDMARK LAKE HILLS, BLDG. E	2 - inch	52,392	52.4	920	947	844	947	18	16	150	11%	office building
LANDMARK LAKE HILLS, BLDG. D	2 - inch	54,978	55.0	1,133	676	859	1,133	21	19	150	12%	office building
LANDMARK LAKE HILLS, BLDG. F	2 - inch	13,818	13.8	162	74	156	162	12	11	150	7%	office building
VONS MARKET	2 - inch	44,856	44.9	5,074	5,599	7,232	7,232	161	145	150	97%	supermarket
WELLS FARGO	2 - inch	18,675	18.7	2,980	2,322	2,437	2,980	160	144	150	96%	bank
TAZ MA HAL	2 - inch	79,643	79.6	10,384	10,005	8,615	10,384	130	117	150	78%	office building
SADDLEBACK VALLEY MEDICAL CENTER	2 - inch	526,070	526.1	13,771	12,866	11,620	13,771	26	24	250	9%	medical office
SEARS	2 - inch	207,500	207.5	4,674	4,867	4,265	4,867	23	21	80	26%	retail store
MACY'S	2 - inch	160,000	160.0	6,138	7,175	6,416	7,175	45	40	80	50%	retail store
J.C. PENNEY	2 - inch	169,000	169.0	7,162	6,359	6,519	7,162	42	38	80	48%	retail store
OAKBROOK FINANCIAL	2 - inch	119,000	119.0	1,965	1,760	1,791	1,965	17	15	150	10%	bank
CIRCUIT CITY	2 - inch	47,471	47.5	496	379	100	496	10	9	80	12%	retail store
LAGUNA HILLS BUSINESS PARK	2 - inch	113,474	113.5	5,256	3,976	3,412	5,256	46	42	150	28%	office building
PLAZA POINTE OFFICE BLDG.	2 - inch	63,156	63.2	2,232	2,476	2,426	2,476	39	35	150	24%	office building
PLAZA POINTE	2 - inch	30,000	30.0	662	574	1,172	1,172	39	35	150	23%	office building
LAGUNA HILLS COMMERCE CENTER	1 1/2 - inch	36,074	36.1	7,564	7,158	7,906	8,892	246	222	150	148%	office building
SOUTH POINTE II OFFICE CONDOS	1 1/2 - inch	44,334	44.3	600	596	617	617	14	13	150	8%	office building
TERRA VENTURES		38,504	38.5	1,799	2,865	1,857	2,865	74	67	150	45%	office building
LAGUNA HILLS BUSINESS PARK, BLDG. 1 'A'	1 1/2 - inch	33,220	33.2	1,463	2,326	1,443	2,326	70	63	150	42%	office building
CHASE BUILDING	2 - inch	47,949	47.9	2,656	1,758	1,570	2,656	55	50	150	33%	office building
PETCO	2 - inch	28,586	28.6	937	1,055	697	1,055	37	33	80	42%	retail store
CVS PHARMACY MV	1 1/2 - inch	14,943	14.9	125	107	381	381	26	23	80	29%	retail store
TARGET	2 - inch	114,488	114.5	2,795	2,295	2,320	2,795	24	22	80	27%	retail store
MUIRLANDS MEDICAL CENTER	2 - inch	19,569	19.6	1,801	1,521	1,439	1,801	92	83	250	33%	medical office
Average		72,982	73.0	3,185	2,787	2,731	3,220	79	71	182	44%	
Std Dev		94,668	94.7	3,160	2,917	2,741	3,131	75	67	138	47%	

The actual wastewater generation patterns of the restaurants do not vary proportionally with the square footage of the service area depending on the services provided. For example, a fast food restaurant will generate less wastewater than a sit-down formal restaurant (e.g. Subway and King Fish House). LA estimates that a restaurant generates, on average, 1,000 gallons of wastewater per day (gpd) for every 1,000 sq ft service area. The actual maximum water consumption (from 2007 to 2009) of the 27 restaurants included in this analysis varies from 86 to 1,351 gpd per 1,000 sq ft service area. Assuming a 90 percent return factor, the daily wastewater generation for these restaurants ranged from 78 to 1,216 gpd per 1,000 sq ft of building. Based on this data set, on average, LA's data, modified for ETWD's usage characteristics, may be used to reasonably estimate wastewater generation. In other words, an average restaurant in ETWD potentially generates approximately 63 percent of the wastewater estimated by LA's data. As shown in Table 9 below, 95 percent confidence limits for wastewater generations of restaurants in ETWD with respect to LA's data are 63 percent ± 11 percent (or from 52 percent to 74 percent).

