

## CHAPTER 3

### DEVELOPMENT OF CAPACITY CHARGES

In this chapter the capacity charges are calculated using the marginal (incremental) method described in Chapter 1. These calculations were performed for the following alternatives:

- In the first alternative the portion of the CIP allocable to new customers (\$176,575,450) was recovered over the flow, BOD and TSS capacity added by the CIP. No consideration was given to the recovery of financing costs.
- The second alternative is the same as the first alternative except that the total debt service interest cost allocable to new customers for each of the bond issues was added to the portion of the CIP allocable to new customers.
- The third alternative is the same as the first alternative except that the present value of the total debt service interest costs allocable to new customers for each of the bond issues was added to the portion of the CIP allocable to new customers.

Specifically, three alternative capacity charge calculations were made; one excluding interest costs (presented for comparison purposes) and two alternatives which recover interest costs using different methods.

#### **Equivalent Dwelling Unit Capacity Charges**

Using the unit costs of service developed in Chapter 2, the capacity charges for a single family Equivalent Dwelling Unit (EDU) were developed in Table 3.1 for Alternative 1 which excludes financing costs.

The wastewater discharge characteristics for an EDU are based on single family residential flow and concentration averages of 290 gpd, 200 mg/l of BOD and 200 mg/l of TSS. The average flow value was developed by the City as shown in Appendix E. The concentrations of 200 mg/l for both BOD and TSS were also provided by the City staff and were based on measurements of residential wastewater strength gathered in 2003. These concentrations are consistent with the midpoint of the range suggested by the State Water Resources Control Board Revenue Program Guidelines as shown in Table G-6 of the Guidelines and the same as the values used by Brown and Caldwell in a Wastewater Rate Study conducted for the City in 1998.

The flow and concentration averages for an EDU are combined with the unit costs derived in Table 2.13 to calculate the EDU capacity charge for 2006 as shown in Table 3.1. This charge is escalated by the percentage increase in the *Engineering News Record* San Francisco Construction Cost Index to determine the FY 2007 EDU capacity charge.

We have escalated the CIP in order to calculate escalated capacity charges in succeeding years. As a consequence the City may adopt the charges developed for

a particular period of time (for example, five years) or the City may wish to adopt the FY 2007 charge and recalculate the charges in subsequent years by using the actual inflationary change as indicated by a particular index such as the *Engineering News Record* (ENR) 20-City Construction Cost Index (CCI), the ENR CCI for San Francisco, the Consumer Price Index (CPI), the Implicit Price Deflator, etc. These inflation indices are applied to the capital costs only (not the interest costs). We have merely incorporated the escalation of costs so as to illustrate, approximately, what the charge may look like in the future.

We have used the particular cost escalation value of 5.0 percent per annum for the remaining years because that has been the approximate average annual increase over the last four years for both the *Engineering News Record* 20-City CCI and the Implicit Price Deflator for State and Local Government Purchases used by the State of California Department of Finance. We have shown these two particular indices because the former is a readily available and popular measure of construction cost inflation and because the latter is explicitly mentioned in State of California Government Code Section 54999.3 which pertains to the calculation of capacity charges.

The Consumer Price Index (from the U.S. Department of Labor) is included because it is the most widely mentioned index of cost inflation. We do not, however, recommend its use as a measure of construction cost inflation. It is basically a measure of consumer price increases. Actual annual values for 2001 through 2005, and the projected 2006 values, for each index are summarized in Table 3.2.

The capital costs for succeeding years were determined by escalating CIP costs to account for inflation. The escalation values are 7.9 percent for FY 2007 and 5.0 percent per annum for the remaining years. These inflated capital costs are calculated in Table 3.3. The results of inflating capital costs for FY 2007 are summarized in the table below:

**Summary of FY 2007 Unit Cost Development from Table 3.3**

<u>Category</u>	<u>Amount</u>	<u>Unit Costs</u>	<u>Equivalent Dwelling Unit (EDU) Flow &amp; Loading</u> <sup>1</sup>	<u>FY 2006 EDU Capacity Charge</u> <sup>2</sup>	<u>ENR CCI-SF Index</u> <sup>3</sup>	<u>FY 2007 EDU Capacity Charge</u> <sup>2</sup>
Flow	\$8.111	per gpd	290 gpd	\$2,352	7.9%	\$2,538
BOD	\$748.792	per lb-day	0.484 lbs-day	\$362	7.9%	\$391
TSS	\$198.965	per lb-day	0.484 lbs-day	\$96	7.9%	\$104
Total	-		-	\$2,811		\$3,033

**Notes:**

- EDU loads for BOD and TSS are based on the general formula shown below:  
 $flow \text{ (in mgd)} \times concentration \text{ (in mg/l)} \times conversion \text{ factor} = pounds/day$   
 Concentrations for BOD and TSS are 200 mg/l. The conversion factor is 8.34.
- Amounts are rounded to the nearest whole dollar.
- The projected increase in the *Engineering News Record* Construction Cost Index-San Francisco from June 2006 (index = 8441) to December 2006 (index = 9108.66).

The unit costs developed in Table 3.3 do not yet include interest costs. As a consequence, the percent increase in capital costs is the same as the percent increase in unit costs.

Table 3.4 presents the calculation of EDU capacity charges for the period FYs 2007-2011. In addition, the calculation for a sample restaurant (commercial customer class group 4) has been illustrated.

### **Projected New Connections (Growth)**

In order to project the annual revenues from the capacity charges it was necessary to project the annual number of EDU connections until build out. Based on extensive discussions with City staff, the following assumptions were made regarding growth in EDU connections:

- **FY 2006 – FY 2011.** The numbers of EDUs connecting during this time period subject to both current and new (proposed) capacity charges were developed in a Modesto Public Works Department Memorandum dated November 15, 2006. This Memorandum is included in Appendix F. The number of estimated EDU connections subject to current fees (5,828) plus the number of EDU connections per year subject to new capacity charges (6,539) totals 12,367.
- **FY 2012 – FY 2049.** The number of EDUs connecting during this time period is based on General Plan growth estimates.

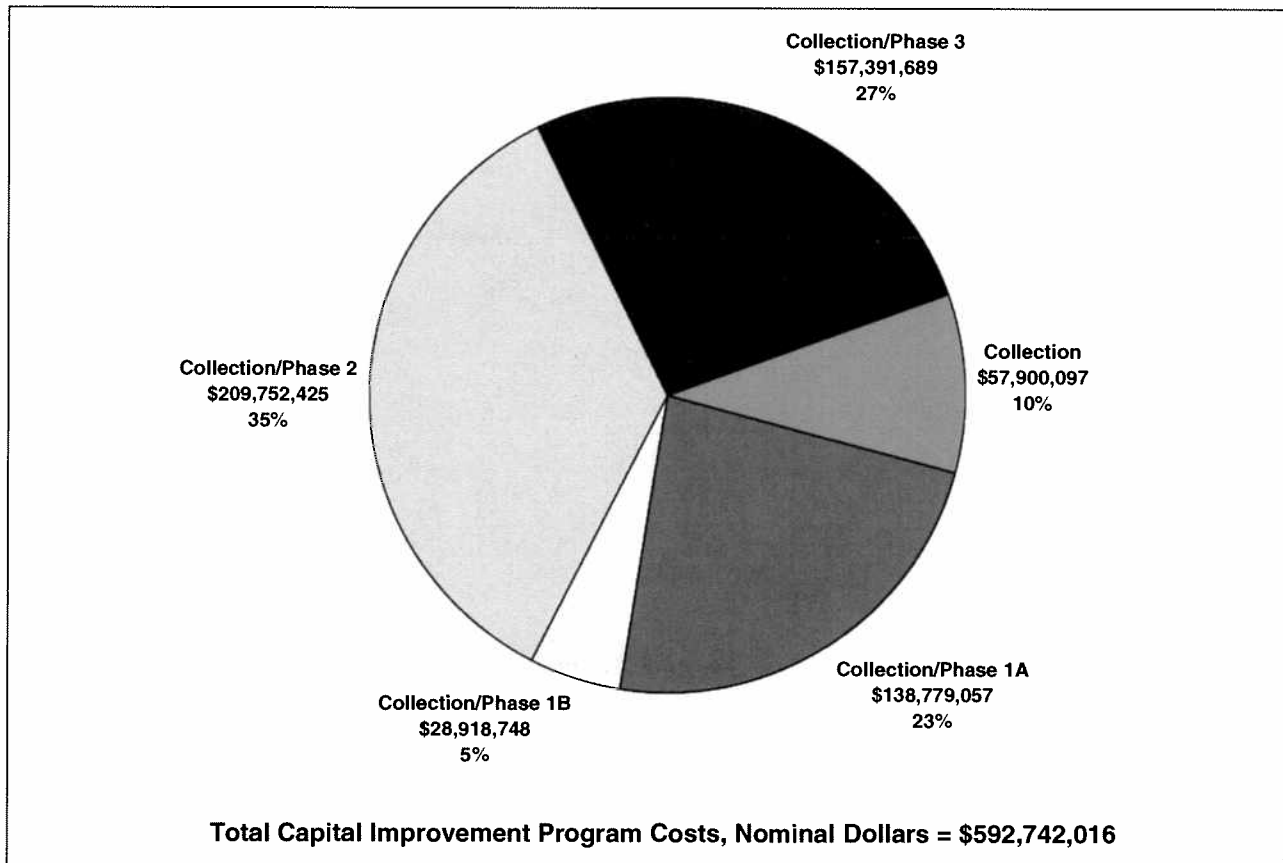
The projected total number of EDUs connecting during the entire study period is 54,138, which is the amount of capacity added by the CIP. The projected annual number of EDUs connecting during FY 2006 through FY 2049 is presented in Table 3.5. These projections are used to project revenues from capacity charges (for Alternative 1 which excludes interest cost recovery) in Table 3.6.

### **Financing Costs**

In addition to the estimated cost of the CIP allocable to new customers, the allocable share of the cost of financing the CIP should also be included in the costs to be recovered via the capacity charge. Table 3.7 shows the calculation of the total estimated costs of the various debt issues. Five debt issues are assumed in years 2008, 2009, 2010, 2012 and 2020.

For simplicity we have assumed the sum of the various series of bond debt issues is equal to the cost of the CIP, in nominal dollars, plus three percent in debt issuance costs. The CIP in nominal dollars, by phase, is shown in Figure 3.1. Nominal dollars are current dollars escalated by the projected annual rate of inflation.

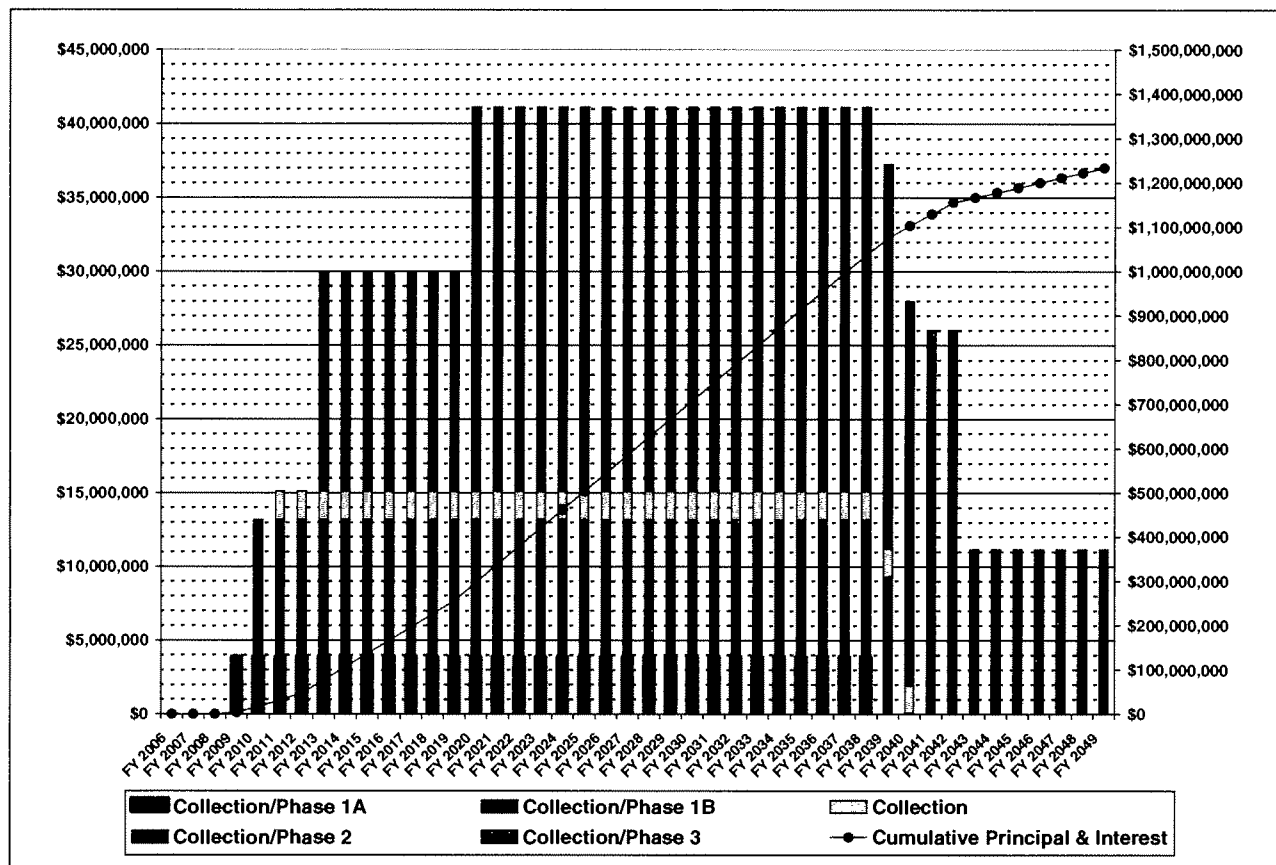
**Figure 3.1 CIP, Nominal Dollars**



In addition, a 30 year term has been assumed for each series. A 5.0 percent interest rate for the first three series (2008, 2009 and 2010) and a 5.5 percent interest rate for the last two series (2012 and 2020) have been assumed. These assumptions were made by the City’s Financial Advisor. Finally, based on the allocations in the Carollo Engineers draft report, about 42.0 percent of the financing costs are allocable to new customers. This is merely the percentage of total costs allocable to new customers (\$176.6M/\$420.5M).

Table 3.8 presents the annual debt service (principal and interest) for each series for the period FY 2009 – 2049 and the amounts allocated to both existing customers and new connections. FY 2049 is the last year of debt service on the last series issued in FY 2020. Total debt service in each year and the cumulative total are shown in Figure 3.2.

Figure 3.2 Projected New Debt Service



In the calculation of capacity charges, the financing cost (interest) is often merely added in a single lump sum to the cost of the CIP. We have calculated the unit costs and the associated capacity charges for an EDU under this alternative (Alternative 2) in Table 3.9. Table 3.10 summarizes the capacity charge for an EDU and a sample restaurant for the period FYs 2007 – 2011. Table 3.11 presents the calculation of the annual revenues recovered under this alternative.

As was discussed in Chapter 1, this alternative does not take into account the time value of money. That is, the entire interest cost over the life of the debt is merely added to the CIP cost. To account for the time value of money, we developed another alternative that uses the present value of the interest.

Because the interest payments will be made in the future they will be paid with dollars reduced in value by inflation. In addition, the City will have the use of funds from capacity charge collections until they have to make bond debt service payments. These funds can be invested and earn interest. Therefore, to calculate the present value of the interest portion of the debt service payments we have discounted the annual interest payment. The discount rate used (4.85 percent) in the present value calculation was provided by the City’s Financial Advisor.

Table 3.12 presents the present value of annual debt service (principal and interest) for each series for the period FY 2009 – 2049 and the amounts allocated to both existing customers and new connections.

Tables 3.13 (unit costs and capacity charges for an EDU), 3.14 (FY 2007 – 2011 projected capacity charges for an EDU and for a restaurant), and 3.15 (projected revenue from capacity charges) summarize the results for Alternative 3 which includes the present value of total interest costs.

