

CITY OF WILLITS

SEWER RATE AND CONNECTION FEE STUDY

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INTRODUCTION AND BACKGROUND

The City of Willits provides sewer service to about 2,300 residential and commercial customers within the City. Bartle Wells Associates, independent public finance advisor, was retained by the City to review the City's current wastewater rates and connection fee for several purposes:

- To review the financial health of the sewer enterprise and evaluate the sufficiency of revenue produced by the current rates;
- To ascertain compliance with Proposition 218, which imposes certain procedural and substantive requirements on fees related to property ownership, which may include water and sewer fees.
- To examine and update the City's sewer rate and connection charge.

This report discusses the City's sewer utility, its current rates and finances, and recommends adjustments in the current rates and rate structure. It also projects revenues and expenses and rates for five years through 2010/11.

SEWER RATE STUDY

Sewer Rate Design

Rates should be designed to generate sufficient revenue to ensure the financial health and stability of a utility, taking into account both ongoing operating needs and capital improvements. Bartle Wells Associates believes that properly designed wastewater rates should meet the following tests:

- All sewer users should pay a proportional share of system operating and maintenance costs;
- Rates for customers with similar wastewater characteristics should be consistent;
- Total revenues should be sufficient to pay all costs of providing wastewater collection, treatment, and disposal, as well as debt service, administration, and other expenses;
- The rates should include a provision for replacement of sewer system facilities; and
- The rates should comply with commitments to bondholders or other lenders.

This approach to ratemaking treats customers fairly. It also complies with the spirit of Proposition 218, which was approved by California voters in November 1996.

Proposition 218 and its application of utility rates is discussed in some detail in another section of this report. Overall, the proposition requires a “cost of service” approach to rates. The criteria set forth above meets these requirements.

Current Sewer Rates

Table 1 summarizes the City’s current sewer rates. Residential customers pay \$336 per residential unit. Non-residential customers are billed based on wastewater flow.

Wastewater flow for each fiscal year is defined to be total water use for the previous December through March (“winter water use”) annualized and reduced by 10 percent to account for water which does not enter the wastewater system. Non-residential customers are charged based on the strength of their wastewater, which is as follows:

- Low strength: Wastewater with strength characteristics, in terms of biochemical oxygen demand (BOD) and suspended solids (SS) of less than wastewater

discharged by residential customers. Strength factor of 0.8 for rate calculation is applied. Included institutional, laundromats, carwashes, and other low strength dischargers.

- Domestic strength: Wastewater with strength characteristics, in terms of BOD and SS, comparable to wastewater discharged by residential customers. Strength factor of 1.0 for rate calculation is applied. Includes most customers, such as retail, office, general, hospitals and convalescent homes, medical office, hotel and motels, and mobile home parks.
- High strength: Wastewater with strength characteristics, in terms of BOD and SS, of more than to wastewater discharged by residential customers. Strength factor of 1.6 for rate calculation is applied. Includes supermarkets, restaurants, bakeries, and mortuaries.

An amount determined by applying the following rates to the annual wastewater flow for each commercial/industrial account:

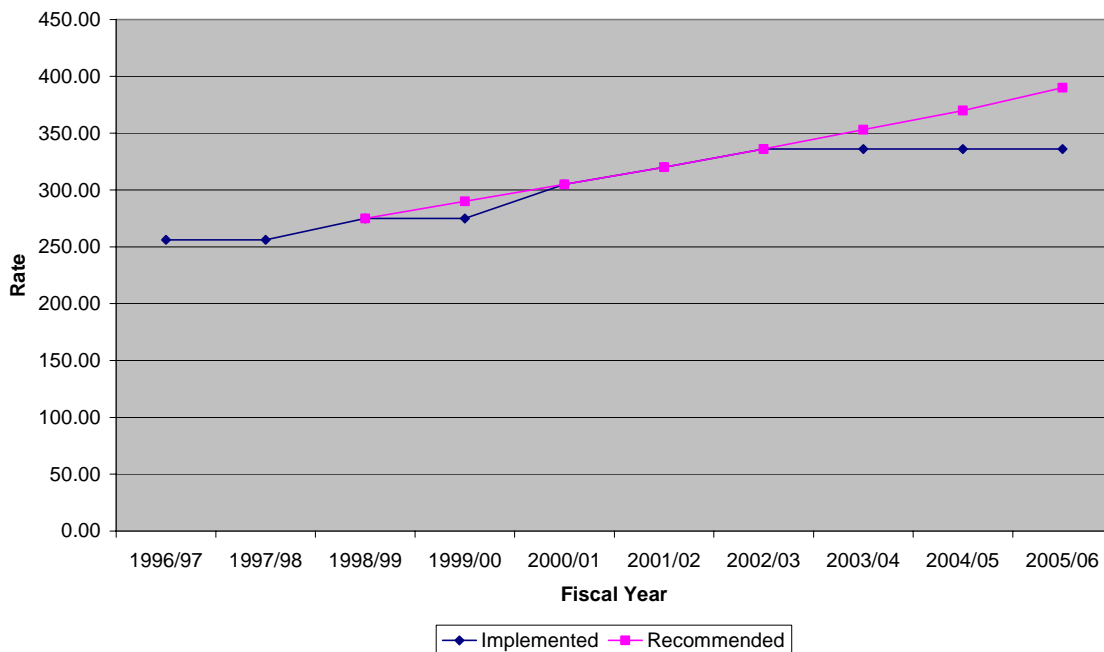
Low strength, per hcf	\$3.15
Domestic strength, per hcf	\$3.84
High strength, per hcf	\$6.02

Table 1
City of Willits Wastewater Rate Study
Analysis of Current Rates

Classification	Rate per year
Residential (per EDU)	\$ 336.00
Nonresidential	
Low strength (per hcf)	\$ 3.15
Domestic strength (per hcf)	\$ 3.84
High strength (per hcf)	\$ 6.02

Source: City of Willits

**Figure 1
Sewer Rate Comparison with Implemented and Recommended Rates**



In March 1998, Bartle Wells Associates had conducted a sewer rate study for the City of Willits. The above graph compares the residential rates implemented by the City of Willits with the rates recommended by Bartle Wells Associates. The residential and commercial rates have not been increased since the year 2003/04.

The nonresidential rate categories are designed to reflect the varying characteristics of wastewater discharged by different types of customers. The highest rates apply to restaurants and grocery stores because they discharge the highest strength wastewater. The costs of treating wastewater from these customers is higher than the cost of treating wastewater from other customers with lower strength wastewater.

The service charges are collected on the property tax bill. The City must advise the county tax collector by late August of the charges for the year for each customer. The charges are then included on the property tax bill. The City receives its revenue on the same cycle as property taxes: approximately half of the revenue in December and the other half in April. This is a convenient, efficient and low cost way for the City to collect its sewer service

charges, and it is very common throughout California. The City must adopt its rates in time to submit them to the county in August, or wait for another year to make any changes.

Wastewater Characteristics

Table 2 summarizes current wastewater customers and their winter water use for commercial customers. The City has a total of 2,016 residential accounts and 270 nonresidential accounts.

Table 2
City of Willits Wastewater Rate Study
Wastewater Flow Characteristics

Customer Class	Accounts	Estimated Wastewater Flow (gpd) ⁽¹⁾	BOD (mg/l)	SS (mg/l)	Annual Loadings	
					BOD (1,000 lbs)	SS (1,000 lbs)
Residential						
Single family	1,148	252,356				
Multi-family	868	109,982				
Total residential	2,016	362,337	220	220	242.66	242.66
Nonresidential						
Low strength	13	7,288	100	100	2.22	2.22
Domestic strength	224	83,159	220	220	55.69	55.69
High strength	20	17,948	600	600	32.78	32.78
Blended strength/Mixed use ⁽²⁾	13	6,810	250	250	5.18	5.18
Total nonresidential	270	115,205			95.87	95.87
Total City of Willits	2,286	477,543			338.53	338.53
Brooktrails		147,513				
Inflow/Infiltration (estimated)		214,944				
Total Flow (ADWF) ⁽³⁾		840,000				

(1) At 90 percent of winter water use

(2) BOD and SS for Blended Strength is assumed to be at 250 mg/l each

(3) Average Dry Weather Flow (ADWF) based on May 2004 Preliminary Engineering Report - Wastewater Treatment Facilities Upgrade by SHN Consulting Engineers & Geologists, Inc.