For commercial offices, where water is used mainly for sanitary purposes, such as fitness center, spa, banks, medical offices, etc. the LA and ETWD data are linearly proportional. On average, ETWD's flows are about 44 percent of LA's numbers for the commercial offices included in this analysis. The 95 percent confidence limits for commercial customers are 44 percent ± 15 percent (or from 28 percent to 59 percent), as shown in Table 9.

The wastewater capital facilities fee for a residential customer is $1,862 per RDU. Capital facilities fees for non-residential customers should be based on the City of Los Angeles flows adapted to the average flows in the District as shown in Table 9. The fees should be calculated using $9.311 per gpd as shown in Table 6.
Commercial establishments may be categorized into restaurant and non-restaurant types. The average percentages of 63% and 44% will be applied to the City of Los Angeles flow data to determine the capital facilities fees for restaurants and non-restaurant commercials, respectively (see Table 9).

TABLE 8

Wastewater Generation Comparisons for Commercial Offices

Business Name	Meter Size	Area (sq ft)	Area (1000 sq ft)	ETWD Consumption (GPD) 2007	2008	2009	Max	ETWD Water consumption per 1000 sq ft	ETWD Wastewater flows (gpd) est. per 1000 sq ft	LA's Est. Wastewater (gpd) per 1,000 sq ft	% ETWD / LA	Type
AAA Self Storage	1 - inch	83,000	83.0		516	478	516	6	6	20	28%	storage
Bally's Total Fitness	2 - inch	20,000	20.0		4,493	4,092	4,493	225	202	600	34%	health spa
Elite 10 Nail & Spa	3/4 - inch	1,000	1.0		275	245	275	275	248	600	41%	health spa
Total Woman Spa	2 - inch	10,000	10.0		0	1,729	1,729	173	156	600	26%	health spa
Town Center	2 - inch	40,000	40.0		2,808	3,925	3,925	98	88	250	35%	medical office
Valencia Center	3/4 - inch	1,600	1.6		177	134	177	111	100	250	40%	medical office
Mccormick Mortuary	1 1/2 - inch	8,037	8.0	1,879	1,469	1,307	1,879	234	210	80	263%	mortuary
Stater Bros	2 - inch	41,802	41.8	4,447	3,713	3,287	4,447	106	96	150	64%	supermarket
Home Depot	2 - inch	105,000	105.0	3,963	3,967	2,713	3,967	38	34	80	43%	retail store
Laguna Hills Senior Center	1 1/2 - inch	7,500	7.5	578	592	584	592	79	71	150	47%	counseling center
SCOS Orthopedics	2 - inch	35,228	35.2	2,709	2,808	3,914	3,914	111	100	250	40%	medical office
Town Centre	2 - inch	48,758	48.8	779	959	853	959	20	18	250	7%	medical office
Laguna Woods Community Center	2 - inch	220,701	220.7	1,633	1,615	1,687	1,687	8	7	150	5%	counseling center
Landmark Lake Hills, Bldg E	2 - inch	52,392	52.4	920	947	844	947	18	16	150	11%	office building
Landmark Lake Hills, Bldg D	2 - inch	54,978	55.0	1,133	676	859	1,133	21	19	150	12%	office building
Landmark Lake Hills, Bldg F	2 - inch	13,818	13.8	162	74	156	162	12	11	150	7%	office building
Vons Market	2 - inch	44,856	44.9	5,074	5,599	7,232	7,232	161	145	150	97%	supermarket
Wells Fargo	2 - inch	18,675	18.7	2,980	2,322	2,437	2,980	160	144	150	96%	bank
Tez Mo Hal	2 - inch	79,643	79.6	10,384	10,005	8,615	10,384	130	117	150	78%	office building
Saddleback Valley Medical Center	2 - inch	526,070	526.1	13,771	12,866	11,620	13,771	26	24	250	9%	medical office
Sears	2 - inch	207,500	207.5	4,674	4,867	4,265	4,867	23	21	80	26%	retail store
Macy's	2 - inch	160,000	160.0	6,138	7,175	6,416	7,175	45	40	80	50%	retail store
J.C. Penney	2 - inch	169,000	169.0	7,162	6,359	6,519	7,162	42	38	80	48%	retail store
Oakbrook Financial	2 - inch	119,000	119.0	1,965	1,760	1,791	1,965	17	15	150	10%	bank
Circuit City	2 - inch	47,471	47.5	496	379	100	496	10	9	80	12%	retail store
Laguna Hills Business Park	2 - inch	113,474	113.5	5,256	3,976	3,412	5,256	46	42	150	28%	office building
Plaza Pointe Office Building	2 - inch	63,156	63.2	2,232	2,476	2,426	2,476	39	35	150	24%	office building
Plaza Pointe	2 - inch	30,000	30.0	662	574	1,172	1,172	39	35	150	23%	office building
Laguna Hills Commerce Center	1 1/2 - inch	36,074	36.1	7,564	7,158	7,906	8,892	246	222	150	148%	office building
South Pointe II Office Condos	1 1/2 - inch	44,334	44.3	600	598	617	617	14	13	150	8%	office building
Terra Ventures		38,504	38.5	1,799	2,865	1,857	2,865	74	67	150	45%	office building
Laguna Hills Business Park, Bldg 1A	1 1/2 - inch	33,220	33.2	1,463	2,326	1,443	2,326	70	63	150	42%	office building
Chase Building	2 - inch	47,949	47.9	2,656	1,758	1,570	2,656	55	50	150	33%	office building
Petco	2 - inch	28,586	28.6	937	1,055	697	1,055	37	33	80	42%	retail store
CVS Pharmacy	1 1/2 - inch	14,943	14.9	125	107	381	381	26	23	80	29%	retail store
Target	2 - inch	114,488	114.5	2,795	2,295	2,320	2,795	24	22	80	27%	retail store
Mulrlands Medical Center	2 - inch	19,569	19.6	1,801	1,521	1,439	1,801	92	83	250	33%	medical office
Average		**72,982**	**73.0**	**3,185**	**2,787**	**2,731**	**3,220**	**79**	**71**	**182**	**44%**	
Std Dev		**94,668**	**94.7**	**3,160**	**2,917**	**2,741**	**3,131**	**75**	**67**	**138**	**47%**	