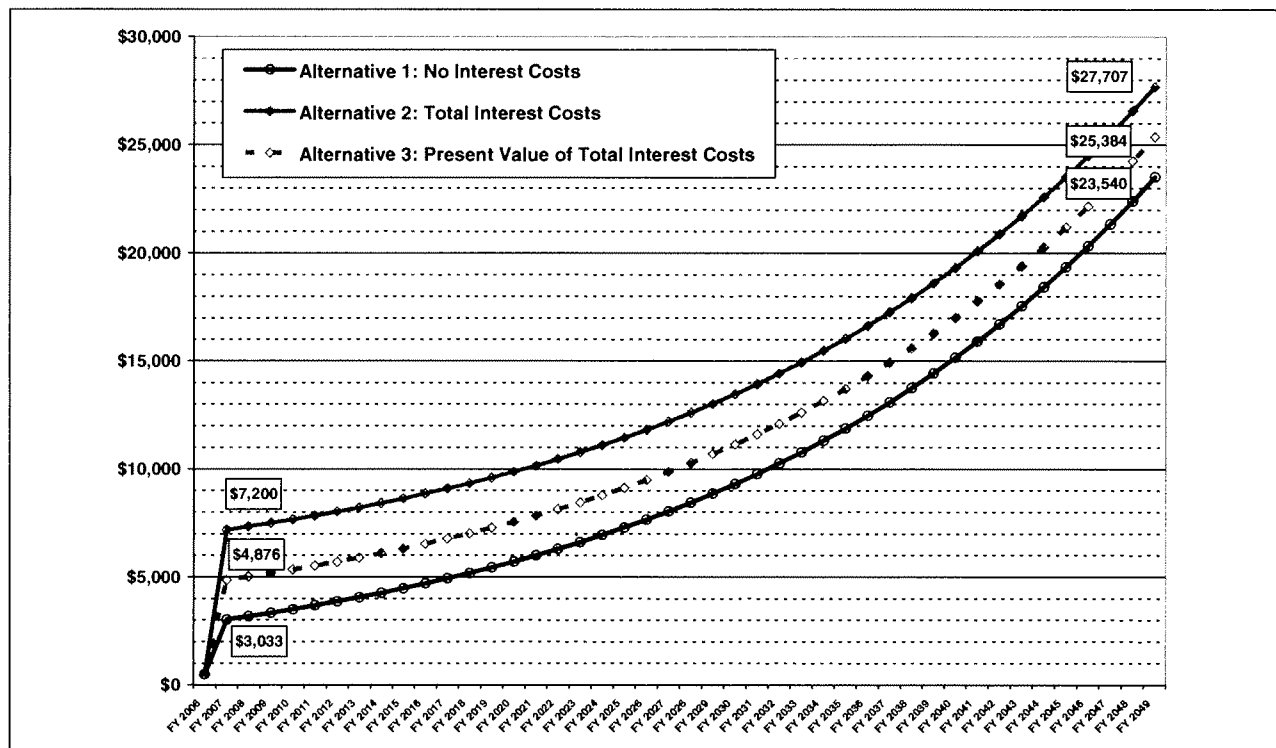
### **Comparison of Alternatives**

A series of tables and figures were prepared for the purpose of comparing capacity charges developed under the three alternatives. The first alternative assumes no interest would be recovered via the capacity charge while the second and third alternatives assume that the total interest and the present value of the total interest, respectively, would be recovered via the capacity charges.

The comparison is made in terms of the actual capacity charge for each alternative and the amount of revenue from capacity charges based on an annual number of new connections that is the same for each alternative. Revenue from capacity charges for each alternative is then compared to the annual cumulative capital spending (in nominal dollars) and the annual cumulative debt service.

Table 3.16 presents a comparison of both the annual capacity charges and the revenues from those charges for each alternative. Figure 3.3 illustrates the comparison of capacity charges for each alternative.

**Figure 3.3 Alternative Capacity Charges**



A summary of the capacity charge alternatives for the first five years is summarized from Table 3.16 in the table below.

**Five Year Summary of Alternative Capacity Charges from Table 3.16**

Fiscal Year	Alternative		
	1	2	3
FY 2007	\$3,033	\$7,200	\$4,876
FY 2008	\$3,185	\$7,352	\$5,028
FY 2009	\$3,344	\$7,511	\$5,187
FY 2010	\$3,511	\$7,678	\$5,355
FY 2011	\$3,687	\$7,854	\$5,530

Alternative 1: No Interest Costs  
 Alternative 2: Total Interest Costs  
 Alternative 3: Present Value of Total Interest Costs

Projected annual cumulative revenue from the alternative capacity charges is shown using a scale of \$0 to \$550,000,000 in Figure 3.4 for 2008-2049. The large scale range in Figure 3.4 masks the differences in revenue for each alternative during the first nine years. Figure 3.5, with the same data as in Figure 3.4, shows only the first six years on a scale of \$0 to \$60,000,000. Note that for all alternatives, the new capacity charges are shown as not being implemented until FY 2007. As a result, each alternative shows the same revenue from capacity charges for FY 2006.

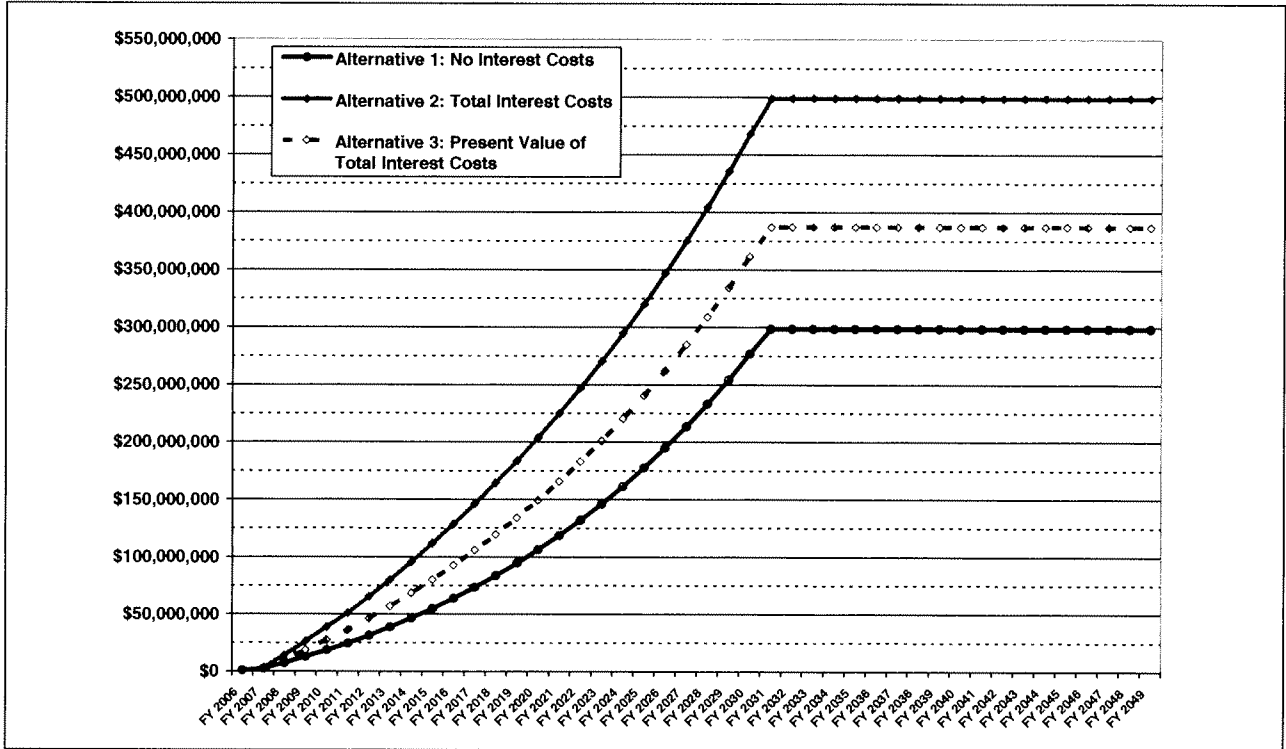
A summary of the annual revenue recovered via capacity charge receipts for each alternative for the first five years is summarized from Table 3.16 in the table below.

**Five Year Summary of Capacity Charge Revenue from Table 3.16**

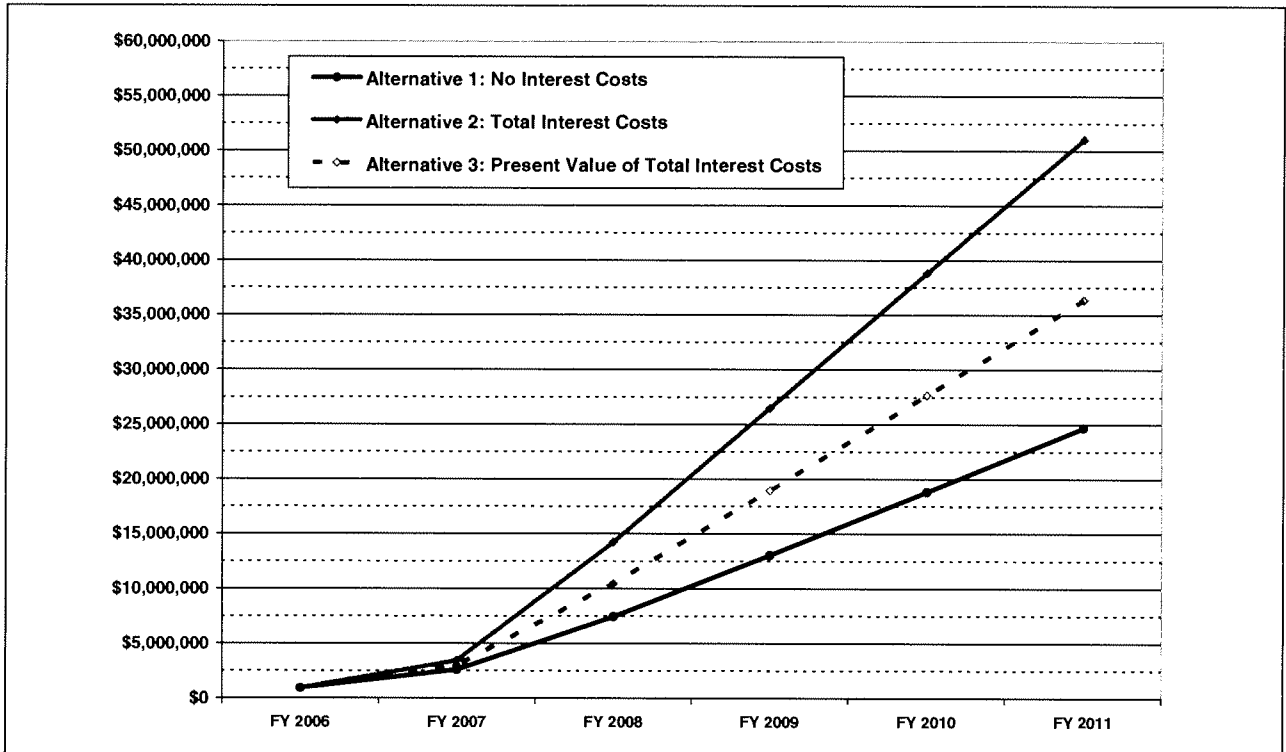
Fiscal Year	Alternative		
	1	2	3
<b>Current Fee</b>	\$928,500	\$928,500	\$928,500
<b>FY 2007</b>	\$1,653,579	\$2,518,257	\$2,036,118
<b>FY 2008</b>	\$4,880,625	\$10,810,442	\$7,504,008
<b>FY 2009</b>	\$5,582,369	\$12,241,433	\$8,528,375
<b>FY 2010</b>	\$5,795,763	\$12,350,649	\$8,695,680
<b>FY 2011</b>	\$5,844,381	\$12,220,080	\$8,665,025
<b>Total</b>	<b>\$24,685,218</b>	<b>\$51,069,361</b>	<b>\$36,357,705</b>

Alternative 1: No Interest Costs  
 Alternative 2: Total Interest Costs  
 Alternative 3: Present Value of Total Interest Costs

**Figure 3.4 Cumulative Revenue from Capacity Charges, 2006-2049**



**Figure 3.5 Cumulative Revenue from Capacity Charges, 2006-2011**



**Recommendation**

We have developed capacity charges using three alternatives. Alternative 1, which does not include financing costs, was merely carried forward to serve as a reference point. It is not a candidate for adoption since it does not include the recovery of interest expenses; a significant part of the cost of capacity when the CIP is financed via the issuance of debt. Alternative 2, which includes total interest, was carried forward because it is used by other utilities. It, of course, fails to take into account the time value of the annual interest payments. As a result, we recommend Alternative 3, the alternative which includes the present value of interest.

Table 3.1  
Equivalent Dwelling Unit Capacity Charge, 2006

Facility Description	Equivalent Dwelling Units Based on Single Family Class Averages: <sup>(1)</sup>		Total
	Flow 290 (gpd)	TSS 200 (mg/l)	
EDU Loads <sup>(2)</sup>	0.000290 <mgd	0.483720 <pounds/day	0.483720 <pounds/day
Unit Costs <sup>(3)</sup>	\$8,110,869 <per mgd	\$748.792 <per lb-day	\$198.965 <per lb-day
EDU Unit Cost	\$2,352 +	\$362 +	\$96 =
			\$2,811

**Notes:**

- Flow per equivalent dwelling unit is from a Public Works Memo from the Assistant Civil Engineer to the Deputy Public Works Director dated May 25, 2006, regarding Estimated Sewer Flow Projections. Data from the memo used to develop flow per dwelling unit is shown below:  

$$2.9 \text{ People per Dwelling Unit} \times \frac{100 \text{ Gallons per day per capita}}{290 \text{ Gallons per day per Dwelling Unit}}$$
- BOD concentration and TSS concentration values were provided by the City.  
 EDU loads for BOD and TSS are based on the general formula shown below:  

$$\text{flow (in mgd)} \times \text{concentration (in mg/l)} \times \text{conversion factor (8.34)} = \text{pounds/day}$$
- Unit costs are from Table 2.13.

**Table 3.2  
Construction Cost Escalation**

Index	Calendar Year End Index Values					2002 - 2006 Average
	2001	2002	2003	2004	2005	
<b>Indices Evaluated</b>						
Engineering News Record 20-City <sup>1,4</sup>	6343	6538	6694	7115	7446	7888
Construction Cost Index		3.1%	2.4%	6.3%	4.7%	5.9%
Engineering News Record San Francisco <sup>1,4</sup>	7399	7644	7789	8228	8462	9109
Construction Cost Index		3.3%	1.9%	5.6%	2.8%	7.6%
California Department of Finance <sup>2,5</sup>	103	105	110	114	121	126
Implicit Price Deflator for State and Local Government Purchases of Goods and Services		2.5%	4.1%	4.3%	6.2%	3.3%
Consumer Price Index - All Urban Consumers <sup>3,5</sup>	177.1	179.9	184.0	188.9	195.3	202.0
		1.6%	2.3%	2.7%	3.4%	3.4%

**Cost Escalator for FY 2007 Increase to Carollo Engineers CIP <sup>6</sup>**

*ENR San Francisco CCI, June 2006 > 8441.00*  
*ENR San Francisco CCI, December 2006 > 9108.66*  
*Cost escalator for FY 2007 > 7.9097%*

**Notes:**

- The ENR indices are built on: 200 hours of common labor at the average of common labor rates, plus 25 cwt of standard structural steel shapes at the mill price prior to 1996 and the fabricated 20-city price from 1996, plus 1.128 tons of portland cement at the average price, plus 1,088 board ft of 2 x 4 lumber at the average price. The ENR 20-City index was used by Carollo Engineers in its August 2006 Justification and Cost Allocation for Proposed Wastewater Collection System and Treatment Plant Improvements to develop pipeline unit costs that were in turn used to estimate collection system improvement costs. The ENR San Francisco index used by Carollo Engineers, 8441, is for June 2006 and shown in Table 1 (page 2) of the report.
- The Implicit Price Deflator used by California is based on data from the U.S. Department of Commerce, Bureau of Economic Analysis (BEA). California Government Code Section 54999.3 allows the Implicit Price Deflator to be used to increase historical capacity charges to present values. [http://www.dof.ca.gov/HTML/FS\\_DATA/LatestEconData/documents/BBDEFLO0\\_003.xls](http://www.dof.ca.gov/HTML/FS_DATA/LatestEconData/documents/BBDEFLO0_003.xls)
- Consumer Price Index - All Urban Consumers (1982-84 = 100) data is from the U.S. Department of Labor, Bureau of Labor Statistics. The CPI - All Urban Consumers is used by the City of Merced to escalate the Plant Component of Sewer Facilities Charges. <http://data.bis.gov/cgi-bin/surveymost>
- Year end values for 2006 are based on published values as of December 2006.
- Year end values for 2006 are projected based on values obtained from websites as of November 2006.
- The cost escalator is used in Table 3.3 and in Table 3.7.