All residential customers, by definition, discharge domestic strength wastewater. The commercial categories from the City's current rate structure are each identified as low, domestic, high or blended strength.

Most commercial customers are in the domestic strength category. This includes offices, retail and convenience stores, hospitals, hotels and motels, in short all customers with generally domestic strength wastewater. Low strength customers are those which

discharge a lot of water of less than domestic strength, such as laundromats, car washes, schools, and institutional customers. High strength customers are bakeries, restaurants, supermarkets, and mortuaries with on-site facilities. Blended strength customers are commercial customers who have several individual businesses, with different wastewater characteristics. The basis of charging the mixed-use customers is discussed in detail in another section of this report.

The strength categories for commercial customers are based on typical wastewater loadings published by the State Water Resources Control Board. Table 2 also summarizes the wastewater characteristics for residential and commercial customers. The characteristics are flow—the volume of wastewater, biochemical oxygen demand (BOD), and suspended solids (SS). These characteristics influence the cost of treating wastewater. The BOD and SS shown in Table 2 are used to develop the strength factors—the relationships between the rates for the customer classes. The high strength category includes all customers whose wastewater includes more than 600 parts per million of either BOD or SS or both, specifically restaurants, supermarkets, bakeries, and mortuaries.

Wastewater flow is assumed to be 90 percent of winter water use for nonresidential customers, to allow for such water uses as irrigation, sidewalk cleaning, and process water which do not go to the sewer.

Cost Allocation

Wastewater costs are commonly allocated on the basis of flow, BOD, and SS. The process used in this rate study is to allocate the utility's costs on these parameters and develop a cost per unit for each parameter, to define the wastewater characteristics of each class of customers, and to then allocate the treatment costs to customer classes based on the costs and wastewater characteristics. Tables 3 and 4 demonstrate these calculations.

Table 3 allocates the costs in the 2005/06 projected wastewater budget to flow, BOD and SS. Maintenance of the collection system is entirely allocated to flow. Operating costs at

the treatment plant are divided equally between flow, BOD, and SS. Administration, contingencies and debt service are allocated to flow, and other costs are allocated based on the weighted average of costs. Overall, as shown in Table 3, 59.5 percent of costs are allocated to flow and 20.3 percent each to BOD and SS. Thus, of the \$2.3 million operating budget, about \$1.4 million is related to the cost of treating the volume of water, and the remaining \$481,900 is related equally to the cost of treating BOD and SS.

Table 3
City of Willits Wastewater Rate Study
Allocation of Projected 2005/06 Expenses

Expenses	Projected 2005/06	Percentage Allocation			Dollar Allocation		
		Flow	BOD	SS	Flow	BOD	SS
Operation & maintenance expenses							
Maintenance	\$126,300	100%	0%	0%	\$126,300	\$0	\$0
Operations							
Salaries and employee benefits	238,600	34%	33%	33%	81,100	78,700	78,700
Services and supplies (exc. utilities)	88,200	34%	33%	33%	30,000	29,100	29,100
Utilities	139,400	34%	33%	33%	47,400	46,000	46,000
Equipment charges	7,500	34%	33%	33%	2,600	2,500	2,500
Subtotal - operations	473,700	34%	33%	33%	161,100	156,300	156,300
Total operating costs	600,000	48%	26%	26%	287,400	156,300	156,300
Administration	530,200	100%	0%	0%	530,200	0	0
Engineering ⁽¹⁾	75,000	48%	26%	26%	35,900	19,500	19,500
Contingencies	14,200	100%	0%	0%	14,200	0	0
Debt Service	230,200	100%	0%	0%	230,200	0	0
Total before capital improvements	1,449,600	76%	12%	12%	1,097,900	175,800	175,800
Capital improvement expenses ⁽²⁾	927,600	34%	33%	33%	315,400	306,100	306,100
Total estimated 2005/06 expenses	2,377,200	59.5%	20.3%	20.3%	1,413,300	481,900	481,900

(1) Also included is the labor and benefits for Engineering Tech III hired

(2) Average of the next 5 year capital improvement program expenses plus Debt Service on \$4.7 million and \$12.4 million USDA loan

Table 4 calculates strength factors for the customer categories based on the loadings (BOD and SS). The calculated strength factors are 0.8 for low strength, 1.0 for domestic strength, 1.7 for high strength and 1.1 for blended strength. Thus, for an equivalent amount of wastewater discharge, a low strength customer will pay 80 percent and a high strength customer will pay 170 percent of the charge for a domestic strength customer.

Table 4
 City of Willits Wastewater Rate Study
 Equivalent Dwelling Units and Strength Factors

Equivalent Dwelling Unit (EDU) Standards

Parameter	Allocation	Definition of EDU	
Flow	59.5%	Flow	180 gpd
BOD	20.3%	BOD	220 mg/l
SS	20.3%	SS	220 mg/l

Strength Factor Calculation

$$\text{Strength factor} = 59.5\% + (20.3\% * \text{BOD in mg/l} / 220) + (20.3\% * \text{SS in mg/l} / 220)$$

Equivalent Dwelling Units and Strength Factors by User Group

Customer Class	Number of units	Average daily flow (MGD)	BOD (mg/l)	SS (mg/l)	Strength Factor	No. of EDUs
Residential	2,016	0.3623	220	220	1.0	2,016
Nonresidential						
Low strength	13	0.0073	100	100	0.8	32
Domestic strength	224	0.0832	220	220	1.0	462
High strength	20	0.0179	600	600	1.7	170
Blended strength	13	0.0068	250	250	1.1	40
Total nonresidential	270	0.1152				703
Total	2,286	0.4775				2,719

Equivalent Dwelling Units

An equivalent dwelling unit (EDU) is a measure of the wastewater flow and strength discharged by a typical single family dwelling. It is a standard commonly used in establishing sewer charges. An EDU for Willits is defined as 180 gallons per day of wastewater discharge, with BOD and SS both at 220 parts per million. Table 4 includes a calculation of total EDUs for all wastewater customers, which is used in calculating the recommended rates.

Revenues and Expenses

Tables 5 through 7 evaluate the sewer enterprise finances. Table 5 shows revenues and expenses for 2005/06 from the City's budgets. It is projected to have \$80,400 net loss in 2005/06. Table 6 projects expenses for five years beginning with 2005/06. In general, expenses are projected to increase at 3.5 percent per year. Table 6 also adjusts the projection to demonstrate cash flow, by deducting the depreciation expense, which is a non-cash item, and including principal on debt, which are not included in the budget. Table 6 projects total annual expenses, excluding capital improvements, of just over \$1.2 million for 2005/06, increasing rapidly after that time due to the addition of a new debt service of a USDA loan for the Wastewater treatment facility upgrade project. Table 7 includes the five year budgeted capital improvement program.