TABLE 9

Wastewater Generation Comparisons Summary

Business Type	Average % ETA / LA	Std Dev	# of Samples	95% Confidence Limits	95% Confidence Interval	Lower Limit	Upper Limit	LA's Est. Wastewater (gpd) per 1,000 sq ft	ETWD Est. WW (gpd) per 1,000 sq ft	WW Capital Facilities Fees ($ per 1,000 sq ft)
Restaurant	63%	29%	27	11%	63% ± 11%	52%	74%	1,000	631	$5,873
All Commercial Types	44%	47%	37	15%	44% ± 15%	28%	59%			
Retail store								80	35	$324
Office building								150	65	$608
Medical office								250	109	$1,013
Supermarket								150	65	$608
Bank								150	65	$608
Health spa								600	261	$2,432
Storage								20	9	$81
Mortuary								80	35	$324
Counseling center								150	65	$608

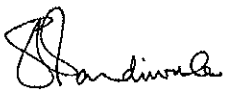
Implementation

Once the water and wastewater capital facilities fees are approved, new customers will be required to pay those fees consistent with the size of their meter for water or their property building square footage for wastewater. When customers change their usage and/or when redevelopment occurs, the property will be provided credit for the existing capacity applied to the property. For example, if water demands increase for a customer and the existing 1" meter needs to be replaced with a 2" meter, the customer would pay the difference between the current capital facilities cost for the two meters, so there would be a payment of $21,856 required for the 2"meter and a credit of $3,582 for the 1" meter resulting in a net payment of $18,274. There would not be a charge or credit for downsizing. The District will keep track of the maximum capacity that accrues to a property. For example, if a 2" meter downsized to a 1½" meter, there would not be any payment to the customer, however, the District will maintain a record of the original 2" meter so that in the future if that property were to require a larger meter the credit for the 2" meter would be retained.