Table 3.3  
 Att 1 Projected Capacity Charge Unit Costs  
 Financing Costs Excluded

Facility Description	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
<b>Capital and Interest Costs <sup>(1)</sup></b>																
Capital Costs for New Customers	\$176,575	\$190,542	\$200,069	\$210,073	\$220,576	\$231,605	\$243,185	\$255,345	\$268,112	\$281,517	\$295,593	\$310,373	\$325,892	\$342,186	\$359,296	\$377,260
Interest on Debt	\$0,000	\$0,000	\$0,000	\$0,000	\$0,000	\$0,000	\$0,000	\$0,000	\$0,000	\$0,000	\$0,000	\$0,000	\$0,000	\$0,000	\$0,000	\$0,000
Total Costs for New Customers	\$176,575	\$190,542	\$200,069	\$210,073	\$220,576	\$231,605	\$243,185	\$255,345	\$268,112	\$281,517	\$295,593	\$310,373	\$325,892	\$342,186	\$359,296	\$377,260
<b>Cost Allocation</b>																
Flow	\$127,341	\$137,413	\$144,284	\$151,498	\$159,073	\$167,026	\$175,378	\$184,146	\$193,354	\$203,021	\$213,173	\$223,831	\$235,023	\$246,774	\$259,113	\$272,068
BOD	\$40,659	\$43,875	\$48,069	\$48,373	\$50,791	\$53,331	\$55,997	\$58,797	\$61,737	\$64,824	\$68,065	\$71,469	\$75,042	\$78,794	\$82,794	\$86,870
TSS	\$8,575	\$9,254	\$9,716	\$10,202	\$10,712	\$11,248	\$11,810	\$12,401	\$13,021	\$13,672	\$14,355	\$15,073	\$15,827	\$16,618	\$17,449	\$18,322
<b>Capacity Added</b>																
Flow (million gallons-day)	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7
BOD (pounds-day)	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300
TSS (pounds-day)	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100
<b>Unit Costs</b>																
Flow (per gallons-day)	\$8,111	\$8,752	\$9,190	\$9,650	\$10,132	\$10,639	\$11,171	\$11,729	\$12,316	\$12,931	\$13,578	\$14,257	\$14,970	\$15,718	\$16,504	\$17,329
BOD (per pound-day)	\$748,792	\$608,020	\$848,421	\$890,842	\$935,384	\$982,153	\$1,031,261	\$1,082,824	\$1,136,965	\$1,193,813	\$1,253,504	\$1,316,179	\$1,381,988	\$1,451,088	\$1,523,642	\$1,599,824
TSS (per pound-day)	\$198,965	\$214,702	\$225,437	\$236,709	\$248,545	\$260,972	\$274,021	\$287,722	\$302,108	\$317,213	\$333,074	\$349,727	\$367,214	\$385,574	\$404,853	\$425,096
<b>Equivalent Single Family Dwelling Unit Costs</b>																
Flow	\$2,352	\$2,538	\$2,665	\$2,798	\$2,938	\$3,085	\$3,239	\$3,401	\$3,572	\$3,750	\$3,938	\$4,134	\$4,341	\$4,558	\$4,786	\$5,025
BOD	\$362	\$391	\$410	\$431	\$452	\$475	\$499	\$524	\$550	\$577	\$606	\$637	\$668	\$702	\$737	\$774
TSS	\$96	\$104	\$109	\$115	\$120	\$126	\$133	\$139	\$146	\$153	\$161	\$169	\$178	\$187	\$196	\$206
Total	\$2,811	\$3,033	\$3,185	\$3,344	\$3,511	\$3,687	\$3,871	\$4,064	\$4,268	\$4,481	\$4,705	\$4,940	\$5,187	\$5,447	\$5,719	\$6,005

**Notes:**

- The capital costs for new customers shown above are escalated as shown below to account for cost escalation. The escalation value for FY 2007 is calculated as shown in Table 3.2. Escalation values for FY 2008 onward are comparable with average escalation of the Engineering News Record Construction Cost Index for San Francisco over the past six years.

FY 2007 7.9%  
 FY 2008 5.0%  
 FY 2009 5.0%  
 FY 2010 5.0%  
 FY 2011 5.0%  
 FY 2012 5.0%  
 FY 2013 5.0%  
 FY 2014 5.0%  
 FY 2015 5.0%  
 FY 2016 5.0%  
 FY 2017 5.0%  
 FY 2018 5.0%  
 FY 2019 5.0%  
 FY 2020 5.0%  
 FY 2021 5.0%

Table 3.3  
Alt 1 Projected Capacity Charge Unit Costs  
Financing Costs Excluded

Facility Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	FY 2035	FY 2036	FY 2037
<b>Capital and Interest Costs <sup>(1)</sup></b>																
Capital Costs for New Customers	\$396,123	\$415,929	\$436,726	\$458,562	\$481,490	\$505,565	\$530,843	\$557,385	\$585,255	\$614,517	\$645,243	\$677,505	\$711,381	\$746,950	\$784,297	\$823,512
Interest on Debt	\$0,000	\$0,000	\$0,000	\$0,000	\$0,000	\$0,000	\$0,000	\$0,000	\$0,000	\$0,000	\$0,000	\$0,000	\$0,000	\$0,000	\$0,000	\$0,000
Total Costs for New Customers	\$396,123	\$415,929	\$436,726	\$458,562	\$481,490	\$505,565	\$530,843	\$557,385	\$585,255	\$614,517	\$645,243	\$677,505	\$711,381	\$746,950	\$784,297	\$823,512
<b>Cost Allocation</b>																
Flow	\$285,672	\$299,955	\$314,953	\$330,701	\$347,236	\$364,597	\$382,827	\$401,969	\$422,067	\$443,170	\$465,329	\$488,595	\$513,025	\$538,676	\$565,610	\$593,891
BOD	\$91,214	\$95,775	\$100,563	\$105,592	\$110,871	\$116,415	\$122,235	\$128,347	\$134,765	\$141,503	\$148,578	\$155,007	\$163,807	\$171,998	\$180,597	\$189,627
TSS	\$19,238	\$20,200	\$21,210	\$22,270	\$23,384	\$24,553	\$25,780	\$27,069	\$28,423	\$29,844	\$31,336	\$32,903	\$34,548	\$36,276	\$38,089	\$39,994
<b>Capacity Added</b>																
Flow (million gallons-day)	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7
BOD (pounds-day)	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300
TSS (pounds-day)	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100
<b>Unit Costs</b>																
Flow (per gallons-day)	\$18,196	\$19,105	\$20,061	\$21,064	\$22,117	\$23,223	\$24,384	\$25,603	\$26,883	\$28,227	\$29,639	\$31,121	\$32,677	\$34,311	\$36,026	\$37,827
BOD (per pound-day)	\$1,679,815	\$1,763,806	\$1,851,996	\$1,944,596	\$2,041,826	\$2,143,917	\$2,251,113	\$2,363,669	\$2,481,852	\$2,605,945	\$2,738,242	\$2,873,054	\$3,016,707	\$3,167,542	\$3,325,919	\$3,492,215
TSS (per pound-day)	\$446,351	\$488,666	\$492,101	\$516,707	\$542,542	\$569,669	\$598,152	\$628,060	\$659,463	\$692,436	\$727,058	\$763,411	\$801,581	\$841,660	\$883,744	\$927,931
<b>Equivalent Single Family Dwelling Unit Costs</b>																
Flow	\$5,277	\$5,541	\$5,818	\$6,108	\$6,414	\$6,735	\$7,071	\$7,425	\$7,796	\$8,186	\$8,595	\$9,025	\$9,476	\$9,950	\$10,448	\$10,970
BOD	\$913	\$953	\$996	\$941	\$988	\$1,037	\$1,089	\$1,143	\$1,201	\$1,261	\$1,324	\$1,390	\$1,459	\$1,532	\$1,609	\$1,689
TSS	\$216	\$227	\$238	\$250	\$262	\$276	\$289	\$304	\$319	\$335	\$352	\$369	\$388	\$407	\$427	\$449
Total	\$6,305	\$6,620	\$6,951	\$7,299	\$7,664	\$8,047	\$8,450	\$8,872	\$9,316	\$9,781	\$10,271	\$10,784	\$11,323	\$11,889	\$12,484	\$13,108

**Notes:**

- The capital costs for new customers shown above are escalated as shown below to account for cost escalation. The escalation value for FY 2007 is calculated as shown in Table 3.2. Escalation values for FY 2008 onward are comparable with average escalation of the Engineering News Record Construction Cost Index for San Francisco over the past six years.

Table 3.3  
Alt 1 Projected Capacity Charge Unit Costs  
Financing Costs Excluded

Facility Description	FY 2038	FY 2039	FY 2040	FY 2041	FY 2042	FY 2043	FY 2044	FY 2045	FY 2046	FY 2047	FY 2048	FY 2049
<b>Capital and Interest Costs <sup>(1)</sup></b>												
Capital Costs for New Customers	\$864,688	\$907,922	\$953,318	\$1,000,984	\$1,051,033	\$1,103,585	\$1,158,764	\$1,216,702	\$1,277,537	\$1,341,414	\$1,408,485	\$1,478,909
Interest on Debt	\$0,000	\$0,000	\$0,000	\$0,000	\$0,000	\$0,000	\$0,000	\$0,000	\$0,000	\$0,000	\$0,000	\$0,000
Total Costs for New Customers	\$864,688	\$907,922	\$953,318	\$1,000,984	\$1,051,033	\$1,103,585	\$1,158,764	\$1,216,702	\$1,277,537	\$1,341,414	\$1,408,485	\$1,478,909
<b>Cost Allocation</b>												
Flow	\$623,585	\$654,765	\$687,503	\$721,878	\$757,972	\$795,870	\$835,664	\$877,447	\$921,320	\$967,386	\$1,015,755	\$1,066,543
BOD	\$199,109	\$209,064	\$219,517	\$230,493	\$242,018	\$254,119	\$266,825	\$280,166	\$294,174	\$308,883	\$324,327	\$340,543
TSS	\$41,994	\$44,093	\$46,298	\$48,613	\$51,043	\$53,596	\$56,275	\$59,089	\$62,044	\$65,146	\$68,403	\$71,823
<b>Capacity Added</b>												
Flow (million gallons-day)	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7
BOD (pounds-day)	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300
TSS (pounds-day)	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100
<b>Unit Costs</b>												
Flow (per gallons-day)	\$39,719	\$41,705	\$43,790	\$45,979	\$48,278	\$50,692	\$53,227	\$55,888	\$58,683	\$61,617	\$64,698	\$67,933
BOD (per pound-day)	\$3,666,826	\$3,850,167	\$4,042,676	\$4,244,809	\$4,457,050	\$4,679,902	\$4,913,897	\$5,159,592	\$5,417,572	\$5,688,451	\$5,972,873	\$6,271,517
TSS (per pound-day)	\$974,327	\$1,023,044	\$1,074,196	\$1,127,906	\$1,184,301	\$1,243,516	\$1,305,692	\$1,370,976	\$1,439,525	\$1,511,501	\$1,587,076	\$1,666,490
<b>Equivalent Single Family Dwelling Unit Costs</b>												
Flow	\$11,518	\$12,094	\$12,689	\$13,334	\$14,001	\$14,701	\$15,436	\$16,208	\$17,018	\$17,869	\$18,762	\$19,700
BOD	\$1,774	\$1,862	\$1,956	\$2,053	\$2,156	\$2,264	\$2,377	\$2,496	\$2,621	\$2,752	\$2,889	\$3,034
TSS	\$471	\$495	\$520	\$546	\$573	\$602	\$632	\$663	\$696	\$731	\$768	\$806
Total	\$13,763	\$14,452	\$15,174	\$15,933	\$16,730	\$17,566	\$18,444	\$19,367	\$20,335	\$21,352	\$22,419	\$23,540

**Notes:**

- The capital costs for new customers shown above are escalated as shown below to account for cost escalation. The escalation value for FY 2007 is calculated as shown in Table 3.2. Escalation values for FY 2008 onward are comparable with average escalation of the Engineering News Record Construction Cost Index for San Francisco over the past six years.

**Table 3.4**

**Alt 1 Projected Single Family and Restaurant Capacity Charges, FYs 2007 - 2011  
Financing Costs Excluded**

**Single Family Residential**

	<b>Flow</b>	<b>BOD</b>	<b>TSS</b>	
<b><i>Unit Costs</i></b>	<u>\$/gallons/day</u>	<u>\$/lb/day</u>	<u>\$/lb/day</u>	
FY 2007	<b>\$8.752</b>	<b>\$808.020</b>	<b>\$214.702</b>	
FY 2008	<b>\$9.190</b>	<b>\$848.421</b>	<b>\$225.437</b>	
FY 2009	<b>\$9.650</b>	<b>\$890.842</b>	<b>\$236.709</b>	
FY 2010	<b>\$10.132</b>	<b>\$935.384</b>	<b>\$248.545</b>	
FY 2011	<b>\$10.639</b>	<b>\$982.153</b>	<b>\$260.972</b>	
<b><i>Estimated Peak Month Discharge</i></b>	290 < gallons per day			
mgd or mg/l	<i>amount &gt;</i> 0.000290	200	200	
	<i>unit of measure &gt;</i> mgd	mg/l	mg/l	
gallons or pounds per day	<i>amount &gt;</i> 290	0.483720	0.483720	
	<i>unit of measure &gt;</i> gallons/day	pounds/day	pounds/day	
gallons or pounds per month	<i>amount &gt;</i> 8,821	14.71	14.71	
	<i>unit of measure &gt;</i> gallons/month	pounds/month	pounds/month	
<b><i>Capacity Charge</i></b>	<b>Flow</b>	<b>BOD</b>	<b>TSS</b>	<b>Total</b>
FY 2007	\$2,538.20	\$390.86	\$103.86	<b>\$3,033</b>
FY 2008	\$2,665.11	\$410.40	\$109.05	<b>\$3,185</b>
FY 2009	\$2,798.37	\$430.92	\$114.50	<b>\$3,344</b>
FY 2010	\$2,938.28	\$452.46	\$120.23	<b>\$3,511</b>
FY 2011	\$3,085.20	\$475.09	\$126.24	<b>\$3,687</b>