Table 5
City of Willits Wastewater Rate Study
Revenues and Expenses

	Budget 2005/06
Revenues	
Sewer use charge	1,005,000
Brooktrails sewer user charge	236,800
Meadowbrook Manor charge	42,000
Interest	38,000
Other revenue ⁽¹⁾	47,500
Total revenues	<u>1,369,300</u>
Expenses	
Dept 5010 - Administration	
Salaries and employee benefits	86,000
Services and supplies	23,400
Funded depreciation	255,600
Overhead and administration	165,200
Subtotal - administration	<u>530,200</u>
Dept 5011 - Maintenance	
Salaries and employee benefits	99,600
Services and supplies (except utilities)	22,400
Utilities	400
Equipment charges	4,000
Subtotal - maintenance	<u>126,400</u>
Dept 5013 - Operations	
Salaries and employee benefits	238,600
Services and supplies (except utilities)	88,200
Utilities	139,400
Equipment charges	7,500
Subtotal - operations	<u>473,700</u>
Dept 5014 - Engineering	
Salaries and employee benefits ⁽²⁾	63,300
Architectural and engineering	11,700
Subtotal - engineering	<u>75,000</u>
Dept 5017 - Contingencies	
Appropriations	14,200
Subtotal - contingencies	<u>14,200</u>
Dept 5018 - Debt service	
Interest	230,200
Subtotal - debt service	<u>230,200</u>
Total expenses	<u>1,449,700</u>
Net income	(80,400)

Source: City of Willits Budget 2005

⁽¹⁾ Other revenues break-up:

Sewer By Products	15,000
Sewer Lateral Installation	6,000
Sewer Hookup Fees	20,000
Other Services	6,500
Total	<u>47,500</u>

⁽²⁾ Engineering Tech III hired in 2005/06 salaried @\$5,273/month for labor & benefits

Table 6
City of Willits Wastewater Rate Study
Projected Expenses

	Budget		Projected			
	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11
Operations & Maintenance Expenses						
Dept 5010 - Administration						
Salaries and employee benefits	86,000	89,000	92,100	95,300	98,600	102,100
Services and supplies	23,400	24,200	25,000	25,900	26,800	27,700
Funded depreciation	255,600	264,500	273,800	283,400	293,300	303,600
Overhead and administration	165,200	171,000	177,000	183,200	189,600	196,200
Subtotal - administration	530,200	548,700	567,900	587,800	608,300	629,600
Dept 5011 - Maintenance						
Salaries and employee benefits	99,600	103,100	106,700	110,400	114,300	118,300
Services and supplies (except utilities)	22,400	23,200	24,000	24,800	25,700	26,600
Utilities	400	400	400	400	400	400
Equipment charges	4,000	4,100	4,200	4,300	4,500	4,700
Subtotal - maintenance	126,400	130,800	135,300	139,900	144,900	150,000
Dept 5013 - Operations						
Salaries and employee benefits	238,600	247,000	255,600	264,500	273,800	283,400
Services and supplies (except utilities)	88,200	91,300	94,500	97,800	101,200	104,700
Utilities	139,400	144,300	149,400	154,600	160,000	165,600
Equipment charges	7,500	7,800	8,100	8,400	8,700	9,000
Subtotal - operations	473,700	490,400	507,600	525,300	543,700	562,700
Dept 5014 - Engineering						
Salaries and employee benefits	63,300	65,500	67,800	70,200	72,700	75,200
Architectural and engineering	11,700	12,100	12,500	12,900	13,400	13,900
Subtotal - engineering	75,000	77,600	80,300	83,100	86,100	89,100
Dept 5017 - Contingencies						
Appropriations	14,200	14,200	14,200	14,200	14,200	14,200
Subtotal - contingencies	14,200	14,200	14,200	14,200	14,200	14,200
Dept 5018 - Debt service						
Interest on \$4.71 million USDA loan	230,200	212,000	208,600	205,000	201,300	197,300
Interest on \$12.4 million USDA loan ⁽¹⁾		527,000	521,800	516,300	510,600	504,700
10% annual reserve contribution		52,700	52,200	51,600	51,100	50,500
Subtotal - debt service	230,200	791,700	782,600	772,900	763,000	752,500
Total expenses	1,449,700	2,053,400	2,087,900	2,123,200	2,160,200	2,198,100
Adjustment for cash expenses						
Less: Funded depreciation (Dept 5010)	(255,600)	(264,500)	(273,800)	(283,400)	(293,300)	(303,600)
Add: Principal on \$4.71 million USDA loan (Dept 5018)	60,000	65,000	70,000	70,000	75,000	80,000
Add: Principal on \$12.4 million USDA loan ⁽²⁾		123,000	128,200	133,700	139,300	145,300
Total adjustments	(195,600)	(76,500)	(75,600)	(79,700)	(79,000)	(78,300)
Total cash expenses	1,254,100	1,976,900	2,012,300	2,043,500	2,081,200	2,119,800

(1) Interest on USDA loan for the Wastewater Treatment Facility Upgrade Project of \$12.4 million at 4.25% for 40 years

(2) Principal on USDA loan

Inflation/escalation assumption 3.5%
Prepared by Bartle Wells Associates

Table 7
City of Willits Wastewater Rate Study
Sewer Fund Capital Improvement Program

	2005/06	2006/07	2007/08	2008/09	2009/10
Building for Office and Equipment (\$225,000 @ 4.5% for 10 yrs.)	28,435	28,435	28,435	28,435	28,435
Loader/Brush Cutter Lease Purchase (current year portion)	27,525	27,525	27,525	27,525	
Pick Up Truck (\$20,000 @ 4.5% for 5 yrs.) - current year portion	5,575	5,575	5,575	5,575	
(2) #3 Water Pumps	12,000				
Chlorine Residual Analyzer	5,000				
Portable John Deere Pump	41,485				
Installation of Clarifier Rehabbed in FY04-05	120,000				
Line Extensions and Rehabilitation of Brooktrails Line for 2005-06	200,000	150,000	150,000	150,000	150,000
Wastewater Treatment Facility Upgrade ⁽¹⁾		243,000	442,000	650,000	650,000
Annual total	440,020	454,535	653,535	861,535	828,435

Source: City Budget 2005

(1) Estimated Debt Service on \$12.4 million USDA loan

Projected Revenues and Expenses

Tables 8 and 9 are projections of revenues and expenses for the five year period. Table 8 is the operating fund, including debt service. Table 9 is the capital fund. The projection assumes that all service charge revenues are initially deposited into the operating fund, and amounts as needed or available are transferred into the capital fund to be used or accumulated for capital improvements.

Table 8 shows recommended service charges per EDU or residential unit for 2006/07 and estimates through 2010/11. The projections indicate that the City should increase the rate to \$383 per EDU in 2006/07, an increase in the residential rate of about 14 percent, and continue to increase the rate at 14 percent per year over the next few years. These rates will put the sewer enterprise on a solid financial footing and provide a transfer of about \$50,000 per year to the capital funds.

Table 8
City of Willits Wastewater Rate Study
Revenue and Expense Projection
Operating Fund

	Estimated		Projected			
	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11
Number of EDUs ⁽¹⁾	2,719	2,744	2,769	2,794	2,819	2,844
Service charge per EDU	\$336	\$383	\$437	\$498	\$567	\$567
Dollars per year		47	54	61	70	0
Percent		14%	14%	14%	14%	0%
Beginning balance ⁽²⁾	677,369	559,400	480,700	409,900	380,500	573,800
Revenues						
Sewer use charge	913,600	1,051,000	1,209,100	1,390,800	1,599,700	1,613,900
Brooktrails sewer user charge	236,800	245,100	253,700	262,600	271,800	281,300
Brooktrails debt service (37.69%)		91,600	166,600	245,000	245,000	245,000
Meadowbrook Manor charge	42,000	47,900	54,600	62,200	70,900	70,900
Interest	38,000	22,400	19,200	16,400	15,200	23,000
Other revenues ⁽³⁾	27,500	28,500	29,500	30,500	31,600	32,700
Total revenues	1,257,900	1,486,500	1,732,700	2,007,500	2,234,200	2,266,800
Expenses ⁽⁴⁾						
Operations and maintenance						
Administration ⁽⁵⁾	274,600	284,200	294,100	304,400	315,000	326,000
Maintenance	126,400	130,800	135,300	139,900	144,900	150,000
Operations	473,700	490,400	507,600	525,300	543,700	562,700
Engineering	75,000	77,600	80,300	83,100	86,100	89,100
Contingencies	14,200	14,200	14,200	14,200	14,200	14,200
Debt service:						
- 4.7 million USDA loan	280,000	280,000	280,000	280,000	280,000	280,000
- 12.4 million USDA loan		243,000	442,000	650,000	650,000	650,000
10% annual reserve contribution		24,300	44,200	65,000	65,000	65,000
Total expenses	1,243,900	1,544,500	1,797,700	2,061,900	2,098,900	2,137,000
Net operating income	14,000	(58,000)	(65,000)	(54,400)	135,300	129,800
Transfer to capital fund	132,000	45,000	50,000	40,000	7,000	86,000
Ending balance - operating fund	559,400	480,700	409,900	380,500	573,800	682,600
Ending balance - capital fund	50,700	51,700	57,800	54,100	50,400	53,300
Total ending balance	610,100	532,400	467,700	434,600	624,200	735,900
Recommended minimum balance ⁽⁶⁾	562,000	596,000	627,000	660,000	682,000	704,000