Similarly on the wastewater side, credit would be provided at the existing rates if a customer and/or redeveloper requires additional capacity to accommodate increased building square footage. Downsizing would not result in payment to a customer, but the District will keep track of the higher capacity accrued to a property to facilitate credit reconciliation as appropriate.

We have enjoyed the opportunity to assist you on this project. Should you have any questions or comments regarding this report, feel free to contact me at (626) 583-1984.

Sincerely,
RAFTELIS FINANCIAL CONSULTANTS, INC.



Sudhir Pardiwala
Vice President

Appendix A

El Toro Water District, California
Water and Wastewater Capacity Facilities Fee Model
Table A - 1
Fixed Asset Summary

NUM	Fixed Assets	Original Cost	Replacement Cost	Escalated Acculated Depreciation	Escalated RCNLD	% Water	% Wastewater	Escalated Water	Escalated Wastewater
	Equipment - 1418								
1422	Source of Supply (W)	$129,433	$180,179	($97,396)	$82,783	100%	0.00%	$82,783	$0
1424	Effluent Disp Equipment (WW)	703,268	1,103,870	(1,014,531)	89,339	0%	100.00%	$0	89,339
1426	Mains - (W)	1,103,304	7,554,520	(4,628,076)	2,926,444	100%	0.00%	$2,926,444	0
1427	Mains - (WW)	4,288,463	6,789,711	(3,062,358)	3,727,353	0%	100.00%	$0	3,727,353
1428	Pumping (W)	3,005,923	4,586,108	(2,870,269)	1,715,839	100%	0.00%	$1,715,839	0
1429	Pumping (WW)	4,505,951	7,307,174	(5,863,640)	1,443,534	0%	100.00%	$0	1,443,534
1430	Treatment (W)	1,722,733	4,887,544	(2,411,139)	2,476,405	100%	0.00%	$2,476,405	0
1431	Treatment (WW)	6,527,252	9,462,935	(6,551,552)	2,911,384	0%	100.00%	$0	2,911,384
1432	Reservoirs & Tanks (W)	1,684,711	3,299,206	(1,202,780)	2,096,427	100%	0.00%	$2,096,427	0
1434	Transportation & Distribution (W)	8,223,045	15,217,656	(5,651,971)	9,565,684	100%	0.00%	$9,565,684	0
1435	Transportation & Distribution (WW)	4,385,253	11,478,254	(3,682,655)	7,795,600	0%	100.00%	$0	7,795,600
1436	Fire Mains (W)	93,637	153,811	(51,362)	102,449	100%	0.00%	$102,449	0
1438	Services (W)	1,175,565	3,035,907	(2,127,882)	908,025	100%	0.00%	$908,025	0
1439	Services (WW)	401,118	1,211,070	(563,337)	647,733	0%	100.00%	$0	647,733
1440	Meters (W)	393,495	1,332,106	(828,260)	503,846	100%	0.00%	$503,846	0
1441	Meters (WW)	533	1,648	(1,477)	171	0%	100.00%	$0	171
1442	Hydrants (W)	1,116,386	2,595,410	(1,611,030)	984,379	100%	0.00%	$984,379	0