**Restaurant (Commercial Group 4)**

	<b>Flow</b>	<b>BOD</b>	<b>TSS</b>	
<b><i>Unit Costs</i></b>	<u>\$/gallons/day</u>	<u>\$/lb/day</u>	<u>\$/lb/day</u>	
FY 2007	<b>\$8.752</b>	<b>\$808.020</b>	<b>\$214.702</b>	
FY 2008	<b>\$9.190</b>	<b>\$848.421</b>	<b>\$225.437</b>	
FY 2009	<b>\$9.650</b>	<b>\$890.842</b>	<b>\$236.709</b>	
FY 2010	<b>\$10.132</b>	<b>\$935.384</b>	<b>\$248.545</b>	
FY 2011	<b>\$10.639</b>	<b>\$982.153</b>	<b>\$260.972</b>	
<b><i>Estimated Peak Month Discharge</i></b>	3,000 < gallons per day			
mgd or mg/l	<i>amount &gt;</i> 0.003000	1,000	600	
	<i>unit of measure &gt;</i> mgd	mg/l	mg/l	
gallons or pounds per day	<i>amount &gt;</i> 3,000	25.020000	15.012000	
	<i>unit of measure &gt;</i> gallons/day	pounds/day	pounds/day	
gallons or pounds per month	<i>amount &gt;</i> 91,250	761.03	456.62	
	<i>unit of measure &gt;</i> gallons/month	pounds/month	pounds/month	
<b><i>Capacity Charge</i></b>	<b>Flow</b>	<b>BOD</b>	<b>TSS</b>	<b>Total</b>
FY 2007	\$26,257.25	\$20,216.66	\$3,223.11	<b>\$49,697</b>
FY 2008	\$27,570.11	\$21,227.49	\$3,384.27	<b>\$52,182</b>
FY 2009	\$28,948.62	\$22,288.86	\$3,553.48	<b>\$54,791</b>
FY 2010	\$30,396.05	\$23,403.31	\$3,731.15	<b>\$57,531</b>
FY 2011	\$31,915.85	\$24,573.47	\$3,917.71	<b>\$60,407</b>

Table 3.5  
Projected Capacity Utilization

Item	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
<b>Capacity Utilization</b>																	
<b>FY 2006 - FY 2011</b>																	
Capacity Utilization Estimates <sup>(1)</sup>																	
Subject to Current Charges	1,857	1,841	698	478	546	408											
Subject to New Charges	0	415	1,423	1,598	1,573	1,530											
Total EDUs <sup>(2)</sup>																	
Current EDUs = 88,966	90,823	93,079	95,200	97,276	99,395	101,333											
Annual Growth Rate	2.09%	2.48%	2.28%	2.18%	2.18%	1.95%											
<b>FY 2012 - FY 2049</b>																	
Annual Growth Estimates <sup>(3)</sup>							1.75%	1.75%	1.75%	1.75%	1.75%	1.75%	1.75%	1.75%	1.75%	1.75%	1.75%
Capacity Utilization Estimates																	
Subject to New Charges							1,773	1,804	1,836	1,868	1,901	1,934	1,968	2,002	2,037	2,073	2,109
Total EDUs							103,106	104,910	106,746	108,614	110,515	112,449	114,417	116,419	118,456	120,529	122,639
<b>FY 2006 - FY 2049</b>																	
EDUs Added per Year																	
Charge Category																	
Subject to Current Charges	1,857	1,841	698	478	546	408	0	0	0	0	0	0	0	0	0	0	0
Subject to New Charges	0	415	1,423	1,598	1,573	1,530	1,773	1,804	1,836	1,868	1,901	1,934	1,968	2,002	2,037	2,073	2,109
Total	1,857	2,256	2,121	2,076	2,119	1,938	1,773	1,804	1,836	1,868	1,901	1,934	1,968	2,002	2,037	2,073	2,109

**Notes:**

- The percent of EDUs subject to current and new fees was based on capacity utilization project data provided by the Public Works Director in a Memo dated November 15, 2006.  
 Total EDUs subject to current fees ( 5,828 ) >  
 Total EDUs subject to new fees ( 6,539 ) >  
 Total EDUs ( 12,367 ) >  
 % of Total EDUs subject to new fees >
- Current EDUs is based on Carollo Engineering studies.
- General Plan estimates were based on an email from the Deputy Public Works Director dated September 25, 2006.

Table 3.5  
Projected Capacity Utilization

Item	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	FY 2035	FY 2036	FY 2037	FY 2038	FY 2039
<b>Capacity Utilization</b>																	
<b>FY 2006 - FY 2011</b>																	
Capacity Utilization Estimates <sup>(1)</sup>																	
Subject to Current Charges																	
Subject to New Charges																	
Total EDUs <sup>(2)</sup>																	
Current EDUs = 88,966																	
Annual Growth Rate																	
<b>FY 2012 - FY 2049</b>																	
Annual Growth Estimates <sup>(3)</sup>	1.75%	1.75%	1.75%	1.75%	1.75%	1.75%	1.75%	1.75%	1.57%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Capacity Utilization Estimates	2,146	2,184	2,222	2,261	2,300	2,341	2,382	2,423	2,206	0	0	0	0	0	0	0	0
Subject to New Charges	124,785	126,969	129,191	131,451	133,752	136,092	138,474	140,897	143,104	143,104	143,104	143,104	143,104	143,104	143,104	143,104	143,104
Total EDUs	2,146	2,184	2,222	2,261	2,300	2,341	2,382	2,423	2,206	0	0	0	0	0	0	0	0
<b>FY 2006 - FY 2049</b>																	
<b>EDUs Added per Year</b>																	
Charge Category																	
Subject to Current Charges	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Subject to New Charges	2,146	2,184	2,222	2,261	2,300	2,341	2,382	2,423	2,206	0	0	0	0	0	0	0	0
Total	2,146	2,184	2,222	2,261	2,300	2,341	2,382	2,423	2,206	0	0	0	0	0	0	0	0

**Notes:**

- The percent of EDUs subject to current and new fees was based on capacity utilization project data provided by the Public Works Director in a Memo dated November 15, 2006.  
Total EDUs subject to current fees ( 5,828 ) >  
Total EDUs subject to new fees ( 6,539 ) >  
Total EDUs ( 12,367 ) >  
% of Total EDUs subject to new fees >
- Current EDUs is based on Carollo Engineering studies.
- General Plan estimates were based on an email from the Deputy Public Works Director dated September 25, 2006.

Table 3.5  
Projected Capacity Utilization

Item	FY 2040	FY 2041	FY 2042	FY 2043	FY 2044	FY 2045	FY 2048	FY 2047	FY 2048	FY 2049	Total
<b>Capacity Utilization</b>											
<b>FY 2006 - FY 2011</b>											
Capacity Utilization Estimates <sup>(1)</sup>											5,828
Subject to Current Charges											6,539
Subject to New Charges											
Total EDUs <sup>(2)</sup>											
Current EDUs = 88,966											
Annual Growth Rate											
<b>FY 2012 - FY 2049</b>											
Annual Growth Estimates <sup>(3)</sup>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Capacity Utilization Estimates	0	0	0	0	0	0	0	0	0	0	41,771
Subject to New Charges	143,104	143,104	143,104	143,104	143,104	143,104	143,104	143,104	143,104	143,104	
Total EDUs	0	0	0	0	0	0	0	0	0	0	54,138
<b>FY 2006 - FY 2049</b>											
<b>EDUs Added per Year</b>											
Charge Category											
Subject to Current Charges	0	0	0	0	0	0	0	0	0	0	0
Subject to New Charges	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0

**Notes:**

- The percent of EDUs subject to current and new fees was based on capacity utilization project data provided by the Public Works Director in a Memo dated November 15, 2006.  
 Total EDUs subject to current fees ( 5,828 ) >  
 Total EDUs subject to new fees ( 6,539 ) >  
 Total EDUs ( 12,367 ) >  
 % of Total EDUs subject to new fees >  
 Current EDUs is based on Carollo Engineering studies.
- General Plan estimates were based on an email from the Deputy Public Works Director dated September 25, 2006.

5,828  
6,539  

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12,367

Table 3.5  
 Alt 1 Projected Revenue  
 Financing Costs Excluded

Facility Description	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
<b>New Connections (EDUs) <sup>(1)</sup></b>																		
Subject to Current Charges	1,857	1,841	698	478	546	408	0	0	0	0	0	0	0	0	0	0	0	0
Subject to New Charges	0	415	1,423	1,598	1,573	1,530	1,773	1,804	1,836	1,868	1,901	1,934	1,968	2,002	2,037	2,073	2,109	2,146
<b>Equivalent Dwelling Unit Charges <sup>(2)</sup></b>																		
Current Charges	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500
Projected New Charges	\$3,033	\$3,185	\$3,344	\$3,344	\$3,511	\$3,687	\$3,871	\$4,064	\$4,268	\$4,481	\$4,705	\$4,940	\$5,187	\$5,447	\$5,719	\$6,005	\$6,305	\$6,620
<b>Revenue from Capacity Charge</b>																		
Annual																		
Current Charges	\$928,500	\$1,024,250	\$349,000	\$239,000	\$273,000	\$204,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Projected New Charges	\$0	\$629,329	\$4,531,625	\$5,343,369	\$5,522,763	\$5,640,381	\$6,864,251	\$7,333,595	\$7,835,029	\$8,370,749	\$8,943,099	\$9,554,584	\$10,207,878	\$10,905,842	\$11,651,529	\$12,448,202	\$13,299,348	\$14,208,891
Cumulative	\$928,500	\$2,592,079	\$7,462,705	\$13,045,074	\$19,840,837	\$24,695,218	\$31,549,469	\$39,883,064	\$46,718,093	\$55,088,842	\$64,031,941	\$73,596,525	\$83,794,403	\$94,700,245	\$106,351,773	\$118,799,976	\$132,099,323	\$146,308,014

**Notes:**

1. See Table 3.5
2. Current charges are for the Sewer Bond Redemption Charge. Projected new charges are from Table 3.3.

Table 3.6  
Alt 1 Projected Revenue  
Financing Costs Excluded

Facility Description	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	FY 2035	FY 2036	FY 2037	FY 2038	FY 2039	FY 2040	FY 2041
<b>New Connections (EDUs) <sup>(1)</sup></b>																		
Subject to Current Charges	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Subject to New Charges	2,184	2,222	2,261	2,300	2,341	2,382	2,423	2,206	0	0	0	0	0	0	0	0	0	0
<b>Equivalent Dwelling Unit Charges <sup>(2)</sup></b>																		
Current Charges	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500
Projected New Charges	\$6,951	\$7,299	\$7,664	\$8,047	\$8,450	\$8,872	\$9,316	\$9,781	\$10,271	\$10,784	\$11,323	\$11,889	\$12,484	\$13,108	\$13,763	\$14,452	\$15,174	\$15,933
<b>Revenue from Capacity Charge</b>																		
Annual																		
Current Charges	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Projected New Charges	\$15,180,210	\$16,218,157	\$17,327,073	\$18,511,812	\$19,777,557	\$21,129,846	\$22,574,601	\$21,562,289	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Cumulative	\$161,488,224	\$177,706,381	\$195,033,455	\$213,545,287	\$233,322,824	\$254,452,672	\$277,027,273	\$296,609,582	\$296,609,582	\$296,609,582	\$296,609,582	\$296,609,582	\$296,609,582	\$296,609,582	\$296,609,582	\$296,609,582	\$296,609,582	\$296,609,582

**Notes:**

1. See Table 3.5
2. Current charges are for the Sewer Bond Redemption Charge. Projected new charges are from Table 3.3.

**Table 3.6**  
**Alt 1 Projected Revenue**  
**Financing Costs Excluded**

Facility Description	FY 2042	FY 2043	FY 2044	FY 2045	FY 2046	FY 2047	FY 2048	FY 2049	Total
<b>New Connections (EDUs) <sup>(1)</sup></b>									
Subject to Current Charges	0	0	0	0	0	0	0	0	5,828
Subject to New Charges	0	0	0	0	0	0	0	0	48,310
									<u>54,138</u>
<b>Equivalent Dwelling Unit Charges <sup>(2)</sup></b>									
Current Charges	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500
Projected New Charges	\$16,730	\$17,566	\$18,444	\$19,367	\$20,335	\$21,352	\$22,419	\$23,540	
<b>Revenue from Capacity Charge</b>									
Annual									
Current Charges	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Projected New Charges	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Cumulative	\$296,609,562	\$296,609,562	\$296,609,562	\$296,609,562	\$296,609,562	\$296,609,562	\$296,609,562	\$296,609,562	\$296,609,562

**Notes:**

1. See Table 3.5
2. Current charges are for the Sewer Bond Redemption Charge. Projected new charges are from Table 3.3.

**Table 3.7  
Projected Debt Service**

Item	Variable	Costs	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014
<b>Capital Costs <sup>(1)</sup></b>										
Phases	<u>Year</u>	<u>Capital Cost</u>								
Collection/Phase 1A	2008	\$51,101,000		\$57,900,097						
Collection/Phase 1B	2009	\$116,650,000			\$138,779,057					
Collection	2010	\$23,150,000			\$28,918,748					
Collection/Phase 2	2012	\$152,300,000						\$209,752,425		
Collection/Phase 3	2020	\$77,350,000								
Total		\$420,551,000	\$0	\$57,900,097	\$138,779,057	\$28,918,748	\$0	\$209,752,425	\$0	\$0
<b>Capital Costs from Debt Funding</b>										
Phases	<u>% Debt Funding</u>	<u>Capital Cost from Debt Funding</u>								
Collection/Phase 1A	100%	\$57,900,097								
Collection/Phase 1B	100%	\$138,779,057								
Collection	100%	\$28,918,748								
Collection/Phase 2	100%	\$209,752,425								
Collection/Phase 3	100%	\$157,391,689								
Total		\$592,742,016								
<b>Debt Issue Costs</b>										
Phases	<u>% Issue Costs</u>	<u>Issuance Cost</u>								
Collection/Phase 1A	3.0%	\$1,737,003								
Collection/Phase 1B	3.0%	\$4,163,372								
Collection	3.0%	\$867,562								
Collection/Phase 2	3.0%	\$6,292,573								
Collection/Phase 3	3.0%	\$4,721,751								
Total		\$17,782,260								
<b>Debt Issue Amount</b>										
Phases	<u>Year</u>	<u>Debt Issuance Amount</u>								
Collection/Phase 1A	2008	\$59,637,100								
Collection/Phase 1B	2009	\$142,942,429								
Collection	2011	\$29,786,310								
Collection/Phase 2	2016	\$216,044,997								
Collection/Phase 3	2023	\$162,113,440								
Total		\$610,524,276								

**Notes:**

- Capital costs for FY 2007 and beyond are escalated to account for inflationary increases in the costs of capital improvements. The annual increases for FY 2007 and beyond were provided by the City in an email from the Deputy Finance Director dated January 23, 2007. Annual escalation for FY 2007 is shown in Table 3.2. Capital costs are escalated by the cumulative percent.

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014
annual escalation >	7.9%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
cumulative escalation >	7.9%	13.3%	19.0%	24.9%	31.2%	37.7%	44.6%	51.8%

**Table 3.7  
Projected Debt Service**

Item	Variable	Costs	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
<b>Capital Costs (1)</b>										
Phases	<u>Year</u>	<u>Capital Cost</u>								
Collection/Phase 1A	2008	\$51,101,000								
Collection/Phase 1B	2009	\$116,650,000								
Collection	2010	\$23,150,000								
Collection/Phase 2	2012	\$152,300,000								
Collection/Phase 3	2020	\$77,350,000								
Total		\$420,551,000	\$0	\$0	\$0	\$0	\$0	\$157,391,689	\$0	\$0
<b>Capital Costs from Debt Funding</b>										
Phases	<u>% Debt Funding</u>	<u>Capital Cost</u>								
Collection/Phase 1A	100%	\$57,900,097								
Collection/Phase 1B	100%	\$138,779,057								
Collection	100%	\$28,918,748								
Collection/Phase 2	100%	\$209,752,425								
Collection/Phase 3	100%	\$157,391,689								
Total		\$592,742,016								
<b>Debt Issue Costs</b>										
Phases	<u>% Issue Costs</u>	<u>Issuance Cost</u>								
Collection/Phase 1A	3.0%	\$1,737,003								
Collection/Phase 1B	3.0%	\$4,163,372								
Collection	3.0%	\$667,562								
Collection/Phase 2	3.0%	\$6,292,573								
Collection/Phase 3	3.0%	\$4,721,751								
Total		\$17,782,260								
<b>Debt Issue Amount</b>										
Phases	<u>Year</u>	<u>Debt Issuance Amount</u>								
Collection/Phase 1A	2008	\$59,637,100								
Collection/Phase 1B	2009	\$142,942,429								
Collection	2011	\$29,786,310								
Collection/Phase 2	2016	\$216,044,997								
Collection/Phase 3	2023	\$162,113,440								
Total		\$610,524,276								

**Notes:**

- Capital costs for FY 2007 and beyond are escalated to account for inflationary increases in the costs of capital improvements. The annual increases for FY 2007 and beyond were provided by the City in an email from the Deputy Finance Director dated January 23, 2007. Annual escalation for FY 2007 is shown in Table 3.2. Capital costs are escalated by the cumulative percent.