(1) Since new sewer connections average 30 per year, we assume increase in 25 EDU's per year

(2) Beginning balance for 2005/06 is from Fund Balance 6/30/2005 - "Fund Balance Unreserved/Undesignated"

(3) Other revenues break-up:

Sewer By Products	15,000
Sewer Lateral Installation	6,000
Other Services	6,500
Total	<u>27,500</u>

(4) From Table 6 except for Debt Service

(5) Administration = Total administration expenses less Funded depreciation

(6) 7/12 of annual operating expenses not including debt service

Escalator	3.5%
Interest rate	4.0%

Operating Reserve

Table 8 includes a recommended minimum balance in the sewer fund of 7/12 of annual operating expenses not including debt service. The City collects its sewer service charges on the property tax bill, and thus receives revenues on the property tax cycle. Property taxes are paid in two installments, on December 10 and April 10, and the county transfers revenues to local governments following those payment dates. Thus, the City receives its first sewer service charge revenues of the fiscal year, typically about 60 percent of the annual total, around the end of December, and receives the balance of its annual revenues in late April. However, the City has to pay operating expenses on a relatively even pace throughout the year. Operating expenses typically total 50 to 60 percent of the annual budget by the time any revenues are received.

Table 9
City of Willits Wastewater Rate Study
Revenue and Expense Projection
Capital Fund

	Budget	Projected				
	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11
Beginning balance ⁽¹⁾	206,378	50,700	51,700	57,800	54,100	50,400
Revenues						
Transfer from operating fund	132,000	45,000	50,000	40,000	7,000	86,000
Connection fees ⁽²⁾	144,000	165,500	165,500	165,500	165,500	165,500
Interest	8,300	2,000	2,100	2,300	2,200	2,000
USDA loan proceeds		5,712,100	4,712,100	2,000,000		
Grant proceeds			1,000,000	2,000,000		
Total	284,300	5,924,600	5,929,700	4,207,800	174,700	253,500
Capital improvement expenses ⁽³⁾	440,000	5,923,600	5,923,600	4,211,500	178,400	250,600 ⁽⁴⁾
Ending balance	50,700	51,700	57,800	54,100	50,400	53,300

(1) Beginning balance for 2005/06 is from Fund Balance 6/30/2005 - "Retained Earnings Reserved"

(2) Current sewer connection fee per EDU \$3,000
New connections in 2005/06 48

Recommended sewer connection fee per EDU \$6,620
Average number of new connections per year 25

(3) From Table 12

(4) For the year 2010/11, capital improvement expenses are estimated to be the average of the previous 5 years excluding the wastewater treatment facility upgrade capital project cost

Interest rate 4.0%

The City should maintain a sufficient reserve to cover the first six months of the fiscal year, until revenues are received. The City's projected operating reserve as of June 30, 2005 is about \$677,000. The capital reserve is \$206,000, bringing the total to \$883,000, which exceeds the recommended minimum balance of \$562,000. Total reserves are projected at about \$610,000 by the end of 2005/06 and to drop to \$532,000 by the end of 2006/07 due to capital projects scheduled for the next fiscal years.

Recommended Rates

Table 10 shows the recommended sewer rates for 2006/07 through 2010/11. The recommended residential rate for 2006/07 is \$383 per dwelling unit, an increase of \$47 or 14 percent from the current rate.

Table 10
City of Willits Wastewater Rate Study
Recommended Rates

	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11
Residential						
Service charge per EDU	\$336	\$383	\$437	\$498	\$567	\$567
Nonresidential						
Low strength, per hcf	3.15	3.59	4.09	4.67	5.32	5.32
Domestic strength, per hcf	3.84	4.38	4.99	5.69	6.49	6.49
High strength, per hcf	6.02	6.86	7.82	8.92	10.17	10.17

The rates are based on the following recommendations:

- All residential units, single or multiple, should be 1 equivalent dwelling unit (EDU).
- All customers other than single family residential and multiple residential should be billed based on annualizing the prior year's winter water use—multiplying the December through March water use (4 months) times three.
- The annualized winter water use should be reduced by 10 percent to account for water which does not go the sewer.
- No customer should be less than 1 EDU.
- There should be three basic categories of nonresidential customers, based on wastewater characteristics:
 - Low strength:
 - laundromats, car washes, schools and other institutional customers
 - Domestic strength:
 - office, retail and convenience stores, motels, hospitals, all customers that discharge wastewater which is basically comparable to domestic strength wastewater
 - High strength:
 - restaurants, bakeries, supermarkets, mortuaries.
- Other customer types, not listed here, should be categorized by City staff based on wastewater characteristics. Wastewater loadings can be estimated or determined by sampling.
- All units connected to the sewer system should be billed annually, regardless of their current occupancy.

Impact on Customers

Table 11 shows the impact of the recommended rates on a variety of typical commercial sewer customers. Rates for all commercial categories increase in varying amounts based on their water use and strength category.

Table 11
City of Willits Wastewater Rate Study
Impact of Rates on Sample Customers

Customer	Typical Winter water Use (hcf)	Water use		Current Rates		Proposed Rates		Difference
		Winter	Annual	Rate per hcf	Bill	Rate per hcf	Bill	
Mobile home park	250	562500	708750	\$3.84	\$2,880	\$4.38	\$3,285	\$405
Office	15	33750	42525	\$3.84	\$336	\$4.38	\$383	\$47
Retail	80	180000	226800	\$3.84	\$922	\$4.38	\$1,051	\$130
Laundromat	500	1125000	1417500	\$3.15	\$4,725	\$3.59	\$5,385	\$660
Beauty shop	25	56250	70875	\$3.84	\$336	\$4.38	\$383	\$47
Gas station	70	157500	198450	\$3.84	\$806	\$4.38	\$920	\$113
Restaurant	100	225000	283500	\$6.02	\$1,806	\$6.86	\$2,058	\$252
Restaurant	500	1125000	1417500	\$6.02	\$9,030	\$6.86	\$10,290	\$1,260
Motel	250	562500	708750	\$3.84	\$2,880	\$4.38	\$3,285	\$405
Supermarket	400	900000	1134000	\$6.02	\$7,224	\$6.86	\$8,232	\$1,008

Nonresidential Mixed Use Customers – Blended Strength

Some of the City’s commercial customers have several individual businesses served by a single water meter. This may include different types of businesses, with different wastewater characteristics. The City should charge mixed-use customers on the following basis:

- Commercial on master meters:** If all occupants on a master water meter are office and retail, they should be billed based on volume, at the domestic strength rate. The minimum bill should be 1 EDU—per account, not per occupant (as current practice). Therefore, a building with one water meter and six small offices would be based on water use, with a minimum of 1 EDU, rather than 6 EDUs currently charged as follows:

Volume Charge		Sewer Bill		
Water Use x 90%	Rate per hcf	Charge at Volume Rate	Flat Rate per EDU	Greater of Volume or Flat
50 hcf	\$3.59	\$180	\$383	\$383
150 hcf	\$3.59	\$539	\$383	\$539

- Mixed use on master meter:** If a master meter includes a high or low strength customer, such as a restaurant or laundromat, the City should evaluate the water

use and make a one-time calculation of a strength factor for that account. The City’s determination should be based on a reasonable approach. For example:

Calculation of mixed use strength factor:

Description	Strength Factor		Mixed Use Strength Factor
	User	Share of Water Use	
Dental Office, insurance, barber, office	1.0	50%)	1.35
Restaurant	1.7	50%)	
Two restaurants	1.7	75%)	1.53
Beauty shop	1.0	25%)	
Laundromat	0.8	50%)	1.25
Restaurant	1.7	50%)	

Charge calculation: Strength factor x domestic volume rate x water use x 90%

- **Multiple parcels on one meter:** If multiple parcels with nonresidential uses are served by one water meter, the City should bill the parcel with the meter for sewer based on all of the metered water use, and bill each other parcel 1 EDU.
- **Multiple meters on one parcel:** If one parcel has more than one water meter, the City should sum the usage of the meters and bill the property owner based on the total.