1444	Office Furniture (OS)	78,329	101,294	(71,507)	29,787	50%	50.00%	$14,894	14,894
1445	Office Furniture (A)	393,348	531,678	(473,919)	57,759	50%	50.00%	$28,879	28,879
1446	Office Equipment (OS)	31,081	38,841	(38,841)	0	50%	50.00%	$0	0
1447	Office Equipment (A)	989,472	1,247,791	(987,232)	260,559	50%	50.00%	$130,279	130,279
1448	Transportation Equipment (OS)	2,397,591	3,117,589	(2,593,785)	523,804	50%	50.00%	$261,902	261,902
1450	Stores Equipment (OS)	150,117	202,102	(128,778)	73,323	50%	50.00%	$36,662	36,662
1452	Laboratory Equipment (WW)	172,126	244,615	(236,334)	8,281	0%	100.00%	$0	8,281
1454-1455-1456	Communications Equipment (W,WW,&OS)	394,192	130,033	(110,650)	19,383	50%	50.00%	$9,692	9,692
1457	Power Equipment (OS)	652,628	727,927	(637,380)	90,547	50%	50.00%	$45,274	45,274
1458	Tools, Shop, & Garage Equipment	871,882	1,276,150	(1,148,942)	127,208	50%	50.00%	$63,604	63,604
	Total Equipment	$45,590,837	$87,815,129	($48,647,082)	$39,168,047			$21,953,468	$17,214,579
	Collection & Impound Reservoirs - 1419								
1420	Collection & Impound Reservoirs (W)	$5,813,295	$17,000,172	($3,534,543)	$13,465,629	100%	0.00%	$13,465,629	$0
1421	Collection & Impound Reservoirs (WW)	432,312	972,834	(955,224)	17,611	0%	100.00%	$0	17,611
	Total Collection & Impound Reservoirs	$6,245,606	$17,973,006	($4,489,766)	$13,483,240			$13,465,629	$17,611
	Structures & Improvements - 1469								
1470	Structures & Improvements (W)	$556,023	$1,170,561	($931,265)	$239,296	100%	0.00%	$239,296	$0
1471	Structures & Improvements (WW)	6,631,563	10,194,501	(1,346,457)	8,848,044	0%	100.00%	$0	8,848,044
1472	Structures & Improvements (Pumps W)	1,580,724	2,196,975	(1,025,771)	1,171,204	100%	0.00%	$1,171,204	0
1473	Structures & Improvements (WW)	142,844	167,926	(123,348)	44,578	0%	100.00%	$0	44,578
1474	Structures & Improvements (Pumps WW)	655,823	965,923	(61,830)	904,093	0%	100.00%	$0	904,093
1475	Structures & Improvements (Plant)	19,507,320	26,395,893	(11,063,513)	15,332,380	50%	50.00%	$7,666,190	7,666,190
1476	Structures & Improvements (OS)	2,859,243	3,428,323	(1,939,492)	1,488,831	50%	50.00%	$744,416	744,416
1477	Structures & Improvements (A)	1,049,093	1,561,716	(975,864)	585,852	50%	50.00%	$292,926	292,926
	Total Structures & Improvements	$32,982,633	$46,081,817	($17,467,539)	$28,614,278			$10,114,031	$18,500,247
	Total Fixed Assets	92,613,044	151,869,952	(70,604,387)	81,265,565			**$45,533,128**	**$35,732,437**

