

Section 2

Wastewater Rate Determination

The quality and quantity of effluent from different customer classes varies widely. This is an important fact, as wastewater system costs are dependent on both the quality and quantity of effluent from the customer classes. The quality and quantity parameters applicable to the City's wastewater system include average wastewater flow, biochemical oxygen demand (BOD), and suspended solids (SS). The City provides only wastewater collection for their customers' sewage. Transportation, treatment, and disposal are provided by the City of San Diego's Metropolitan Wastewater Department (Metro).

Published data is available on the typical quality of wastewater from different types of commercial and industrial establishments. Table 2-2 summarizes the discharge loading of residential and various common non-residential users normally found in a City. This data is from published sampling compilations from the City of San Jose, East Bay MUD, Monterey Regional Water Pollution Control Agency, Sacramento County Regional Sanitation District, and the County Sanitation Districts of Los Angeles County. The State Water Resources Control Board (SWRCB), the overseer of wastewater rates for all Environmental Protection Agency (EPA) grant and low interest loan funded agencies in the State, considers this data representative of most cities in California. All individual commercial discharge loadings used in this study are from this approved SWRCB data. Although the City does not have all of these types of users, the sewer user strength classifications are provided for reference in grouping the non-residential.

Table 2-2
City of Chula Vista
Compilation of Published Data on Sewer User Strength Classifications

User Classification Description	Proposed Strength (mg/l)			Percent of Single Family
	BOD	SS	Weighted Average	
Strength Weighting Factor	50%	50%		
Residential Single Family	200	200	200	100%
LOW STRENGTH CLASSIFICATIONS				
Low I Strength:				
Soft Water Service	3	55	29	15%
Office With Public Access	80	80	80	40%
Car Wash	20	150	85	43%
Veterinarian	130	80	105	53%
Business Equipment Rental	130	80	105	53%
Business Services -- Other	130	80	105	53%
Office (Finance, Insurance, etc.)	130	80	105	53%
Office (No Public Access)	130	80	105	53%
Office (Medical Services)	130	80	105	53%
Personal Services (Other)	130	80	105	53%
Photo & Portrait Studios	130	80	105	53%
Manufacturing - Textile Mill Products	115	115	115	58%
Schools	130	100	115	58%

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Strength Weighting Factor	50%	50%		
Residential Single Family	200	200	200	100%
Low II Strength:				
Laundromat-Public	150	110	130	65%
Landscaping Services	150	150	150	75%
Amusement & Recreation: Indoor & Out	150	150	150	75%
Auto Parking	150	150	150	75%
Barber Shop	150	150	150	75%
Beauty Shop	150	150	150	75%
Church (No Kitchen)	150	150	150	75%
Community Center (No Kitchen)	150	150	150	75%
Grocery Market (No Butcher or Baker)	150	150	150	75%
Health Spa	150	150	150	75%
Kennel	150	150	150	75%
Malls/Dept. Stores (No Food Svcs)	150	150	150	75%
Manufacturing (Other)	150	150	150	75%
Manufacturing (Apparel & Other Textiles)	150	150	150	75%
Manufacturing (Furniture)	150	150	150	75%
Membership Organizations	150	150	150	75%
Museum/Art Gallery	150	150	150	75%
Nursery/Greenhouse	150	150	150	75%
Office (Construction)	150	150	150	75%
Massage Parlor	150	150	150	75%
Retail Apparel and Accessory Store	150	150	150	75%
Retail Bldg. (Materials & Gardening)	150	150	150	75%
Retail (Packaged) Food (No Sewer Disposal)	150	150	150	75%
Retail Furniture & Home Furnishings	150	150	150	75%
General Merchandise -- Retail/Wholesale	150	150	150	75%
Retail Trade -- Misc. (Except Food/Drink)	150	150	150	75%
Storage, Warehouse & Outdoor	150	150	150	75%
Studio/Recording Sound Stage	150	150	150	75%
Theater/Auditorium (No Food)	150	150	150	75%
Low III (Residential) Strength:				
Convalescent Homes	250	100	175	88%
Hospital	250	100	175	88%
Other Health Services	250	100	175	88%
Transp. & Utilities (SIC 400 through 489)	200	150	175	88%
Agricultural Production	150	250	200	100%
Agricultural Services - Other	250	150	200	100%
Bar Without Restaurant	200	200	200	100%
Restaurant -- Preprocessed Only	200	200	200	100%
Social Services	200	200	200	100%
Average Low Strength Per Low Class	200	200	200	100%