The City should bill such accounts not less than one residential charge per business.

When customers point out potential inequities, the City should work with them to resolve the issues in a practical, simple way, to promote equity in the rates.

PROPOSITION 218

On November 5, 1996, California voters approved Proposition 218, “The Right to Vote on Taxes Act,” an initiative amendment to the California constitution. The amendment establishes both substantive and procedural requirements on “fees imposed as an incident of property ownership.” There is considerable difference in opinion among attorneys about whether sewer service charges are subject to these provisions. These questions will ultimately be settled by the courts, and the answers may not be available for a number of years. In the meantime, Willits and many other local governments in California will have to reach their own conclusions on the practical impact of the proposition.

Substantive Requirements

Proposition 218 imposes the following five substantive requirements for property related fees and charges. If the courts determine that it does apply to sewer service charges, the charges would have to meet these requirements.

1. Revenues from the charge must not exceed the funds required to provide the service.
2. Revenues from the charge must not be used for any other purpose other than that for which it was imposed.
3. The amount of the charge imposed upon any parcel or person as an incident of property ownership must not exceed the proportional cost of the service attributable to the parcel.
4. No charge may be imposed for a service unless that service is actually used by, or immediately available to, the owner of the property in question.
5. No charge may be imposed for general governmental services...In any legal action contesting the validity of a fee or charge, the burden shall be on the agency to demonstrate compliance with these requirements.

These requirements basically make a “cost of service” approach to rates a requirement of the California constitution. The first three requirements also apply under current (i.e. pre-Proposition 218) law, to avoid charges being characterized as taxes.

One issue of particular concern to many cities is that of general fund transfers. The drafters of Proposition 218 hold that such transfers are revenues in excess of the cost of providing a service and/or revenues being applied to a purpose other than that for which the fee was charged. Clearly, transfers which reimburse the general fund for overhead costs are a cost of service of the utility. However, in lieu transfers to compensate the city for the taxes and franchise fees that a private utility would pay are likely to be prohibited if the proposition is determined to apply to water and wastewater fees. This will not affect Willits because the City has no in lieu transfers.

Calculation of the cost of service should include all the City’s costs, including administration, capital outlay, operating and maintenance, conservation programs, maintaining a reasonable reserve, and accumulating funds for capital improvements and replacement. The cost should also include the costs of complying with both the procedural and substantive requirements of Proposition 218.

Requirement 3 will prohibit preferential rates, such as lifeline or senior citizen rates, on property related services. Differences in rates between residential and commercial customers must be based on differences in the cost of service to such customer categories. Rates designed to encourage water conservation such as ascending block rates may be prohibited, unless it can be demonstrated that there are higher costs of service associated with higher water use.

Procedural Rules

Under Proposition 218, in order to impose new or increased fees and charges, the City must:

- Identify the parcels which would be subject to the charge;
- Calculate the amount of the fee to be imposed on each parcel;

- Provide written notice by mail to the record owner of each affected parcel of the amount of the fee, basis of the fee, reason for the fee, and the time and place of a public hearing on the proposed fee or charge.

The City must conduct a public hearing not less than 45 days after mailing the notice. If the agency receives written protests against the proposed fee or charge at the public hearing from a majority of the owners of the identified parcels (one parcel, one vote), the fee or charge may not be imposed.

Impact on Willits' Sewer Enterprise

The recommended rates reflect the cost of serving various types of customers, and comply with the requirements of Proposition 218 and the State's revenue program guidelines for sewer rates. The sewer enterprise pays an allocation of overhead costs, which it should continue to pay. The overhead costs allocated to the sewer enterprise include the costs of City administrative personnel, such as city manager, fiscal officer, city attorney, and city council, all of which provide necessary services to the sewer enterprise. The allocation is calculated annually and assigns an appropriate share of these costs to the sewer enterprise.

The City has no special rate categories, such as senior citizen or low income, which would likely be prohibited by Proposition 218. Such categories should not be considered due to their uncertain legality.

Complying with the procedural rules of the proposition may be difficult for a number of reasons, although it may be easier for sewer than for water:

- Written notice must be provided to the record owner of each parcel. The City collects its sewer service charges on the property tax bill, so it bills the property owner. However, the property tax bills are processed and mailed by the county.

- The amount, basis, and reason for the fee must be included in the notice. Residential sewer bills are flat rate, and the amount of the charge to each property can be determined ahead of time. Nonresidential bills are based on each customer's winter water use for the prior year and will vary from customer to customer. As with water, the notice of proposed sewer charges will probably have to include the proposed rate schedule and the impact on representative customers.

The proposition provides no way for the city council to override a protest, such as to correct urgent health and safety problems. It also includes no restrictions on the City's ability to reconsider increases in fees following a majority protest. If the City believes that fee increases are necessary, in spite of a successful protest, the council can apparently immediately call for and notice a new public hearing on the increased fees.

Implementation

The City has scheduled a rate hearing on the proposed sewer rates on August 22, 2006, in connection with the provisions of Proposition 218. Notices will be mailed to property owners on July 5, 2006.

SEWER CONNECTION FEE STUDY

Introduction

The City of Willits currently provides water and sewer services to about 2,300 customers in and adjacent to the City. Single family residential customers comprise almost 50 percent of accounts served. The sewer system is in need of extensive capital improvements and the City will need to do a wastewater treatment facility upgrade in the near future. Sewer systems are severely depreciated.

This report determines connection fees for new sewer customers. The connection fees calculated in this report are based on the cost and capacity of current and proposed capital facilities. The fees apply to new customers inside the City. The report develops the maximum connection fees that the City can impose. The City also provides sewer services to customers outside the City. Connection fees for these customers can be determined on a case-by-case basis and should reflect the cost of providing capital facilities to serve these customers.

Connection fees are charges to new customers to recover the capital costs for facilities needed to serve growth. City ordinance calls these fees by several terms: hook-up fees, connection charges, and connection fees. Resolution 99-15 terms these fees capital improvement fees. This report uses the term connection fees to refer to these charges, because this term is the one generally used by the City for these fees.

Connection fees recover costs for future projects that must be constructed to serve new growth, as well as the costs of capacity in existing facilities that will benefit and serve new customers. The fees must be reasonable and non-arbitrary, and based on facility capital costs, user loads, and system capacity. A variety of methods may be used to determine the appropriate connection fee.

In addition to paying connection fees, new customers connecting to the sewer systems must pay a number of other fees prior to receiving service. New sewer customers must pay a lateral sewer installation charge and other permit and special fees.

California Government Code Section 66013 deals with sewer connection fees or capacity charges. It states that such fees or charges shall not exceed the estimated reasonable cost of providing the service for which the fees or charges are imposed, unless a question regarding the amount of the fee or charge imposed in excess of the estimated reasonable cost of providing the services is submitted to the electorate and approved by two-thirds of the vote cast.

The Government Code defines two types of charges for new customers connecting to a sewer system: capacity charges and connection charges. Capacity charges are charges for capital facilities which benefits a new customer. These are the connection fees developed in this report. Connection fees are charges for the physical facilities necessary to make a sewer connection, such as *meters, meter boxes, and pipelines*, which do not exceed the reasonable cost of labor and materials for the connection. These are the lateral sewer installation charges and other permit and special fees listed above. A new customer pays both types of charges.