El Toro Water District, California
Water and Wastewater Capacity Facilities Fee Model
Table A - 2A
Water Debt Principal Offset

Fiscal Year	Installment Principal Payment Agreements	Equivalent Meter Units	Principal Per EMU	Present Value
2008	$433,452	26,248	$16.514	$6.433
2009	487,854	26,248	$18.587	$7.629
2010	549,084	26,248	$20.919	$9.049
2011	617,999	26,248	$23.545	$10.732
2012	695,563	26,248	$26.500	$12.729
2013	1,210,404	26,248	$46.115	$23.341
2014		26,248	$0.000	$0.000
	$3,994,356		$152.179	$69.913

Weighted Average Cost of Debt[1] 5.38%

[1] Represents the weighted average interest rate on all remaining debt. See Schedule A - 2B for more information.

El Toro Water District, California
Water and Wastewater Capacity Facilities Fee Model
Table A - 2B
Wastewater Debt Principal Offset

Fiscal Year	1993 COP	2002 Installment	Installment Payment Agreements	SRF Loan	Total	Average Daily Flows, GPD	Principal Per Gallon	Present Value
2008	$65,000	$56,000	$197,024	$469,323	$787,347	4,320,000	$0.182	$0.173
2009	70,000	55,000	221,752	477,785	824,537	4,320,000	$0.191	$0.172
2010	70,000	58,000	249,584	486,399	863,983	4,320,000	$0.200	$0.171
2011	75,000	63,000	280,909	495,192	914,101	4,320,000	$0.212	$0.172
2012	80,000	68,000	316,165	504,098	968,263	4,320,000	$0.224	$0.172
2013	85,000	152,800	275,092	532,029	1,044,920	4,320,000	$0.242	$0.177
2014		152,800	275,092	532,029	959,920	4,320,000	$0.222	$0.154
2015		152,800		532,029	684,829	4,320,000	$0.159	$0.104
2016		152,800		532,029	684,829	4,320,000	$0.159	$0.099
2017		152,800		532,029	684,829	4,320,000	$0.159	$0.094
2018		11,270		561,151	572,421	4,320,000	$0.133	$0.074
	$445,000	$1,075,270	$1,815,617	$5,654,091	$8,989,978		$2.081	$1.562
Interest Rate	4.68%	4.90%	12.00%	1.50%				
Percent of Total	5.97%	7.38%	32.73%	53.91%	100.00%			

Weighted Average Cost of Debt [1] 5.38%

[1] Represents the weighted average interest rate on all remaining debt.

Appendix B

Sewage Generation Factors

CHARACTERISTIC SEWAGE GENERATION FACTORS
City of Los Angeles/Los Angeles County Sanitation Districts

	Charge Guide	
	(gpd)	Units
Acupuncture	150	1000 gr.sq.ft.
Arcade - Video Games	80	1000 gr.sq.ft.
Auditorium	4	seat
Auto Parking	20	1000 gr.sq.ft.
Auto Body/Mechanical Shop (domestic)	80	1000 gr.sq.ft.
Auto Body/Mechanical Shop (industrial)	1,440	gpm avg.
Bakery	280	1000 gr.sq.ft.
Bank: Headquarters	150	1000 gr.sq.ft.
Bank: Branch	80	1000 gr.sq.ft.
Banquet Room/Ballroom	800	1000 gr.sq.ft.
Bar:Fixed Seat	18	seat
Bar: Juice, No Food & Pastry	120	1000 gr.sq.ft.
Bar: Juice, Pastry Only	280	1000 gr.sq.ft.
Barber Shop	100	1000 gr.sq.ft.
Beauty Parlor	280	1000 gr.sq.ft.
Building Construction/Field Office	150	office
Bowling Alley: Alley & Lobby Area	80	1000 gr.sq.ft.
Bowling Facility: Arcade/Bar/Restaurant/Dancing	sum	
Cafeteria: Fixed Seat	30	seat
Car Wash: Automatic	1,440	gpm avg.
Car Wash: Coin Operated	206	stall
Car Wash: In Bay	1,440	gpm avg.
Car Wash: Counter & Sale Area	80	1000 gr.sq.ft.
Chapel: Fixed Seat	4	seat
Chiropractic Office	150	1000 gr.sq.ft.
Church: fixed Seat	4	seat
Church School: Day Care/Elementary	8	occupant
Church School: One Day Use	200	1000 gr.sq.ft.
Cocktail Lounge: Fixed Seat	18	seat
Coffee House: No Food & Pastry	120	1000 gr.sq.ft.
Coffee House: Pastry Only	280	1000 gr.sq.ft.
Coffee House: Serves Cooked Food	30	seat
Cold Storage: No Sales	20	1000 gr.sq.ft.
Cold Storage: Retail Sales	80	1000 gr.sq.ft.
Comfort Station: Public	100	fixture
Commercial Use	80	1000 gr.sq.ft.
Community Center	4	occupant
Conference Room of Office of Building	same as office	
Counseling Center	150	1000 gr.sq.ft.

CHARACTERISTIC SEWAGE GENERATION FACTORS
City of Los Angeles/Los Angeles County Sanitation Districts