	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
annual escalation >	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
cumulative escalation >	59.4%	67.4%	75.8%	84.6%	93.8%	103.5%	113.7%	124.3%





Table 3.8  
Projected New Debt Service

Item	Costs	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Collection/Phase 1A</b>								
Debt Issuance Year	2008	\$1,692,604	\$1,777,234	\$1,866,096	\$1,959,400	\$2,057,370	\$2,160,239	\$2,268,251
Debt Issuance Amount	\$59,637,100	\$2,186,875	\$2,102,245	\$2,013,383	\$1,920,078	\$1,822,108	\$1,719,240	\$1,611,228
Number of Years	30	\$3,879,479	\$3,879,479	\$3,879,479	\$3,879,479	\$3,879,479	\$3,879,479	\$3,879,479
Interest Rate (1)	5.00%	\$17,592,201	\$19,369,435	\$21,236,531	\$23,194,931	\$25,252,302	\$27,412,541	\$29,680,792
		\$36,720,504	\$38,822,749	\$40,836,132	\$42,756,210	\$44,578,319	\$46,297,559	\$47,908,787
		\$54,312,705	\$58,192,184	\$62,071,663	\$65,951,142	\$69,830,620	\$73,710,099	\$77,589,578
<b>Collection/Phase 1B</b>								
Debt Issuance Year	2009	\$3,863,765	\$4,056,953	\$4,259,800	\$4,472,790	\$4,696,430	\$4,931,251	\$5,177,814
Debt Issuance Amount	\$142,942,429	\$5,434,846	\$5,241,657	\$5,038,810	\$4,825,820	\$4,602,180	\$4,367,359	\$4,120,796
Number of Years	30	\$9,298,610	\$9,298,610	\$9,298,610	\$9,298,610	\$9,298,610	\$9,298,610	\$9,298,610
Interest Rate (1)	5.00%	\$38,109,282	\$42,166,235	\$46,426,035	\$50,898,826	\$55,595,256	\$60,526,507	\$65,704,321
		\$82,772,649	\$88,014,307	\$93,053,116	\$97,878,936	\$102,481,116	\$106,848,475	\$110,969,271
		\$120,881,932	\$130,180,542	\$139,479,152	\$148,777,762	\$158,076,372	\$167,374,982	\$176,673,592
<b>Collection</b>								
Debt Issuance Year	2010	\$766,791	\$805,130	\$845,387	\$887,656	\$932,039	\$978,641	\$1,027,573
Debt Issuance Amount	\$29,786,310	\$1,170,851	\$1,132,512	\$1,092,255	\$1,049,986	\$1,005,603	\$959,001	\$910,069
Number of Years	30	\$1,937,642	\$1,937,642	\$1,937,642	\$1,937,642	\$1,937,642	\$1,937,642	\$1,937,642
Interest Rate (1)	5.00%	\$7,136,073	\$7,941,203	\$8,786,590	\$9,674,247	\$10,606,286	\$11,584,927	\$12,612,500
		\$16,115,634	\$17,248,146	\$18,340,401	\$19,390,387	\$20,395,990	\$21,354,991	\$22,265,060
		\$23,251,707	\$25,189,349	\$27,126,991	\$29,064,633	\$31,002,276	\$32,939,918	\$34,877,560
<b>Collection/Phase 2</b>								
Debt Issuance Year	2012	\$4,829,087	\$5,094,687	\$5,374,894	\$5,670,514	\$5,982,392	\$6,311,423	\$6,658,552
Debt Issuance Amount	\$216,044,997	\$10,035,973	\$9,770,374	\$9,490,166	\$9,194,547	\$8,882,668	\$8,553,637	\$8,206,509
Number of Years	30	\$14,865,060	\$14,865,060	\$14,865,060	\$14,865,060	\$14,865,060	\$14,865,060	\$14,865,060
Interest Rate (1)	5.50%	\$38,401,842	\$43,496,529	\$48,871,423	\$54,541,937	\$60,524,329	\$66,835,752	\$73,494,304
		\$110,248,760	\$120,019,134	\$129,509,300	\$138,703,846	\$147,586,515	\$156,140,151	\$164,346,660
		\$148,650,602	\$163,615,663	\$178,360,723	\$193,245,783	\$208,110,843	\$222,975,904	\$237,840,964
<b>Collection/Phase 3</b>								
Debt Issuance Year	2020	\$2,490,994	\$2,627,998	\$2,772,536	\$2,925,028	\$3,085,904	\$3,255,629	\$3,434,689
Debt Issuance Amount	\$162,113,440	\$8,663,285	\$8,526,280	\$8,381,740	\$8,229,251	\$8,068,374	\$7,898,649	\$7,719,590
Number of Years	30	\$11,154,278	\$11,154,278	\$11,154,278	\$11,154,278	\$11,154,278	\$11,154,278	\$11,154,278
Interest Rate (1)	5.50%	\$7,090,164	\$9,718,162	\$12,490,701	\$15,415,728	\$18,501,633	\$21,757,262	\$25,191,950
		\$26,372,671	\$34,898,951	\$43,280,692	\$51,509,942	\$59,578,316	\$67,476,966	\$75,196,556
		\$33,462,835	\$44,617,114	\$55,771,392	\$66,925,671	\$78,079,949	\$89,234,227	\$100,388,506
<b>Total</b>								
Debt Issuance Amount	\$610,524,276	\$13,643,240	\$14,362,002	\$15,118,716	\$15,915,369	\$16,754,136	\$17,637,184	\$18,566,878
		\$27,491,830	\$26,773,068	\$26,016,354	\$25,219,881	\$24,380,934	\$23,497,886	\$22,568,192
		\$41,135,070	\$41,135,070	\$41,135,070	\$41,135,070	\$41,135,070	\$41,135,070	\$41,135,070
		\$108,339,563	\$122,681,565	\$137,810,280	\$153,725,669	\$170,479,804	\$188,116,988	\$206,683,867
		\$272,230,218	\$299,003,286	\$325,019,640	\$350,239,322	\$374,620,256	\$398,118,142	\$420,686,334
		\$380,559,781	\$421,694,851	\$462,829,921	\$503,964,991	\$545,100,060	\$586,235,130	\$627,370,200
<b>Allocation to New Connections</b>								
% Allocation	41.99%	\$5,728,345	\$6,030,129	\$6,347,848	\$6,682,345	\$7,034,507	\$7,405,270	\$7,795,618
\$ Allocation	\$256,338,943	\$11,542,910	\$11,241,125	\$10,923,406	\$10,588,910	\$10,236,748	\$9,865,985	\$9,479,637
		\$17,271,255	\$17,271,255	\$17,271,255	\$17,271,255	\$17,271,255	\$17,271,255	\$17,271,255
		\$45,483,999	\$51,514,128	\$57,861,977	\$64,544,322	\$71,578,829	\$78,984,099	\$86,778,717
		\$114,300,461	\$125,541,587	\$136,464,993	\$147,053,903	\$157,290,659	\$167,156,635	\$176,632,272
		\$159,784,460	\$177,055,715	\$194,326,970	\$211,598,225	\$228,869,479	\$246,140,734	\$263,411,989
<b>Allocation to Existing Customers</b>								
% Allocation	58.01%	\$7,914,895	\$6,331,873	\$8,770,867	\$9,233,043	\$9,719,628	\$10,231,914	\$10,771,260
\$ Allocation	\$354,185,333	\$15,948,920	\$15,531,943	\$15,092,948	\$14,630,772	\$14,144,187	\$13,631,901	\$13,092,555
		\$23,863,815	\$23,863,815	\$23,863,815	\$23,863,815	\$23,863,815	\$23,863,815	\$23,863,815
		\$62,845,564	\$71,177,436	\$79,948,303	\$89,181,347	\$98,900,975	\$109,132,889	\$119,904,150
		\$157,929,757	\$173,461,699	\$188,554,647	\$203,185,419	\$217,329,606	\$230,961,507	\$244,054,061
		\$220,775,321	\$244,639,136	\$268,502,951	\$292,366,766	\$316,230,581	\$340,094,396	\$363,958,211

Notes:

1. The interest rates for each issue were provided by the City in an email from the Deputy Finance Director dated January 23, 2007.

**Table 3.8  
Projected New Debt Service**

Item	Costs	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	FY 2035
<b>Collection/Phase 1A</b>								
Debt Issuance Year	2008	\$2,381,664	\$2,500,747	\$2,625,784	\$2,757,073	\$2,894,927	\$3,039,673	\$3,191,657
Debt Issuance Amount	\$59,637,100	\$1,497,815	\$1,378,732	\$1,253,695	\$1,122,406	\$984,552	\$839,806	\$687,822
Number of Years	30	\$3,879,479	\$3,879,479	\$3,879,479	\$3,879,479	\$3,879,479	\$3,879,479	\$3,879,479
Interest Rate (1)	5.00%	\$32,062,455	\$34,563,202	\$37,188,986	\$39,946,059	\$42,840,986	\$45,860,659	\$49,072,316
		\$49,406,602	\$50,785,334	\$52,039,029	\$53,161,435	\$54,195,987	\$55,167,314	\$56,073,614
		\$11,469,057	\$65,348,538	\$69,228,015	\$93,107,494	\$96,986,973	\$100,866,452	\$104,745,931
<b>Collection/Phase 1B</b>								
Debt Issuance Year	2009	\$5,436,705	\$5,708,540	\$5,993,967	\$6,293,665	\$6,608,349	\$6,938,766	\$7,285,704
Debt Issuance Amount	\$142,942,429	\$3,861,905	\$3,590,070	\$3,304,643	\$3,004,945	\$2,690,262	\$2,359,844	\$2,012,906
Number of Years	30	\$9,298,610	\$9,298,610	\$9,298,610	\$9,298,610	\$9,298,610	\$9,298,610	\$9,298,610
Interest Rate (1)	5.00%	\$71,141,026	\$76,849,566	\$82,843,533	\$89,137,199	\$95,745,547	\$102,684,313	\$109,970,018
		\$114,831,176	\$118,421,246	\$121,725,990	\$124,730,834	\$127,421,096	\$129,780,940	\$131,793,846
		\$185,972,203	\$195,270,813	\$204,569,423	\$213,868,033	\$223,166,643	\$232,465,253	\$241,763,863
<b>Collection</b>								
Debt Issuance Year	2010	\$1,078,952	\$1,132,899	\$1,189,544	\$1,249,021	\$1,311,473	\$1,377,046	\$1,445,898
Debt Issuance Amount	\$29,786,310	\$858,691	\$804,743	\$748,098	\$688,621	\$626,170	\$560,596	\$491,744
Number of Years	30	\$13,691,451	\$13,691,451	\$13,691,451	\$13,691,451	\$13,691,451	\$13,691,451	\$13,691,451
Interest Rate (1)	5.00%	\$23,123,751	\$23,928,494	\$24,676,992	\$25,365,213	\$25,991,382	\$26,551,978	\$27,043,722
		\$36,815,202	\$38,752,945	\$40,690,487	\$42,628,129	\$44,565,771	\$46,503,413	\$48,441,056
<b>Collection/Phase 2</b>								
Debt Issuance Year	2012	\$7,024,772	\$7,411,135	\$7,818,747	\$8,248,778	\$8,702,461	\$9,181,096	\$9,686,056
Debt Issuance Amount	\$216,044,997	\$7,840,288	\$7,453,926	\$6,616,282	\$5,616,282	\$4,465,060	\$3,179,004	\$1,865,060
Number of Years	30	\$80,519,076	\$87,930,210	\$95,748,957	\$103,897,735	\$112,700,196	\$121,881,292	\$131,567,349
Interest Rate (1)	5.50%	\$172,186,948	\$179,640,874	\$186,687,187	\$193,303,469	\$199,466,069	\$205,150,033	\$210,329,037
		\$252,706,024	\$267,571,084	\$282,438,144	\$297,301,205	\$312,166,265	\$327,031,325	\$341,896,385
<b>Collection/Phase 3</b>								
Debt Issuance Year	2020	\$3,623,596	\$3,822,894	\$4,033,153	\$4,254,977	\$4,489,001	\$4,736,896	\$4,996,308
Debt Issuance Amount	\$162,113,440	\$7,331,384	\$7,121,425	\$6,899,302	\$6,665,278	\$6,418,383	\$6,157,970	\$5,884,408
Number of Years	30	\$11,154,278	\$11,154,278	\$11,154,278	\$11,154,278	\$11,154,278	\$11,154,278	\$11,154,278
Interest Rate (1)	5.50%	\$28,815,547	\$32,638,441	\$36,671,594	\$40,926,571	\$45,415,572	\$50,151,468	\$55,147,838
		\$82,727,238	\$90,058,622	\$97,179,747	\$104,079,048	\$110,744,326	\$117,162,709	\$123,320,617
		\$111,542,784	\$122,697,063	\$133,851,341	\$145,005,619	\$156,159,898	\$167,314,176	\$178,468,455
<b>Total</b>								
Debt Issuance Amount	\$610,524,276	\$19,545,689	\$20,576,215	\$21,661,196	\$22,803,515	\$24,006,210	\$25,272,477	\$26,605,686
		\$21,589,381	\$20,588,855	\$19,473,874	\$18,331,555	\$17,128,860	\$15,862,593	\$14,529,384
		\$41,135,070	\$41,135,070	\$41,135,070	\$41,135,070	\$41,135,070	\$41,135,070	\$41,135,070
		\$226,229,555	\$246,805,770	\$268,466,966	\$291,270,481	\$315,276,690	\$340,549,168	\$367,154,854
		\$442,275,715	\$462,834,570	\$482,308,444	\$500,639,999	\$517,768,860	\$533,631,452	\$548,160,836
		\$668,505,270	\$709,640,340	\$750,775,410	\$791,910,480	\$833,045,550	\$874,180,620	\$915,315,690
<b>Allocation to New Connections</b>								
% Allocation	41.99%	\$8,206,588	\$8,639,272	\$9,094,819	\$9,574,441	\$10,079,413	\$10,611,077	\$11,170,847
\$ Allocation	\$256,338,943	\$9,064,667	\$8,631,983	\$8,176,435	\$7,696,813	\$7,191,842	\$6,660,178	\$6,109,408
		\$17,271,255	\$17,271,255	\$17,271,255	\$17,271,255	\$17,271,255	\$17,271,255	\$17,271,255
		\$4,986,305	\$103,625,577	\$112,720,396	\$122,394,838	\$132,374,251	\$142,985,328	\$154,156,175
		\$185,696,939	\$194,328,922	\$202,505,357	\$210,252,171	\$217,384,013	\$224,054,190	\$230,154,599
		\$280,683,244	\$297,954,499	\$315,225,754	\$332,497,008	\$349,768,263	\$367,039,518	\$384,310,773
<b>Allocation to Existing Customers</b>								
% Allocation	58.01%	\$11,339,101	\$11,986,943	\$12,566,376	\$13,229,074	\$13,926,796	\$14,661,400	\$15,434,839
\$ Allocation	\$354,185,333	\$12,524,714	\$11,926,872	\$11,297,439	\$10,634,742	\$9,937,019	\$9,202,415	\$8,428,976
		\$23,863,815	\$23,863,815	\$23,863,815	\$23,863,815	\$23,863,815	\$23,863,815	\$23,863,815
		\$131,243,250	\$143,180,193	\$155,746,570	\$168,975,643	\$182,902,440	\$197,563,840	\$211,998,679
		\$256,578,776	\$268,505,648	\$279,803,087	\$290,437,828	\$300,374,262	\$309,577,262	\$318,006,639
		\$387,822,026	\$411,685,841	\$435,549,657	\$459,413,472	\$483,277,287	\$507,141,102	\$531,004,917

**Notes:**

- The interest rates for each issue were provided by the City in an email from the Deputy Finance Director dated January 23, 2007.