Current Sewer Connection Fees

City of Willits is charging \$3,000 per EDU for the sewer connection fees. Bartle Wells Associates had conducted a connection fee study in December 1999 and recommended a charge of \$3,230 per single family residence or EDU for the sewer connection fee.

Updates were recommended every year based on the ENR Construction Cost Index, U.S. California or regional consumer price index and interest rate & borrowing costs.

Following is the table showing the new sewer connections each year since fiscal year

2000/01:

City of Willits
New Sewer Connection

<u>Fiscal Year</u>	<u>New connections</u>
2000/01	44
2001/02	16
2002/03	53
2003/04	22
2004/05	13
2005/06	48
Average	30

The new sewer connections every year in the City have been inconsistent. The average equals 30 new connections per year.

Connection Fee Alternatives

Connection fees can be developed on a variety of bases, including the following approaches:

- **Replacement Cost:** Replacement cost is the cost of replacing the current system divided by system capacity. It is the average cost per unit of capacity for constructing the current system. The current system replacement cost can be estimated by adjusting the original construction/acquisition cost of system components according to the Engineering News-Report (ENR) Construction Cost Index. This method is appropriate for fully developed systems.
- **Marginal Cost:** Marginal cost per unit is calculated by dividing expansion costs by expansion capacity. Expansion costs can include projected capital expenditures for expansion projects as well as costs for current facilities that have capacity to accommodate growth. This method is appropriate for systems anticipating significant expansion and growth.
- **Annual Revenue Requirement:** The annual revenue requirement for expansion-related capital, such as the expansion-related share of debt service, is divided by the anticipated new connections expected each year. We do not recommend this method because growth rates are too unpredictable to provide a reliable revenue stream.
- **Average Cost:** The average cost approach combines the replacement cost and marginal cost methods. Under this approach, the costs of old and new construction is divided by the total capacity of the system, including new construction projects. This method recognizes both historical and future costs.

We recommend that the City's connection fees be based on the average cost approach. Under this approach, the total cost of all facilities, existing, under construction, and future, is divided by the total system capacity in terms of residential units that the system can serve. This yields an average cost per residential customer or equivalent. Interest on debt used to finance capital facilities is included in total system cost because it is an element of the cost of constructing facilities.

Capital Improvement Program

Table 12 lists sewer fund capital improvement projects anticipated over the next ten years. The table shows projects in the City's five-year capital improvement program as well as other capital improvements projected through FY 2009/10. Each year, the City prepares a five-year capital improvement program (CIP) as part of its budget process. Through FY 2009/10, the City expects to spend about \$16.6 million on sewer system capital improvements needed for current and future customers.

Table 12
City of Willits Sewer Connection Fee
Sewer Fund Capital Improvement Program

	2005/06	2006/07	2007/08	2008/09	2009/10	Total
Building for Office and Equipment (\$225,000 @ 4.5% for 10 yrs.)	28,435	28,435	28,435	28,435	28,435	142,175
Loader/Brush Cutter Lease Purchase (current year portion)	27,525	27,525	27,525	27,525		110,100
Pick Up Truck (\$20,000 @ 4.5% for 5 yrs.) - current year portion	5,575	5,575	5,575	5,575		22,300
(2) #3 Water Pumps	12,000					12,000
Chlorine Residual Analyzer	5,000					5,000
Portable John Deere Pump	41,485					41,485
Installation of Clarifier Rehabbed in FY04-05	120,000					120,000
Line Extensions and Rehabilitation of Brooktrails Line for 2005-06	200,000	150,000	150,000	150,000	150,000	800,000
Wastewater Treatment Facility Upgrade ⁽¹⁾		5,712,100	5,712,100	4,000,000		15,424,200
Annual total	440,020	5,923,635	5,923,635	4,211,535	178,435	16,677,260

Source: City Budget 2005

(1) Included the Wastewater Treatment Facility Upgrade Project Cost phased over 2006/07, 2007/08 and 2008/09

Value of Existing Facilities

Existing sewer system facilities were built to serve current and future customers. Table 13 is a schedule of long-term fixed assets of the sewer system. The table shows each asset's acquisition date, estimated life, cost, and accumulated depreciation as of June 30, 2005. The table also calculates each asset's depreciated value and current value.

Facilities listed are still in use and provide capacity to serve growth. The schedule does not include facilities with a useful life of less than five years or fully depreciated facilities still in use.

The depreciated value for the facilities listed totals about \$7.6 million. The current value of these facilities is estimated by adjusting each asset's depreciated value by the change in the ENR construction cost index from its acquisition date to the December 2005 ENR-CCI, San Francisco index of 8462.45. The current adjusted value of the facilities listed totals about \$11.1 million.

Table 13
City of Willits Sewer Connection Fee
Sewer Fund Fixed Assets

Capital Component	Date Acquired	Est. Life (yrs)	Cost/ Basis	Accumulated Depreciation 6/30/2005	Depreciated Value	ENR Index as of Acquisition Date	Estimated Value December 2005 (ENR=8462.45)*
Above ground improvements	7/1/1979	60	2,117,190	917,459	1,199,731	3,806	2,667,444
Buildings & Improvements	7/1/1979	45	557,703	322,221	235,482	3,806	523,563
Brwn/Caldwell Xtra Impvt	7/1/1980	60	78,000	32,500	45,500	4,388	87,752
Impvts (EPA Audit)	1/26/1982	40	471	275	196	4,994	332
Sewer Plant Expansion	6/1/1983	45	112,069	52,293	59,776	5,123	98,746
Sewer Upgrade (final pmnt)	12/1/1985	45	2,026	878	1,148	5,055	1,922
Infiltration	6/30/1988	20	18,063	15,355	2,708	5,734	3,996
Sewer Plant Improvements	6/30/1988	20	64,237	54,603	9,634	5,734	14,217
Construction in Process	7/1/1987	20	20,021	16,016	4,005	5,732	5,912
Land	7/1/1987	0	75,000	0	75,000	5,732	110,719
Gorman Portable Pump 4"	4/30/1989	15	6,722	672	6,050	5,933	8,630
1990/91:							
McKinley Street Design IN PROCESS	11/3/1990	50	3,753	0	3,753	6,056	5,245
Creek Weir-design & const	10/24/1990	40	14,947	5,482	9,465	6,056	13,227
Concrete slab-chlorine basin	4/2/1991	45	5,168	1,628	3,540	6,222	4,815
Sewer line extension-Harrah	10/23/1974	40	18,000	13,950	4,050	2,509	13,663
1991/92:							
100-1 Dilution Monitoring Tower	2/1/1992	20	4,593	2,757	1,836	6,295	2,468
Flowmeter Flo-Tote (4) FmHA	12/31/1991	20	24,982	16,863	8,119	6,222	11,042
Lift Gate Valve Operator (Effluent)	7/1/1992	15	18,914	15,132	3,782	6,295	5,084
Pipe insulation	1/1/1992	15	6,561	5,903	658	6,295	885
Painting	1/1/1992	15	14,093	12,687	1,406	6,295	1,890
Comminutor	1/1/1992	15	15,135	13,621	1,514	6,295	2,035
Road Paving	1/1/1992	15	12,604	11,342	1,262	6,295	1,697
1992/93:							
Sulfinator	10/1/1992	15	6,176	5,250	926	6,295	1,245
Irrigation pump	1/1/1993	15	25,298	20,241	5,057	6,478	6,606
Elec control gate	4/1/1993	15	2,533	2,069	464	6,478	606
Effluent gate	1/1/1993	15	18,921	15,135	3,786	6,478	4,946
Paint chlorine room	8/1/1992	15	985	849	136	6,295	183
1993/94:							
Brooktrails meter & data log	11/1/1993	15	3,745	2,913	832	6,478	1,087
Chlorine Induction Unit	7/1/1995	15	6,722	4,929	1,793	6,558	2,314
McKinley Street (bal finished with FmHA)	6/30/1994	50	8,691	1,913	6,778	6,530	8,783
5/1/94 FmHA interest payment	6/30/1994	50	105,152	23,133	82,019	6,530	106,286
FmHA sewer project	6/30/1994	50	5,362,578	1,179,765	4,182,813	6,530	5,420,360
SE Annexation-FmHA WIP	6/30/1994		7,999	0	7,999	6,530	10,366
1994/95:							
Propane heater	5/1/1995	15	4,862	3,295	1,567	6,558	2,022
Sluice gates for storm pond	11/1/1994	40	10,210	2,722	7,488	6,530	9,703
Wire marker machine	6/1/1995	15	1,046	704	342	6,558	441
Power logger & attachments	4/1/1995	20	4,804	2,461	2,343	6,558	3,023
Concrete pad for emergency generator	11/1/1994	20	1,175	623	552	6,530	715
1995/96:							
Service Analyzer	9/18/1995	10	1,223	124	1,099	6,558	1,418
Onolog Chlorine Induction Unit	10/31/1995	15	2,604	1,681	923	6,558	1,191
Polyblend Unit	10/31/1995	15	4,878	3,142	1,736	6,558	2,240
Cast Iron Irrigation Pump with Motor	11/15/1995	15	5,408	3,454	1,954	6,558	2,521
Fairbanks Electric Motor	11/30/1995	10	9,568	9,170	398	6,558	514
Koch Mixer	12/29/1995	15	1,698	1,072	626	6,558	808
SE Annex Design WIP	3/15/1996		12,279	0	12,279	6,550	15,865
SE Annex Design WIP	4/15/1996		9,107	0	9,107	6,550	11,767
Raw Sewage Pump- Chicago in use	1/1/1996	15	5,090	3,224	1,866	6,550	2,411
SE Annex Design-Harris WIP	5/15/1996		3,667	0	3,667	6,550	4,738
Tripod Winch & Harness	6/15/1996	20	2,029	406	1,623	6,550	2,097
Storage Container	6/28/1996	10	3,054	2,138	916	6,550	1,184
Sprayfield Expansion	6/24/1996		179,148	0	179,148	6,550	231,469
94-95 FmHA WIP Capitalized	6/30/1994	50	30,748	6,765	23,983	6,530	31,079