	Charge Guide	
	(gpd)	Units
Credit Union	150	1000 gr.sq.ft.
Dairy: Barn	1,440	gpm avg.
Dairy: Retail Area	80	1000 gr.sq.ft.
Dance Studio	80	1000 gr.sq.ft.
Dental Office/Clinic	250	1000 gr.sq.ft.
Doughnut Shop	280	1000 gr.sq.ft.
Drug Abuse	150	1000 gr.sq.ft.
Equipment Booth	20	1000 gr.sq.ft.
Film Processing: 1 Hour Photo, etc.	100	1000 gr.sq.ft.
Film Processing: Industrial (domestic)	80	1000 gr.sq.ft.
Film Processing: Industrial (industrial)	1,440	gpm avg.
Food Processing Plant (domestic)	80	1000 gr.sq.ft.
Food Processing Plant (industrial)	1,440	gpm avg.
Gas Station: Self Service	100	W.C.
Gas Station: Four Bays Maximum	430	station
Golf course: 18-Hole/9-Hole Green Area	-	
Golf Course: Driving Range	-	
Golf Course Facility: Lobby/Office/Restaurant/Bar	sum	
Gymnasium: Basketball, Volleyball	250	1000 gr.sq.ft.
Hanger (Aircraft)	80	1000 gr.sq.ft.
Health Club/Spa	800	1000 gr.sq.ft.
Homeless Shelter	75	bed
Hospital	75	bed
Hospital: Convalescent	75	bed
Hospital: Animal	280	1000 gr.sq.ft.
Hospital: Psychiatric	75	bed
Hospital: Surgical	450	bed
Hotel: Use Guest Rooms Only	130	room
Industrial Discharge	1,440	
Jail	85	inmate
Kennel: Dog Kennel/Open	100	1000 gr.sq.ft.
Laboratory: Commercial	250	1000 gr.sq.ft.
Laboratory: Industrial	1,440	gpm avg.
Laundromat	170	machine
Library: Public Area	80	1000 gr.sq.ft.
Library: Stacks, Storage	25	1000 gr.sq.ft.
Lobby of Retail	80	1000 gr.sq.ft.
Lodge Hall (LACSDs - "Club")	4	seat
Lounge	80	1000 gr.sq.ft.

CHARACTERISTIC SEWAGE GENERATION FACTORS
City of Los Angeles/Los Angeles County Sanitation Districts

	Charge Guide	
	(gpd)	Units
Machine Shop (domestic)	80	1000 gr.sq.ft.
Machine Shop (industrial)	1,440	gpm avg.
Manufacturing/Industrial Facility (domestic)	80	1000 gr.sq.ft.
Manufacturing/Industrial Facility (industrial)	1,440	gpm avg.
Massage Parlor	275	1000 gr.sq.ft.
Medical Building	250	1000 gr.sq.ft.
Medical: Lab in Hospital	250	1000 gr.sq.ft.
Medical Office/Clinic	250	1000 gr.sq.ft.
Mini-Mall (Shell)	80	1000 gr.sq.ft.
Mortuary: Chapel	5	7 gr.sq.ft.
Mortuary: Living Area	80	1000 gr.sq.ft.
Motel: Use Guest Rooms Only	130	room
Museum: All Area	20	1000 gr.sq.ft.
Museum: Office Over 15%	150	1000 gr.sq.ft.
Museum: Sale Area	80	1000 gr.sq.ft.
Night Club: Fixed Seat Area	18	seat
Night Club: Dancing Area	600	1000 gr.sq.ft.
Night Club: Public Table Area	600	1000 gr.sq.ft.
Office Building	150	1000 gr.sq.ft.
Office Building with Cooling Tower	180	1000 gr.sq.ft.
Plating Plant (domestic)	80	1000 gr.sq.ft.
Plating Plant (industrial)	1,440	gpm avg.
Pool Hall (No Alcohol)	80	1000 gr.sq.ft.
Post Office: Full Service	150	1000 gr.sq.ft.
Post Office: Private Mail Box Rental	80	1000 gr.sq.ft.
Prisons	175	inmate
Residential Dorm: College or Res.	75	student
Residential: Boarding House	75	bed
Residential: Apt. - Bachelor	80	dwelling unit
Residential: Apt. - 1 Bedroom	120	dwelling unit
Residential: Apt. - 2 Bedrooms	160	dwelling unit
Residential: Apt. - 3 Bedrooms	200	dwelling unit
Residential: Apt. - >3 Bedroom	40	additional bedroom
Residential: Condo - 1 Bedroom	120	dwelling unit
Residential: Condo - 2 Bedrooms	160	dwelling unit
Residential: Condo - 3 Bedrooms	200	dwelling unit
Residential: Condo - >3 Bedrooms	40	additional bedroom
Residential: Duplex/Townhouse /SFD - 1 Bedroom	130	dwelling unit
Residential: Duplex/Townhouse /SFD - 2 Bedrooms	180	dwelling unit