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User Classification Description	Proposed Strength (mg/l)			Percent of Single Family
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Strength Weighting Factor	50%	50%		
Residential Single Family	200	200	200	100%
MEDIUM STRENGTH CLASSIFICATIONS				
Medium I Strength:				
Hotel (No Restaurant)	310	120	215	108%
Prison With Food Service	310	120	215	108%
Auto Repair (No Steam Cleaning)	180	280	230	115%
Auto Service Station (No Steam Cleaning)	180	280	230	115%
Agricultural Services -- Animal	350	150	250	125%
Auto/Vehicle Sales	300	200	250	125%
Repair Services -- Misc.	250	250	250	125%
Manufacturing -- Rubber/Plastic Products	200	350	275	138%
Medium II Strength:				
Manufacturing -- Electric/Electronic Equipment	300	350	325	163%
Manufacturing - Instruments	300	350	325	163%
Manufacturing -- Fabricated Metal Products	300	350	325	163%
Manufacturing -- Transport Equipment	400	250	325	163%
Laundromat, Commercial	450	240	345	173%
Transportation -- Bus/Air Terminal	350	350	350	175%
Medium III Strength:				
Malls/Shopping (Including Food Sales)	400	400	400	200%
Manufacturing -- Machine Shops	290	550	420	210%
Manufacturing -- Metal Industry	290	550	420	210%
Manufacturing -- Lumber & Wood Products	431	431	431	216%
Manufacturing -- Stone, Clay, Glass Products	200	700	450	225%
Reproduction/Mailing Service	500	400	450	225%
Hotel (With Restaurant)	500	600	550	275%
Manufacturing -- Paper/Containers	700	500	600	300%
Manufacturing -- Printing & Publishing	700	500	600	300%
Laundry (Industrial)	670	680	675	338%
Average Medium Strength Per User Class	400	400	400	200%

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Strength Weighting Factor	50%	50%		
Residential Single Family	200	200	200	100%
HIGH STRENGTH CLASSIFICATIONS				
High I Strength:				
Agricultural Production - Livestock	1,200	350	775	388%
Mortuary	800	800	800	400%
Grocery (W/Butcher or Baker)	800	800	800	400%
Manufacturing -- Baked Foods	1,000	600	800	400%
Restaurant/Bar (W/Food Preparation)	1,000	600	800	400%
Manufacturing -- Beverages	1,500	300	900	450%
Manufacturing -- Paint	1,300	1,100	1,200	600%
Manufacturing -- Other Chemical Products	1,300	1,100	1,200	600%
High II Strength:				
Manufacturing -- Dairy Products	2,369	922	1,646	823%
Steam Cleaning -- Auto	1,150	2,150	1,650	825%
Manufacturing -- Other Food Products	2,213	1,453	1,833	917%
High III Strength:				
Septage	5,400	12,000	8,700	4350%
Average Strength Per High Strength Class	1,000	600	800	400%

To simplify administration, users are divided into classes based on the estimated strength of their wastewater for the purposes of this study. The City's users are classified into three classes of residential users (Single-Family, Multi-Family and Mobile Homes) and four classes of non-residential users (Low-Strength, Medium-Strength, High-Strength and Institutional). In the future, should the City have additional commercial or industrial customers that due to their unique characteristics and/or high volume usage do not fit within any of the established user categories, they should create a unique and separate user class for the customer.

2.2 Fiscal Year 2004 Wastewater Rate Revenue Requirement

The costs of wastewater collection, treatment, and disposal, together with associated general and administration expenses, are the basis for wastewater rates. The City of