Table 13
City of Willits Sewer Connection Fee
Sewer Fund Fixed Assets

Capital Component	Date Acquired	Est. Life (yrs)	Cost/Basis	Accumulated Depreciation 6/30/2005	Depreciated Value	ENR Index as of Acquisition Date	Estimated Value 6/30/2005 (ENR=8462.45)*
1996/97:							
Land-State of California	7/31/1997		794	0	794	6,731	998
FMHA-WIP Prior to 7/1/97 Capitalized	2/14/1997	40	89,333	18,798	70,535	6,731	88,679
S. E. Annexation - Phase I from 409	2/14/1997	40	327,349	68,909	258,440	6,731	324,920
Chlorine A Vacuum Unit	4/4/1997	10	5,799	4,640	1,159	6,731	1,457
Toshiba 25hp 460 volt pumps (2)VFD's	6/16/1997	10	7,121	5,697	1,424	6,731	1,790
1997/98:							
Replacement of Raw Sewage Pump	6/30/1998	15	6,647	3,102	3,545	6,846	4,382
Sewer Line from 409-S.E. Annex II	1/1/1998	40	84,112	15,771	68,341	6,846	84,482
S.E. Annex. Phase II - Capitalized	3/1/1998	40	376,931	67,666	309,265	6,846	382,310
1998/99:							
Cement Pad for Washer/Compactor	6/30/1999	15	2,484	993	1,491	6,817	1,851
Sewer Jet Purchase	11/16/1998	10	76,474	50,346	26,128	6,846	32,299
Reclaimed water pump	5/27/1999	15	5,017	2,035	2,982	6,817	3,702
Raw Sewage Pump	7/15/1998	15	6,647	3,102	3,545	6,846	4,382
1999/00:							
Emergency Creek Repairs	6/23/2000	20	13,671	3,418	10,253	7,448	11,650
Co-Gen WIP&new-net PGE \$1,500 refu	8/1/1999	25	39,253	9,289	29,964	6,817	37,198
Dump trailer	12/10/1999	10	5,277	2,946	2,331	6,817	2,894
Remodel Chemical Storage Facility	3/1/1999	15	3,569	1,269	2,300	6,817	2,855
Chemical Induction Unit	1/31/2000	10	6,254	3,388	2,866	7,448	3,256
VFD - Irrigation	6/30/2000	15	19,296	6,432	12,864	7,448	14,616
VFD - Raw Sewage	12/15/1999	15	4,344	1,617	2,727	6,817	3,385
2000/01:							
Sprayfield Development	6/15/2001	40	30,233	3,024	27,209	7,399	31,119
Remodel-Chemical Storage Facility	11/30/2000	30	13,686	2,090	11,596	7,448	13,175
Capitalize Pump	7/21/2001	5	2,199	1,760	439	7,399	502
VFD-Irrigation	4/16/2001	20	16,611	3,530	13,081	7,399	14,961
Emergency Pump Repair	4/16/2001	20	8,024	1,704	6,320	7,399	7,228
Emergency Creek Repairs	8/16/2000	20	8,274	1,757	6,517	7,448	7,405
2001/02:							
Bartley Pump	11/16/2002	5	4,255	2,908	1,347	7,645	1,491
Sears-Garden Tractor/Mower	8/15/2001	5	3,942	3,020	922	7,399	1,055
2002/03:							
Chemical Room Remodel	6/30/2003	5	3,484	1,394	2,090	7,789	2,271
Engineering & Design-Underground	7/17/2002	10	581	174	407	7,645	451
Engineering & Design-Underg.-Capitaliz	7/1/2002	20	199,505	29,926	169,579	7,645	187,720
Sprayfield Develop 01-02	7/1/2002	40	16,006	1,200	14,806	7,645	16,390
Brooktrails Meter Station - Capitalize	7/1/2002	20	11,755	1,764	9,991	7,645	11,060
Sludge Trailer	3/31/2003	20	89,541	10,073	79,468	7,789	86,341
Pickup Truck - 50%	9/16/2002	7	8,284	3,156	5,128	7,645	5,677
Camera System	3/31/2003	10	6,896	1,551	5,345	7,789	5,807
Chlor A Vac Unit	4/15/2003	10	15,880	3,573	12,307	7,789	13,371
2003/04:							
Pump Tank Pad & Piping	6/30/2004	15	5,300	353	4,947	8,228	5,088
ChemRoom Remodel	6/1/2004	30	5,131	185	4,946	8,228	5,087
Line Extensions	3/1/2004	30	10,116	449	9,667	8,228	9,942
Sludge Trailer	8/1/2003	20	358	42	316	7,789	343
Pump Repair	6/30/2004	5	2,261	452	1,809	8,228	1,860

Table 13
City of Willits Sewer Connection Fee
Sewer Fund Fixed Assets

Capital Component	Date Acquired	Est. Life (yrs)	Cost/Basis	Accumulated Depreciation 6/30/2005	Depreciated Value	ENR Index as of Acquisition Date	Estimated Value 6/30/2005 (ENR=8462.45)*
2004/05:							
Hwy 101 Line extension/repair	2/15/2005	30	5,235	65	5,170	8,462	5,170
Low Metering/Monitoring	2/15/2005	5	3,661	275	3,386	8,462	3,386
ATV 4 Wheeler	5/13/2005	5	9,884	247	9,637	8,462	9,637
Clarifier Upgrade	1/31/2005	10	56,259	2,344	53,915	8,462	53,915
Sprinkler/Irrigation Guns (A/P item)	6/30/2005	15	34,160	0	34,160	8,462	34,160
Sewer Main Lining (A/P item)	8/30/2005	10	29,000	0	29,000	8,462	29,000
Totals			10,712,840	3,232,369	7,557,537		11,121,373

* December 2005 ENR-CCI, San Francisco
Source: City of Willits, ENR-CCI, San Francisco adjusted by Bartle Wells Associates

Interest on Debt

In 1993/94, the City borrowed about \$4.7 million to finance sewer collection system capital projects. Table 14 shows a schedule of annual interest and principal payments. Debt service payments will total about \$11.1 million through maturity in FY 2033/34. Of this, the City will incur a total expense of about \$6.4 million in interest payments through the full term.