**Table 3.8  
Projected New Debt Service**

Item	Costs	FY 2036	FY 2037	FY 2038	FY 2039	FY 2040	FY 2041	FY 2042
<b>Collection/Phase 1A</b>								
Debt Issuance Year	2008	\$3,351,240	\$3,518,802	\$3,694,742				
Debt Issuance Amount	\$59,637,100	\$528,239	\$360,677	\$184,737				
Number of Years	30	\$3,879,479	\$3,879,479	\$3,879,479				
Interest Rate <sup>(1)</sup>	5.00%	\$52,423,556	\$55,942,358	\$59,637,100				
		\$56,201,854	\$56,562,531	\$56,747,268				
		\$108,625,410	\$112,504,889	\$116,384,367				
		Annual Principal Portion >	Annual Principal Portion >	Annual Principal Portion >				
		Annual Interest Portion >	Annual Interest Portion >	Annual Interest Portion >				
		Annual Principal + Interest >	Annual Principal + Interest >	Annual Principal + Interest >				
		Cumulative Principal Portion >	Cumulative Principal Portion >	Cumulative Principal Portion >				
		Cumulative Interest Portion >	Cumulative Interest Portion >	Cumulative Interest Portion >				
		Cumulative Principal + Interest >	Cumulative Principal + Interest >	Cumulative Principal + Interest >				
<b>Collection/Phase 1B</b>								
Debt Issuance Year	2009	\$7,649,990	\$8,032,489	\$8,434,113	\$8,855,819			
Debt Issuance Amount	\$142,942,429	\$1,648,621	\$1,266,121	\$864,497	\$442,791			
Number of Years	30	\$9,298,610	\$9,298,610	\$9,298,610	\$9,298,610			
Interest Rate <sup>(1)</sup>	5.00%	\$117,620,007	\$125,652,496	\$134,086,610	\$142,942,429			
		\$133,442,466	\$134,708,587	\$135,573,084	\$136,015,875			
		\$251,062,473	\$260,361,084	\$269,659,694	\$278,958,304			
		Annual Principal Portion >	Annual Principal Portion >	Annual Principal Portion >	Annual Principal Portion >			
		Annual Interest Portion >	Annual Interest Portion >	Annual Interest Portion >	Annual Interest Portion >			
		Annual Principal + Interest >	Annual Principal + Interest >	Annual Principal + Interest >	Annual Principal + Interest >			
		Cumulative Principal Portion >	Cumulative Principal Portion >	Cumulative Principal Portion >	Cumulative Principal Portion >			
		Cumulative Interest Portion >	Cumulative Interest Portion >	Cumulative Interest Portion >	Cumulative Interest Portion >			
		Cumulative Principal + Interest >	Cumulative Principal + Interest >	Cumulative Principal + Interest >	Cumulative Principal + Interest >			
<b>Collection</b>								
Debt Issuance Year	2010	\$1,518,193	\$1,594,103	\$1,673,808	\$1,757,499	\$1,845,374		
Debt Issuance Amount	\$29,786,310	\$419,449	\$343,539	\$263,934	\$180,144	\$92,269		
Number of Years	30	\$1,937,642	\$1,937,642	\$1,937,642	\$1,937,642	\$1,937,642		
Interest Rate <sup>(1)</sup>	5.00%	\$22,915,527	\$24,509,630	\$26,183,438	\$27,940,937	\$29,786,310		
		\$27,463,171	\$27,806,710	\$28,070,544	\$28,250,688	\$28,342,957		
		\$50,378,698	\$52,316,340	\$54,253,982	\$56,191,625	\$58,129,267		
		Annual Principal Portion >	Annual Principal Portion >	Annual Principal Portion >	Annual Principal Portion >	Annual Principal Portion >		
		Annual Interest Portion >	Annual Interest Portion >	Annual Interest Portion >	Annual Interest Portion >	Annual Interest Portion >		
		Annual Principal + Interest >	Annual Principal + Interest >	Annual Principal + Interest >	Annual Principal + Interest >	Annual Principal + Interest >		
		Cumulative Principal Portion >	Cumulative Principal Portion >	Cumulative Principal Portion >	Cumulative Principal Portion >	Cumulative Principal Portion >		
		Cumulative Interest Portion >	Cumulative Interest Portion >	Cumulative Interest Portion >	Cumulative Interest Portion >	Cumulative Interest Portion >		
		Cumulative Principal + Interest >	Cumulative Principal + Interest >	Cumulative Principal + Interest >	Cumulative Principal + Interest >	Cumulative Principal + Interest >		
<b>Collection/Phase 2</b>								
Debt Issuance Year	2012	\$10,218,790	\$10,780,823	\$11,373,768	\$11,999,326	\$12,659,288	\$13,355,549	\$14,090,104
Debt Issuance Amount	\$216,044,997	\$4,646,271	\$4,084,237	\$3,491,292	\$2,865,735	\$2,205,772	\$1,509,511	\$774,956
Number of Years	30	\$14,865,060	\$14,865,060	\$14,865,060	\$14,865,060	\$14,865,060	\$14,865,060	\$14,865,060
Interest Rate <sup>(1)</sup>	5.50%	\$141,786,138	\$152,566,961	\$163,940,730	\$175,940,035	\$188,599,344	\$201,954,893	\$216,044,997
		\$214,975,307	\$222,550,836	\$225,416,571	\$227,622,343	\$229,131,854	\$229,906,810	\$229,906,810
		\$356,761,446	\$371,626,506	\$386,491,566	\$401,356,626	\$416,221,687	\$431,086,747	\$445,951,807
		Annual Principal Portion >	Annual Principal Portion >	Annual Principal Portion >	Annual Principal Portion >	Annual Principal Portion >	Annual Principal Portion >	Annual Principal Portion >
		Annual Interest Portion >	Annual Interest Portion >	Annual Interest Portion >	Annual Interest Portion >	Annual Interest Portion >	Annual Interest Portion >	Annual Interest Portion >
		Annual Principal + Interest >	Annual Principal + Interest >	Annual Principal + Interest >	Annual Principal + Interest >	Annual Principal + Interest >	Annual Principal + Interest >	Annual Principal + Interest >
		Cumulative Principal Portion >	Cumulative Principal Portion >	Cumulative Principal Portion >	Cumulative Principal Portion >	Cumulative Principal Portion >	Cumulative Principal Portion >	Cumulative Principal Portion >
		Cumulative Interest Portion >	Cumulative Interest Portion >	Cumulative Interest Portion >	Cumulative Interest Portion >	Cumulative Interest Portion >	Cumulative Interest Portion >	Cumulative Interest Portion >
		Cumulative Principal + Interest >	Cumulative Principal + Interest >	Cumulative Principal + Interest >	Cumulative Principal + Interest >	Cumulative Principal + Interest >	Cumulative Principal + Interest >	Cumulative Principal + Interest >
<b>Collection/Phase 3</b>								
Debt Issuance Year	2020	\$5,271,170	\$5,561,085	\$5,866,944	\$6,189,626	\$6,530,056	\$6,889,209	\$7,268,115
Debt Issuance Amount	\$162,113,440	\$5,883,108	\$5,593,194	\$4,964,652	\$4,265,070	\$3,486,163	\$2,655,070	\$1,768,115
Number of Years	30	\$11,542,278	\$11,542,278	\$11,542,278	\$11,542,278	\$11,542,278	\$11,542,278	\$11,542,278
Interest Rate <sup>(1)</sup>	5.50%	\$60,419,008	\$65,960,092	\$71,847,037	\$78,036,663	\$84,566,719	\$91,455,927	\$98,724,043
		\$129,203,725	\$134,796,919	\$140,084,253	\$145,048,905	\$149,673,128	\$153,938,198	\$157,843,361
		\$189,622,733	\$200,777,012	\$211,931,290	\$223,085,568	\$234,239,847	\$245,394,125	\$256,548,404
		Annual Principal Portion >	Annual Principal Portion >	Annual Principal Portion >	Annual Principal Portion >	Annual Principal Portion >	Annual Principal Portion >	Annual Principal Portion >
		Annual Interest Portion >	Annual Interest Portion >	Annual Interest Portion >	Annual Interest Portion >	Annual Interest Portion >	Annual Interest Portion >	Annual Interest Portion >
		Annual Principal + Interest >	Annual Principal + Interest >	Annual Principal + Interest >	Annual Principal + Interest >	Annual Principal + Interest >	Annual Principal + Interest >	Annual Principal + Interest >
		Cumulative Principal Portion >	Cumulative Principal Portion >	Cumulative Principal Portion >	Cumulative Principal Portion >	Cumulative Principal Portion >	Cumulative Principal Portion >	Cumulative Principal Portion >
		Cumulative Interest Portion >	Cumulative Interest Portion >	Cumulative Interest Portion >	Cumulative Interest Portion >	Cumulative Interest Portion >	Cumulative Interest Portion >	Cumulative Interest Portion >
		Cumulative Principal + Interest >	Cumulative Principal + Interest >	Cumulative Principal + Interest >	Cumulative Principal + Interest >	Cumulative Principal + Interest >	Cumulative Principal + Interest >	Cumulative Principal + Interest >
<b>Total</b>								
Debt Issuance Amount	\$610,524,276	\$28,009,383	\$29,487,301	\$31,043,376	\$28,802,270	\$21,034,718	\$20,244,758	\$21,358,220
		Annual Principal Portion >	Annual Principal Portion >	Annual Principal Portion >	Annual Principal Portion >	Annual Principal Portion >	Annual Principal Portion >	Annual Principal Portion >
		Annual Interest Portion >	Annual Interest Portion >	Annual Interest Portion >	Annual Interest Portion >	Annual Interest Portion >	Annual Interest Portion >	Annual Interest Portion >
		Annual Principal + Interest >	Annual Principal + Interest >	Annual Principal + Interest >	Annual Principal + Interest >	Annual Principal + Interest >	Annual Principal + Interest >	Annual Principal + Interest >
		Cumulative Principal Portion >	Cumulative Principal Portion >	Cumulative Principal Portion >	Cumulative Principal Portion >	Cumulative Principal Portion >	Cumulative Principal Portion >	Cumulative Principal Portion >
		Cumulative Interest Portion >	Cumulative Interest Portion >	Cumulative Interest Portion >	Cumulative Interest Portion >	Cumulative Interest Portion >	Cumulative Interest Portion >	Cumulative Interest Portion >
		Cumulative Principal + Interest >	Cumulative Principal + Interest >	Cumulative Principal + Interest >	Cumulative Principal + Interest >	Cumulative Principal + Interest >	Cumulative Principal + Interest >	Cumulative Principal + Interest >
<b>Allocation to New Connections</b>								
% Allocation	41.99%	\$11,760,213	\$12,380,742	\$13,034,086	\$12,093,120	\$8,831,782	\$8,500,104	\$8,967,610
\$ Allocation	\$256,338,943	\$5,511,042	\$4,890,513	\$4,237,168	\$3,549,270	\$2,906,429	\$2,424,555	\$1,957,050
		Annual Principal Portion >	Annual Principal Portion >	Annual Principal Portion >	Annual Principal Portion >	Annual Principal Portion >	Annual Principal Portion >	Annual Principal Portion >
		Annual Interest Portion >	Annual Interest Portion >	Annual Interest Portion >	Annual Interest Portion >	Annual Interest Portion >	Annual Interest Portion >	Annual Interest Portion >
		Annual Principal + Interest >	Annual Principal + Interest >	Annual Principal + Interest >	Annual Principal + Interest >	Annual Principal + Interest >	Annual Principal + Interest >	Annual Principal + Interest >
		Cumulative Principal Portion >	Cumulative Principal Portion >	Cumulative Principal Portion >	Cumulative Principal Portion >	Cumulative Principal Portion >	Cumulative Principal Portion >	Cumulative Principal Portion >
		Cumulative Interest Portion >	Cumulative Interest Portion >	Cumulative Interest Portion >	Cumulative Interest Portion >	Cumulative Interest Portion >	Cumulative Interest Portion >	Cumulative Interest Portion >
		Cumulative Principal + Interest >	Cumulative Principal + Interest >	Cumulative Principal + Interest >	Cumulative Principal + Interest >	Cumulative Principal + Interest >	Cumulative Principal + Interest >	Cumulative Principal + Interest >
<b>Allocation to Existing Customers</b>								
% Allocation	58.01%	\$16,249,170	\$17,106,559	\$18,009,290	\$16,709,150	\$12,202,936	\$11,744,654	\$12,390,610
\$ Allocation	\$354,185,333	\$7,614,646	\$6,757,256	\$5,854,526	\$4,904,051	\$4,015,834	\$3,350,025	\$2,704,069
		Annual Principal Portion >	Annual Principal Portion >	Annual Principal Portion >	Annual Principal Portion >	Annual Principal Portion >	Annual Principal Portion >	Annual Principal Portion >
		Annual Interest Portion >	Annual Interest Portion >	Annual Interest Portion >	Annual Interest Portion >	Annual Interest Portion >	Annual Interest Portion >	Annual Interest Portion >
		Annual Principal + Interest >	Annual Principal + Interest >	Annual Principal + Interest >	Annual Principal + Interest >	Annual Principal + Interest >	Annual Principal + Interest >	Annual Principal + Interest >
		Cumulative Principal Portion >	Cumulative Principal Portion >	Cumulative Principal Portion >	Cumulative Principal Portion >	Cumulative Principal Portion >	Cumulative Principal Portion >	Cumulative Principal Portion >
		Cumulative Interest Portion >	Cumulative Interest Portion >	Cumulative Interest Portion >	Cumulative Interest Portion >	Cumulative Interest Portion >	Cumulative Interest Portion >	Cumulative Interest Portion >
		Cumulative Principal + Interest >	Cumulative Principal + Interest >	Cumulative Principal + Interest >	Cumulative Principal + Interest >	Cumulative Principal + Interest >	Cumulative Principal + Interest >	Cumulative Principal + Interest >

**Notes:**

1. The interest rates for each issue were provided by the City in an email from the Deputy Finance Director dated January 23, 2007.



Table 3.9  
Alt 2 Projected Capacity Charge Unit Costs  
Total Financing Costs Included

Facility Description	FY 2008	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
<b>Capital and Interest Costs <sup>(1)</sup></b>																
Capital Costs for New Customers	\$176,575	\$190,542	\$200,069	\$210,073	\$220,576	\$231,605	\$243,185	\$255,345	\$268,112	\$281,517	\$295,593	\$310,373	\$325,892	\$342,186	\$359,296	\$377,260
Total Interest on Debt	\$261,799	\$261,799	\$261,799	\$261,799	\$261,799	\$261,799	\$261,799	\$261,799	\$261,799	\$261,799	\$261,799	\$261,799	\$261,799	\$261,799	\$261,799	\$261,799
Total Costs for New Customers	\$438,374	\$452,341	\$461,868	\$471,871	\$482,375	\$493,404	\$504,984	\$517,143	\$529,911	\$543,316	\$557,392	\$572,172	\$587,690	\$603,965	\$621,094	\$639,059
<b>Cost Allocation</b>																
Flow	\$316,142	\$326,214	\$333,085	\$340,299	\$347,874	\$355,827	\$364,179	\$372,947	\$382,155	\$391,822	\$401,974	\$412,632	\$423,824	\$435,575	\$447,914	\$460,869
BOD	\$100,943	\$104,159	\$106,353	\$108,656	\$111,075	\$113,614	\$116,281	\$119,081	\$122,021	\$125,108	\$128,349	\$131,752	\$135,325	\$139,078	\$143,017	\$147,154
TSS	\$21,290	\$21,966	\$22,431	\$22,916	\$23,427	\$23,962	\$24,525	\$25,115	\$25,735	\$26,386	\$27,070	\$27,787	\$28,541	\$29,332	\$30,163	\$31,036
<b>Capacity Added</b>																
Flow (million gallons-day)	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7
BOD (pounds-day)	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300
TSS (pounds-day)	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100
<b>Unit Costs</b>																
Flow (per gallons-day)	\$20,136	\$20,778	\$21,216	\$21,675	\$22,158	\$22,664	\$23,196	\$23,755	\$24,341	\$24,957	\$25,603	\$26,282	\$26,995	\$27,744	\$28,530	\$29,355
BOD (per pound-day)	\$1,858,986	\$1,918,213	\$1,958,614	\$2,001,035	\$2,045,577	\$2,092,346	\$2,141,454	\$2,193,017	\$2,247,158	\$2,304,007	\$2,363,697	\$2,426,372	\$2,492,181	\$2,561,281	\$2,633,835	\$2,710,017
TSS (per pound-day)	\$493,959	\$509,696	\$520,431	\$531,703	\$543,539	\$555,966	\$569,014	\$582,716	\$597,102	\$612,207	\$628,068	\$644,721	\$662,208	\$680,568	\$699,847	\$720,090
<b>Equivalent Single Family Dwelling Unit Costs</b>																
Flow	\$5,840	\$6,026	\$6,153	\$6,286	\$6,426	\$6,573	\$6,727	\$6,889	\$7,059	\$7,237	\$7,425	\$7,622	\$7,829	\$8,046	\$8,274	\$8,513
BOD	\$899	\$928	\$947	\$966	\$989	\$1,012	\$1,036	\$1,061	\$1,087	\$1,114	\$1,143	\$1,174	\$1,206	\$1,239	\$1,274	\$1,311
TSS	\$239	\$247	\$252	\$257	\$263	\$269	\$275	\$282	\$289	\$296	\$304	\$312	\$320	\$329	\$339	\$348
Total	\$6,978	\$7,200	\$7,352	\$7,511	\$7,678	\$7,854	\$8,038	\$8,232	\$8,435	\$8,648	\$8,872	\$9,107	\$9,354	\$9,614	\$9,886	\$10,172

**Notes:**

1. Assumes all capital costs are debt financed and includes all financing costs. Capital costs for new customers are from Table 3.3.