CHARACTERISTIC SEWAGE GENERATION FACTORS
City of Los Angeles/Los Angeles County Sanitation Districts

	Charge Guide	
	(gpd)	Units
Residential: Duplex/Townhouse /SFD - 3 Bedrooms	230	dwelling unit
Residential: Duplex/Townhouse /SFD - >3 Bedrooms	50	additional bedroom
Residential Room Addition: Bedroom	50	bedroom
Residential Room Addition: Other than Bedroom	-	
Residential Room Conversion into a Bedroom	50	bedroom
Residential Room Conversion into a Room Other than Bedroom	-	
Residential: Mobile Home	160	dwelling unit
Residential: Artist (2/3 Area)	80	1000 gr.sq.ft.
Residential: Artist Residence	80	dwelling unit
Residential: Guest Home with Kitchen	Same as Apartment	
Residential: Guest Home without Kitchen	50	bedroom
Rest Home	75	bed
Restaurant (LACSD Data)	1,000	1000 gr.sq.ft.
Retail Area	80	1000 gr.sq.ft.
Rifle Range: Shooting Stalls, Lobby Area	80	1000 gr.sq.ft.
Rifle Range Facility: Bar/Restaurant	sum	
School: Arts/Dancing/Music	80	1000 gr.sq.ft.
School: Day Care Center	8	child
School: Elementary/Jr. High	8	student
School: High School	12	student
School: Kindergarten	200	1000 gr.sq.ft.
School: Martial Arts	80	1000 gr.sq.ft.
School: Nursery-Day Care	8	child
School: Special Class-LAC	8	student
School: Trade or Vocation	12	student
School: Training	12	student
School: University/College	18	student
School: Dormitory	75	student
School: Stadium, Pavilion	4	seat
Skating Rink: Ice or Roller	250	1000 gr.sq.ft.
Spa /Jacuzzi (Commercial)	1,440	gpm avg.
Spa /Jacuzzi (Residential)	-	
Storage: Building/Warehouse	20	1000 gr.sq.ft.
Storage: Self Storage	20	1000 gr.sq.ft.
Store: Ice Cream	80	1000 gr.sq.ft.
Store: Retail	80	1000 gr.sq.ft.
Studio: Film/TV - Audience Viewing Room	4	seat
Studio: Film/TV - Regular Use Indoor Filming Area	80	1000 gr.sq.ft.
Studio: Film/TV - Industrial use Film Process/Machine Shop (domestic	80	1000 gr.sq.ft.

CHARACTERISTIC SEWAGE GENERATION FACTORS
City of Los Angeles/Los Angeles County Sanitation Districts

	Charge Guide	
	(gpd)	Units
Studio: Film/TV - Industrial use Film Process/Machine Shop (industrial	1,440	gpm avg.
Studio: Recording	80	1000 gr.sq.ft.
Swimming Pool (Commercial, with Backwash Filters)	1,440	gpm avg.
Swimming Pool (Residential, with Replaceable Filter Cartridges)	-	
Tanning Salon: Independent, No Shower	80	1000 gr.sq.ft.
Tanning Salon: Within a Health Spa/Club	800	1000 gr.sq.ft.
Theater: Drive-in	10	vehicle
Theater: Live/Music/Opera	4	seat
Theater: Cinema	4	seat
Tract: Commercial/Residential		acre
Tract: Residential, Condo	same as condo - 3 Bdr	
Tract: Residential, Duplex/ Townhouse/SFD	same as duplex, etc.-3 Bdr	
Trailer - Construction/Field Office	150	office
Veterinarian	280	1000 gr.sq.ft.
Warehouse	20	1000 gr.sq.ft.
Warehouse with Office	charge separately	
Waste Dump: Recreational	430	station
Wine Tasting Room: Kitchen	215	1000 gr.sq.ft.
Wine Tasting Room: All Area	80	1000 gr.sq.ft.