Table 14
City of Willits Sewer Connection Fee
Sewer Fund Debt Service - \$4,710,000 Loan

Fiscal Year Ending	Interest	Principal	Total
1994	105,152	0	105,152
1995	240,363	40,000	280,363
1996	238,313	40,000	278,313
1997	236,263	40,000	276,263
1998	234,085	45,000	279,085
1999	231,779	45,000	276,779
2000	229,344	50,000	279,344
2001	226,781	50,000	276,781
2002	224,091	55,000	279,091
2003	221,272	55,000	276,272
2004	218,325	60,000	278,325
2005	215,250	60,000	275,250
2006	212,047	65,000	277,047
2007	208,588	70,000	278,588
2008	205,000	70,000	275,000
2009	201,284	75,000	276,284
2010	197,312	80,000	277,312
2011	193,084	85,000	278,084
2012	188,600	90,000	278,600
2013	183,860	95,000	278,860
2014	178,863	100,000	278,863
2015	173,609	105,000	278,609
2016	168,100	110,000	278,100
2017	162,335	115,000	277,335
2018	156,313	120,000	276,313
2019	150,035	125,000	275,035
2020	143,500	130,000	273,500
2021	136,581	140,000	276,581
2022	129,278	145,000	274,278
2023	121,590	155,000	276,590
2024	113,518	160,000	273,518
2025	105,062	170,000	275,062
2026	96,094	180,000	276,094
2027	86,741	185,000	271,741
2028	77,003	195,000	272,003
2029	66,753	205,000	271,753
2030	55,991	215,000	270,991
2031	44,588	230,000	274,588
2032	32,544	240,000	272,544
2033	19,988	250,000	269,988
2034	6,791	265,000	271,791
Total	6,436,070	4,710,000	11,146,070

In 2006/07, the City is going to borrow about \$12.4 million for the wastewater treatment facility upgrade capital project. Table 15 shows an approximate schedule of annual interest and principal payments. Debt service payments will total about \$26.0 million through maturity in FY 2045/46. Of this, the City will incur a total expense of about \$13.6 million in interest payments through the full term.

Table 15
City of Willits Sewer Connection Fee
Sewer Fund Debt Service - \$12,400,000 Loan

Fiscal Year Ending	Interest	Principal	Total
2007	527,000	122,988	649,988
2008	521,773	128,215	649,988
2009	516,324	133,664	649,988
2010	510,643	139,345	649,988
2011	504,721	145,267	649,988
2012	498,547	151,441	649,988
2013	492,111	157,877	649,988
2014	485,401	164,587	649,988
2015	478,406	171,582	649,988
2016	471,114	178,874	649,988
2017	463,512	186,476	649,988
2018	455,587	194,401	649,988
2019	447,325	202,664	649,988
2020	438,711	211,277	649,988
2021	429,732	220,256	649,988
2022	420,371	229,617	649,988
2023	410,612	239,376	649,988
2024	400,439	249,549	649,988
2025	389,833	260,155	649,988
2026	378,777	271,211	649,988
2027	367,250	282,738	649,988
2028	355,234	294,754	649,988
2029	342,707	307,281	649,988
2030	329,647	320,341	649,988
2031	316,033	333,955	649,988
2032	301,840	348,148	649,988
2033	287,043	362,945	649,988
2034	271,618	378,370	649,988
2035	255,537	394,451	649,988
2036	238,773	411,215	649,988
2037	221,297	428,691	649,988
2038	203,077	446,911	649,988
2039	184,084	465,904	649,988
2040	164,283	485,705	649,988
2041	143,640	506,348	649,988
2042	122,120	527,868	649,988
2043	99,686	550,302	649,988
2044	76,298	573,690	649,988
2045	51,916	598,072	649,988
2046	26,498	623,490	649,988
Total	13,599,521	12,400,000	25,999,521

Sewer Connection Fee Calculation

Table 16 calculates a new sewer connection fee based on the average cost approach discussed earlier: total capital investment divided by total capacity in equivalent dwelling units (EDUs). An EDU is a unit of measurement that represents the wastewater discharge of a standard single family residence. The City's capacity in the sewer system will serve 7,230 EDUs. Brooktrails owns 37.69 percent of the capacity, and its share is not included in this calculation.

As shown on Table 16, the City's capital investment in the sewer system totals about \$47.83 million. This yields a connection fee of \$6,620 per EDU. The connection for nonresidential customers can be calculated by multiplying each customer's EDU assignment by the charge per EDU. The City determines a customer's EDU assignment based on wastewater flow and loadings.

Table 16
City of Willits Sewer Connection Fee
Connection Fee Calculation

Capital Investment	
Capital Improvement program (Table 12)	16,677,300
Fixed assets (Table 13)	11,121,373
Interest on debt \$4.71 million (Table 14)	6,436,070
Interest on debt \$12.4 million (Table 15)	13,599,521
 Total capital investment	 47,834,264
System capacity	
Average residential wastewater flow in gpd ⁽¹⁾	180
Treatment plant capacity (gpd)	1,300,000
EDUs of capacity	7,230
 Connection fee per EDU	 \$6,620

(1) At 90% of winter water use

ACCOUNTING FOR AND ADJUSTING CONNECTION FEES

Accounting for Connection Fees

The Government Code specifies the following procedures for the deposit, investment, accounting, and expenditure of connection fees:

- The City must deposit the charges in a separate fund or account and avoid commingling them with its other moneys, except for investment purposes. Interest earned on the fund accrues to the fund.
- For fees collected after December 31, 2006, the City must make available to the public, within 180 days of the end of the fiscal year, the following information:
 - Description of charges deposited in the fund.
 - Beginning and ending balance of fund and interest earned.
 - Amount of charges collected within the fiscal year.
 - Identification of the following:
 - Each public improvement on which charges were spent and amount spent on each improvement, including percentage from connection charges if other funds were also used.
 - Each public improvement on which charges were expended that was completed within the year.
 - Each public improvement that is expected to be undertaken in the following fiscal year.
 - Description of each interfund transfer or loan made from the capital facilities fund, including public improvements on which the transferred moneys are or will be expended, date the loan will be repaid, and interest to be earned by capital facilities fund.

These requirements to maintain connection charges in a separate account and make annual reports do not apply to money received pursuant to a development or reimbursement agreement, charges used to pay debt service or collected under a bond indenture, or charges to reimburse advances made under a prior reimbursement agreement.

Adjusting Connection Fees

Connection fees should be adjusted regularly to prevent the charges from falling behind the costs of constructing new facilities. Several methods can be used to adjust the connection fees, including:

- ENR Construction Cost Index: ENR (Engineering News-Record) magazine publishes construction cost indices monthly for 20 major U.S. cities including San Francisco. These indices can be used to estimate the change in the construction cost of facilities. If the ENR Index has increased by three percent since the last connection fee adjustment, the connection fee should be increased by three percent.
- U.S., California, or regional consumer price index.
- Interest rate and borrowing costs: The interest and borrowing costs for debt issued to finance water or sewer capital projects can be added to the connection fee annually.

We recommend that the City adjust its connection fees annually by the change in the ENR Construction Cost Index, San Francisco. This is the most appropriate index because it directly reflects construction costs. Suggested language for implementing this policy is:

Each year, commencing on ___(m/d/y)___ and continuing thereafter on each ___(m/d)___, the connection fee shall be adjusted by an increment based on the change in the Engineering News Record Construction Cost Index, San Francisco over the prior year.

However, the City Council may at its option determine, by resolution adopted prior thereto, that such adjustment shall not be effective for the next succeeding year, or may determine other amounts as appropriate.

Connection fees should also be reviewed in detail when updated information, such as a revised master plan or capital improvement program, is obtained, but not less than every five years.