Table 3.9  
Alt 2 Projected Capacity Charge Unit Costs  
Total Financing Costs Included

Facility Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	FY 2035	FY 2036	FY 2037
<b>Capital and Interest Costs <sup>(1)</sup></b>																
Capital Costs for New Customers	\$396,123	\$415,929	\$436,726	\$458,562	\$481,490	\$505,565	\$530,843	\$557,385	\$585,255	\$614,517	\$645,243	\$677,505	\$711,381	\$746,950	\$784,297	\$823,512
Total Interest on Debt	\$261,799	\$261,799	\$261,799	\$261,799	\$261,799	\$261,799	\$261,799	\$261,799	\$261,799	\$261,799	\$261,799	\$261,799	\$261,799	\$261,799	\$261,799	\$261,799
Total Costs for New Customers	\$657,922	\$677,728	\$698,525	\$720,361	\$743,289	\$767,364	\$792,642	\$819,184	\$847,053	\$876,316	\$907,042	\$939,304	\$973,179	\$1,008,748	\$1,046,096	\$1,085,311
<b>Cost Allocation</b>																
Flow	\$474,473	\$488,756	\$503,754	\$519,502	\$536,037	\$553,398	\$571,628	\$590,770	\$610,868	\$631,971	\$654,130	\$677,396	\$701,826	\$727,477	\$754,411	\$782,892
BOD	\$151,497	\$156,058	\$160,847	\$165,875	\$171,155	\$176,698	\$182,519	\$188,631	\$195,048	\$201,788	\$208,861	\$216,290	\$224,091	\$232,281	\$240,881	\$249,911
TSS	\$31,952	\$32,914	\$33,924	\$34,984	\$36,098	\$37,267	\$38,495	\$39,784	\$41,137	\$42,558	\$44,050	\$45,617	\$47,262	\$48,990	\$50,804	\$52,708
<b>Capacity Added</b>																
Flow (million gallons-day)	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7
BOD (pounds-day)	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300
TSS (pounds-day)	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100
<b>Unit Costs</b>																
Flow (per gallons-day)	\$30,221	\$31,131	\$32,086	\$33,089	\$34,142	\$35,248	\$36,409	\$37,629	\$38,909	\$40,253	\$41,664	\$43,146	\$44,702	\$46,336	\$48,052	\$49,853
BOD (per pound-day)	\$2,790,008	\$2,873,999	\$2,962,190	\$3,054,789	\$3,152,019	\$3,254,110	\$3,361,306	\$3,473,862	\$3,592,045	\$3,716,138	\$3,846,435	\$3,983,247	\$4,126,900	\$4,277,735	\$4,436,112	\$4,602,408
TSS (per pound-day)	\$741,345	\$763,662	\$787,095	\$811,701	\$837,536	\$864,663	\$893,146	\$923,054	\$954,457	\$987,430	\$1,022,052	\$1,058,405	\$1,096,575	\$1,136,654	\$1,178,737	\$1,222,925
<b>Equivalent Single Family Dwelling Unit Cost</b>																
Flow	\$8,764	\$9,028	\$9,305	\$9,596	\$9,901	\$10,222	\$10,559	\$10,912	\$11,284	\$11,673	\$12,083	\$12,512	\$12,964	\$13,437	\$13,935	\$14,457
BOD	\$1,350	\$1,390	\$1,433	\$1,478	\$1,525	\$1,574	\$1,626	\$1,680	\$1,738	\$1,798	\$1,861	\$1,927	\$1,996	\$2,069	\$2,146	\$2,226
TSS	\$359	\$369	\$381	\$393	\$405	\$418	\$432	\$446	\$462	\$478	\$494	\$512	\$530	\$550	\$570	\$592
Total	\$10,472	\$10,788	\$11,119	\$11,466	\$11,831	\$12,214	\$12,617	\$13,039	\$13,483	\$13,949	\$14,438	\$14,951	\$15,490	\$16,057	\$16,651	\$17,275

**Notes:**

1. Assumes all capital costs are debt financed and includes all financing costs. Capital costs for new customers are from Table 3.3.

Table 3.9  
 Alt 2 Projected Capacity Charge Unit Costs  
 Total Financing Costs Included

Facility Description	FY 2038	FY 2039	FY 2040	FY 2041	FY 2042	FY 2043	FY 2044	FY 2045	FY 2046	FY 2047	FY 2048	FY 2049
<b>Capital and Interest Costs <sup>(1)</sup></b>												
Capital Costs for New Customers	\$864,688	\$907,922	\$953,318	\$1,000,984	\$1,051,033	\$1,103,585	\$1,158,764	\$1,216,702	\$1,277,537	\$1,341,414	\$1,408,485	\$1,478,909
Total Interest on Debt	\$261,799	\$261,799	\$261,799	\$261,799	\$261,799	\$261,799	\$261,799	\$261,799	\$261,799	\$261,799	\$261,799	\$261,799
Total Costs for New Customers	\$1,126,486	\$1,169,721	\$1,215,117	\$1,262,783	\$1,312,832	\$1,365,383	\$1,420,563	\$1,478,501	\$1,539,336	\$1,603,213	\$1,670,284	\$1,740,708
<b>Cost Allocation</b>												
Flow	\$812,386	\$843,566	\$876,304	\$910,679	\$946,773	\$984,671	\$1,024,465	\$1,066,248	\$1,110,121	\$1,156,187	\$1,204,556	\$1,255,344
BOD	\$259,392	\$269,348	\$279,801	\$290,777	\$302,301	\$314,402	\$327,108	\$340,449	\$354,458	\$369,166	\$384,611	\$400,827
TSS	\$54,708	\$56,807	\$59,012	\$61,327	\$63,758	\$66,310	\$68,990	\$71,803	\$74,758	\$77,860	\$81,117	\$84,537
<b>Capacity Added</b>												
Flow (million gallons-day)	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7
BOD (pounds-day)	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300
TSS (pounds-day)	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100
<b>Unit Costs</b>												
Flow (per gallons-day)	\$51,744	\$53,730	\$55,816	\$58,005	\$60,304	\$62,718	\$65,253	\$67,914	\$70,708	\$73,642	\$76,723	\$79,958
BOD (per pound-day)	\$4,777,019	\$4,960,360	\$5,152,869	\$5,355,003	\$5,567,243	\$5,790,096	\$6,024,091	\$6,269,786	\$6,527,765	\$6,798,644	\$7,083,066	\$7,381,710
TSS (per pound-day)	\$1,269,321	\$1,318,038	\$1,369,190	\$1,422,900	\$1,479,295	\$1,538,510	\$1,600,686	\$1,665,970	\$1,734,519	\$1,806,495	\$1,882,070	\$1,961,424
<b>Equivalent Single Family Dwelling Unit Cost</b>												
Flow	\$15,006	\$15,582	\$16,187	\$16,821	\$17,488	\$18,188	\$18,923	\$19,695	\$20,505	\$21,356	\$22,250	\$23,188
BOD	\$2,311	\$2,399	\$2,493	\$2,590	\$2,693	\$2,801	\$2,914	\$3,033	\$3,158	\$3,289	\$3,426	\$3,571
TSS	\$614	\$638	\$662	\$688	\$716	\$744	\$774	\$806	\$839	\$874	\$910	\$949
Total	\$17,931	\$18,619	\$19,341	\$20,100	\$20,897	\$21,733	\$22,611	\$23,534	\$24,502	\$25,519	\$26,586	\$27,707

**Notes:**

1. Assumes all capital costs are debt financed and includes all financing costs. Capital costs for new customers are from Table 3.3.

**Table 3.10**

**Alt 2 Projected Single Family and Restaurant Capacity Charges, FYs 2007 - 2011**  
**Total Financing Costs Included**

**Single Family Residential**

	<u>Flow</u>	<u>BOD</u>	<u>TSS</u>	
	\$/gallons/day	\$/lb/day	\$/lb/day	
<b>Unit Costs</b>				
FY 2007	\$20.778	\$1,918.213	\$509.696	
FY 2008	\$21.216	\$1,958.614	\$520.431	
FY 2009	\$21.675	\$2,001.035	\$531.703	
FY 2010	\$22.158	\$2,045.577	\$543.539	
FY 2011	\$22.664	\$2,092.346	\$555.966	
<b>Estimated Peak Month Discharge</b>	290	< gallons per day		
mgd or mg/l	amount > 0.000290	200	200	
	unit of measure > mgd	mg/l	mg/l	
gallons or pounds per day	amount > 290	0.483720	0.483720	
	unit of measure > gallons/day	pounds/day	pounds/day	
gallons or pounds per month	amount > 8,821	14.71	14.71	
	unit of measure > gallons/month	pounds/month	pounds/month	
<b>Capacity Charge</b>	<u>Flow</u>	<u>BOD</u>	<u>TSS</u>	<u>Total</u>
FY 2007	\$6,025.61	\$927.88	\$246.55	\$7,200
FY 2008	\$6,152.52	\$947.42	\$251.74	\$7,352
FY 2009	\$6,285.77	\$967.94	\$257.20	\$7,511
FY 2010	\$6,425.69	\$989.49	\$262.92	\$7,678
FY 2011	\$6,572.61	\$1,012.11	\$268.93	\$7,854

**Restaurant (Commercial Group 4)**

	<u>Flow</u>	<u>BOD</u>	<u>TSS</u>	
	\$/gallons/day	\$/lb/day	\$/lb/day	
<b>Unit Costs</b>				
FY 2007	\$20.778	\$1,918.213	\$509.696	
FY 2008	\$21.216	\$1,958.614	\$520.431	
FY 2009	\$21.675	\$2,001.035	\$531.703	
FY 2010	\$22.158	\$2,045.577	\$543.539	
FY 2011	\$22.664	\$2,092.346	\$555.966	
<b>Estimated Peak Month Discharge</b>	3,000	< gallons per day		
mgd or mg/l	amount > 0.003000	1,000	600	
	unit of measure > mgd	mg/l	mg/l	
gallons or pounds per day	amount > 3,000	25.020000	15.012000	
	unit of measure > gallons/day	pounds/day	pounds/day	
gallons or pounds per month	amount > 91,250	761.03	456.62	
	unit of measure > gallons/month	pounds/month	pounds/month	
<b>Capacity Charge</b>	<u>Flow</u>	<u>BOD</u>	<u>TSS</u>	<u>Total</u>
FY 2007	\$62,333.87	\$47,993.69	\$7,651.56	\$117,979
FY 2008	\$63,646.73	\$49,004.53	\$7,812.71	\$120,464
FY 2009	\$65,025.24	\$50,065.90	\$7,981.93	\$123,073
FY 2010	\$66,472.67	\$51,180.34	\$8,159.60	\$125,813
FY 2011	\$67,992.47	\$52,350.51	\$8,346.16	\$128,689

Table 3.11  
 Art. 2 Projected Revenue  
 Total Financing Costs Included

Item	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
<b>New Connections (EDUs) <sup>(1)</sup></b>																		
Subject to Current Charges	1,857	1,841	698	478	546	408	0	0	0	0	0	0	0	0	0	0	0	0
Subject to New Charges	0	415	1,423	1,598	1,573	1,530	1,773	1,804	1,836	1,868	1,901	1,934	1,968	2,002	2,037	2,073	2,109	2,146
<b>Equivalent Dwelling Unit Charges <sup>(2)</sup></b>																		
Current Charges	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500
Projected New Charges	\$7,200	\$7,352	\$7,511	\$7,678	\$7,854	\$8,038	\$8,232	\$8,435	\$8,648	\$8,872	\$9,107	\$9,354	\$9,614	\$9,886	\$10,172	\$10,472	\$10,788	
<b>Revenue from Capacity Charge</b>																		
Annual																		
Current Charges	\$928,500	\$1,024,250	\$349,000	\$239,000	\$273,000	\$204,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Projected New Charges	\$0	\$1,494,007	\$10,461,442	\$12,002,433	\$12,077,649	\$12,016,080	\$14,253,891	\$14,852,553	\$15,485,569	\$16,155,174	\$16,863,751	\$17,613,847	\$18,408,179	\$19,249,648	\$20,141,351	\$21,086,596	\$22,088,914	\$23,152,074
Cumulative	\$928,500	\$3,446,757	\$14,257,200	\$26,496,632	\$38,649,281	\$51,069,361	\$65,323,252	\$80,175,804	\$95,661,373	\$111,816,547	\$128,680,298	\$146,294,145	\$164,702,324	\$183,951,971	\$204,093,322	\$225,179,919	\$247,266,833	\$270,420,907

**Notes:**

1. See Table 3.5
2. Current charges are for the Sewer Bond Redemption Charge. Projected new charges are from Table 3.9.

Table 3.11  
 Alt 2 Projected Revenue  
 Total Financing Costs Included

Item	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	FY 2035	FY 2036	FY 2037	FY 2038	FY 2039	FY 2040	FY 2041	
<b>New Connections (EDUs) <sup>(1)</sup></b>																			
Subject to Current Charges	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Subject to New Charges	2,184	2,222	2,261	2,300	2,341	2,382	2,423	2,206	0	0	0	0	0	0	0	0	0	0	0
<b>Equivalent Dwelling Unit Charges <sup>(2)</sup></b>																			
Current Charges	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500
Projected New Charges	\$11,119	\$11,466	\$11,831	\$12,214	\$12,617	\$13,039	\$13,483	\$13,949	\$14,438	\$14,951	\$15,490	\$16,057	\$16,651	\$17,275	\$17,931	\$18,619	\$19,341	\$500	\$20,100
<b>Revenue from Capacity Charge</b>																			
Annual																			
Current Charges	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Projected New Charges	\$24,280,103	\$25,477,298	\$26,748,249	\$28,097,858	\$29,531,359	\$31,054,341	\$32,672,773	\$30,776,848	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Cumulative	\$394,701,010	\$320,178,308	\$346,926,557	\$375,024,415	\$404,555,775	\$435,610,116	\$468,282,889	\$499,059,738	\$499,059,738	\$499,059,738	\$499,059,738	\$499,059,738	\$499,059,738	\$499,059,738	\$499,059,738	\$499,059,738	\$499,059,738	\$499,059,738	\$499,059,738

**Notes:**

1. See Table 3.5
2. Current charges are for the Sewer Bond Redemption Charge. Projected new charges are from Table 3.9.

**Table 3.11**  
**Alt 2 Projected Revenue**  
**Total Financing Costs Included**

Item	FY 2042	FY 2043	FY 2044	FY 2045	FY 2046	FY 2047	FY 2048	FY 2049	Total
<b>New Connections (EDUs) <sup>(1)</sup></b>									
Subject to Current Charges	0	0	0	0	0	0	0	0	5,828
Subject to New Charges	0	0	0	0	0	0	0	0	<u>48,310</u>
									54,138
<b>Equivalent Dwelling Unit Charges <sup>(2)</sup></b>									
Current Charges	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500
Projected New Charges	\$20,897	\$21,733	\$22,611	\$23,534	\$24,502	\$25,519	\$26,586	\$27,707	
<b>Revenue from Capacity Charge</b>									
Annual									
Current Charges	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Projected New Charges	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Cumulative	\$-499,059,738	\$-499,059,738	\$-499,059,738	\$-499,059,738	\$-499,059,738	\$-499,059,738	\$-499,059,738	\$-499,059,738	\$-499,059,738

**Notes:**

1. See Table 3.5
2. Current charges are for the Sewer Bond Redemption Charge. Projected new charges are from Table 3.9.

Table 3.12  
Present Value of Projected New Debt Service

Item	Costs	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
<b>Total Debt Service</b>													
Annual Principal Portion >			\$897,624	\$3,093,994	\$3,697,020	\$3,981,871	\$7,058,550	\$7,426,391	\$7,813,443	\$8,220,714	\$8,649,261	\$9,100,199	\$9,574,699
Annual Interest Portion >			\$2,981,855	\$10,084,095	\$11,418,711	\$11,233,860	\$22,922,241	\$22,554,401	\$22,167,348	\$21,760,078	\$21,331,531	\$20,880,593	\$20,406,092
Annual Principal + Interest >			\$3,879,479	\$13,178,089	\$15,115,731	\$15,115,731	\$29,990,792	\$29,980,792	\$29,980,792	\$29,980,792	\$29,980,792	\$29,980,792	\$29,980,792
Cumulative Principal Portion >			\$897,624	\$3,991,618	\$7,688,638	\$11,570,509	\$18,629,059	\$26,055,450	\$33,868,893	\$42,089,607	\$50,738,868	\$59,839,067	\$69,413,766
Cumulative Interest Portion >			\$2,981,855	\$13,065,950	\$24,484,661	\$35,718,521	\$58,640,763	\$81,195,164	\$103,362,512	\$125,122,589	\$146,454,120	\$167,334,713	\$187,740,805
Cumulative Principal + Interest >			\$3,879,479	\$17,057,568	\$32,173,299	\$47,289,030	\$77,269,822	\$107,250,613	\$137,231,405	\$167,212,197	\$197,192,966	\$227,173,780	\$257,154,571
<b>Present Value Factors <sup>(1)</sup></b>													
Years Past Present Year (2006) >		2	3	4	5	6	7	8	9	10	11	12	13
Rate for Present Value Factor >		4.85%	4.85%	4.85%	4.85%	4.85%	4.85%	4.85%	4.85%	4.85%	4.85%	4.85%	4.85%
Present Value Factor >		0.9096	0.8676	0.8274	0.7891	0.7526	0.7178	0.6846	0.6530	0.6228	0.5939	0.5665	0.5403
<b>Present Value of Total Interest</b>													
Annual Interest Portion >		\$2,586,909	\$8,343,787	\$9,011,040	\$8,455,083	\$8,455,083	\$16,454,248	\$15,441,298	\$14,474,309	\$13,551,148	\$12,669,785	\$11,828,280	\$11,024,787
Cumulative Interest Portion >		\$2,586,909	\$10,930,696	\$19,941,736	\$28,396,829	\$36,852,912	\$44,851,077	\$60,292,376	\$74,766,684	\$88,317,832	\$100,987,617	\$112,815,897	\$123,840,684
<b>Allocation to New Customers</b>													
% Allocation	41.98%												
\$ Allocation		\$1,086,158	\$3,503,280	\$3,783,437	\$3,550,014	\$3,550,014	\$6,908,594	\$6,483,290	\$6,077,283	\$5,669,679	\$5,319,623	\$4,966,304	\$4,628,943
<b>Allocation to Existing Customers</b>													
% Allocation	58.01%												
\$ Allocation		\$1,500,752	\$4,840,507	\$5,227,602	\$4,905,079	\$4,905,079	\$9,545,654	\$8,955,008	\$8,397,025	\$7,861,469	\$7,350,161	\$6,861,977	\$6,395,844
		\$1,500,752	\$6,341,259	\$11,586,861	\$16,473,940	\$26,019,594	\$31,392,057	\$34,377,602	\$43,374,627	\$51,236,097	\$58,586,258	\$65,448,235	\$71,844,078

**Notes:**

- The present value is the total amount that a series of future payments is worth now. The general formula for all years and the specific calculation for FY 2008 are shown below:  

$$\text{Present Value Factor} = 1 / ((1 + \text{rate})^{\wedge} \text{Years After 2006})$$

$$\text{PV Factor, FY 2008} = 1 / ((1 + .055)^{\wedge} 2) = 0.8996$$
 The rate for the present value factor was provided by the City in an email from the Deputy Finance Director dated January 23, 2007.

Table 3.12  
Present Value of Projected New Debt Service

Item	Costs	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031
<b>Total Debt Service</b>													
Annual Principal Portion >		\$12,312,036	\$12,960,321	\$13,643,240	\$14,362,002	\$15,118,716	\$15,915,389	\$16,754,136	\$17,637,184	\$18,566,878	\$19,545,689	\$20,576,215	\$21,661,196
Annual Interest Portion >		\$28,823,034	\$28,174,549	\$27,491,830	\$26,773,068	\$26,016,354	\$25,219,681	\$24,380,934	\$23,497,886	\$22,568,192	\$21,589,381	\$20,558,855	\$19,473,874
Annual Principal + Interest >		\$41,135,070	\$41,135,070	\$41,135,070	\$41,135,070	\$41,135,070	\$41,135,070	\$41,135,070	\$41,135,070	\$41,135,070	\$41,135,070	\$41,135,070	\$41,135,070
Cumulative Principal Portion >		\$61,725,802	\$94,668,323	\$108,329,563	\$122,691,565	\$137,810,280	\$153,725,669	\$170,479,804	\$188,116,988	\$206,683,667	\$226,229,555	\$246,805,770	\$268,466,966
Cumulative Interest Portion >		\$216,563,639	\$244,738,388	\$272,230,218	\$299,033,286	\$325,019,640	\$350,239,322	\$374,620,256	\$398,118,142	\$420,686,334	\$442,275,715	\$462,894,570	\$482,308,444
Cumulative Principal + Interest >		\$298,289,641	\$339,424,711	\$380,559,781	\$421,694,851	\$462,829,921	\$503,964,991	\$545,100,060	\$586,235,130	\$627,370,200	\$668,505,270	\$709,640,340	\$750,775,410
<b>Present Value Factors <sup>(1)</sup></b>													
Years Past Present Year (2006) >		14	15	16	17	18	19	20	21	22	23	24	25
Rate for Present Value Factor >		4.85%	4.85%	4.85%	4.85%	4.85%	4.85%	4.85%	4.85%	4.85%	4.85%	4.85%	4.85%
Present Value Factor >		0.5153	0.4914	0.4687	0.4470	0.4264	0.4066	0.3878	0.3699	0.3528	0.3365	0.3209	0.3060
<b>Present Value of Total Interest</b>													
Annual Interest Portion >		\$14,851,886	\$13,846,195	\$12,885,720	\$11,966,363	\$11,092,121	\$10,255,087	\$9,455,438	\$8,691,438	\$7,961,432	\$7,263,839	\$6,597,152	\$5,959,835
Cumulative Interest Portion >		\$138,692,570	\$152,538,765	\$165,424,485	\$177,392,848	\$188,484,970	\$198,740,056	\$208,195,494	\$216,886,933	\$224,848,365	\$232,112,204	\$238,709,356	\$244,669,290
<b>Allocation to New Customers</b>													
% Allocation	41.99%	\$6,235,816	\$5,813,559	\$5,410,288	\$5,025,120	\$4,657,215	\$4,305,772	\$3,970,026	\$3,649,247	\$3,342,742	\$3,049,846	\$2,769,326	\$2,502,379
\$ Allocation		\$58,232,421	\$64,045,980	\$69,456,268	\$74,481,388	\$79,138,802	\$83,444,374	\$87,414,389	\$91,063,647	\$94,406,389	\$97,456,234	\$100,226,160	\$102,728,539
<b>Allocation to Existing Customers</b>													
% Allocation	58.01%	\$8,616,071	\$8,032,636	\$7,475,433	\$6,943,243	\$6,434,907	\$5,949,315	\$5,485,412	\$5,042,191	\$4,618,690	\$4,213,993	\$3,827,226	\$3,457,555
\$ Allocation		\$80,480,149	\$88,492,785	\$95,966,217	\$102,911,461	\$109,346,367	\$115,295,682	\$120,781,095	\$125,823,286	\$130,441,976	\$134,655,969	\$138,483,195	\$141,940,751

Notes:

- The present value is the total amount that a series of future payments is worth now. The general formula for all years and the specific calculation for FY 2008 are shown below:  
 $Present\ Value\ Factor = 1 / (1 + rate)^n$  Years After 2006  
 $PV\ Factor, FY\ 2008 = 1 / (1 + .055)^n$ ,  $n = 0.6985$   
 The rate for the present value factor was provided by the City in an email from the Deputy Finance Director dated January 23, 2007.

Table 3.12  
Present Value of Projected New Debt Service

Item	FY 2032	FY 2033	FY 2034	FY 2035	FY 2036	FY 2037	FY 2038	FY 2039	FY 2040	FY 2041	FY 2042	FY 2043
<b>Total Debt Service</b>												
Annual Principal Portion >	\$22,803,515	\$24,006,210	\$25,272,477	\$26,605,686	\$28,009,363	\$29,487,301	\$31,043,376	\$28,802,270	\$21,034,718	\$20,244,758	\$21,358,220	\$7,667,962
Annual Interest Portion >	\$18,331,555	\$17,128,860	\$15,862,593	\$14,529,384	\$13,125,687	\$11,647,768	\$10,091,684	\$8,453,321	\$6,922,263	\$5,774,581	\$4,661,119	\$3,486,417
Annual Principal + Interest >	\$41,135,070	\$41,135,070	\$41,135,070	\$41,135,070	\$41,135,070	\$41,135,070	\$41,135,070	\$37,255,591	\$37,956,981	\$35,019,339	\$26,019,339	\$11,154,278
Cumulative Principal Portion >	\$291,270,481	\$315,276,690	\$340,549,168	\$367,154,854	\$395,164,236	\$424,651,539	\$455,694,914	\$484,497,183	\$505,531,901	\$525,776,659	\$547,134,879	\$554,802,740
Cumulative Interest Portion >	\$500,639,392	\$517,768,660	\$533,631,452	\$548,160,836	\$561,266,523	\$572,924,232	\$583,025,986	\$591,478,307	\$598,401,570	\$604,176,151	\$608,637,270	\$612,323,687
Cumulative Principal + Interest >	\$791,910,480	\$833,045,550	\$874,180,620	\$915,315,690	\$956,450,760	\$997,585,830	\$1,038,720,900	\$1,075,976,491	\$1,103,933,471	\$1,129,952,810	\$1,155,972,149	\$1,167,126,427
<b>Present Value Factors <sup>(1)</sup></b>												
Years Past Present Year (2006) >	26	27	28	29	30	31	32	33	34	35	36	37
Rate for Present Value Factor >	4.85%	4.85%	4.85%	4.85%	4.85%	4.85%	4.85%	4.85%	4.85%	4.85%	4.85%	4.85%
Present Value Factor >	0.2919	0.2784	0.2655	0.2532	0.2415	0.2303	0.2197	0.2095	0.1998	0.1906	0.1818	0.1734
<b>Present Value of Total Interest</b>												
Annual Interest Portion >	\$5,350,816	\$4,766,488	\$4,211,706	\$3,679,278	\$3,170,071	\$2,683,004	\$2,217,043	\$1,771,206	\$1,383,316	\$1,100,589	\$847,279	\$604,432
Cumulative Interest Portion >	\$250,020,106	\$254,788,594	\$259,000,300	\$262,679,578	\$265,849,649	\$268,532,652	\$270,749,686	\$272,520,901	\$273,904,217	\$275,004,806	\$275,852,086	\$276,456,517
<b>Allocation to New Customers</b>												
% Allocation	41.99%											
\$ Allocation	\$2,246,631	\$2,002,131	\$1,768,356	\$1,544,807	\$1,331,008	\$1,126,504	\$930,863	\$743,671	\$580,809	\$482,101	\$355,744	\$253,781
Cumulative Interest Portion >	\$104,975,170	\$106,977,300	\$108,745,656	\$110,290,463	\$111,621,471	\$112,747,976	\$113,678,639	\$114,422,510	\$115,003,318	\$115,465,419	\$115,821,164	\$116,074,944
<b>Allocation to Existing Customers</b>												
% Allocation	58.01%											
\$ Allocation	\$3,104,185	\$2,766,356	\$2,443,350	\$2,134,471	\$1,839,063	\$1,556,499	\$1,286,180	\$1,027,535	\$802,507	\$638,488	\$491,535	\$350,651
Cumulative Interest Portion >	\$145,044,936	\$147,811,294	\$150,254,644	\$152,389,114	\$154,228,178	\$155,784,677	\$157,070,857	\$158,098,392	\$158,900,899	\$159,539,387	\$160,030,922	\$160,381,573

**Notes:**

- The present value is the total amount that a series of future payments is worth now. The general formula for all years and the specific calculation for FY 2008 are shown below:  

$$PV \text{ Factor, FY } 2008 = \frac{1}{(1 + .055)^{n-2}} = 0.6985$$
 The rate for the present value factor was provided by the City in an email from the Deputy Finance Director dated January 23, 2007.

Table 3.13  
 Alt. 3 Projected Capacity Charge Unit Costs  
 Total PV Financing Costs Included

Facility Description	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
<b>Capital and Interest Costs <sup>(1)</sup></b>																
Capital Costs for New Customers	\$176,575	\$190,542	\$200,069	\$210,073	\$220,576	\$231,605	\$243,185	\$255,345	\$268,112	\$281,517	\$295,593	\$310,373	\$325,892	\$342,186	\$359,296	\$377,260
Total PV Interest on Debt	\$115,821	\$115,821	\$115,821	\$115,821	\$115,821	\$115,821	\$115,821	\$115,821	\$115,821	\$115,821	\$115,821	\$115,821	\$115,821	\$115,821	\$115,821	\$115,821
Total Costs for New Customers	\$292,397	\$306,363	\$315,890	\$325,894	\$336,397	\$347,426	\$359,007	\$371,166	\$383,933	\$397,339	\$411,414	\$426,194	\$441,713	\$458,007	\$475,117	\$493,081
<b>Cost Allocation</b>																
Flow	\$210,867	\$220,940	\$227,810	\$235,024	\$242,599	\$250,553	\$258,904	\$267,673	\$276,890	\$286,548	\$296,699	\$307,358	\$318,549	\$330,300	\$342,639	\$355,595
BOD	\$67,329	\$70,545	\$72,739	\$75,042	\$77,461	\$80,001	\$82,667	\$85,467	\$88,407	\$91,494	\$94,735	\$98,138	\$101,712	\$105,464	\$109,404	\$113,540
TSS	\$14,200	\$14,879	\$15,341	\$15,827	\$16,337	\$16,873	\$17,435	\$18,026	\$18,646	\$19,297	\$19,980	\$20,698	\$21,452	\$22,243	\$23,074	\$23,946
<b>Capacity Added</b>																
Flow (million gallons-day)	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7
BOD (pounds-day)	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300
TSS (pounds-day)	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100
<b>Unit Costs</b>																
Flow (per gallons-day)	\$13.431	\$14.073	\$14.510	\$14.970	\$15.452	\$15.959	\$16.491	\$17.049	\$17.636	\$18.251	\$18.898	\$19.577	\$20.290	\$21.038	\$21.824	\$22.649
BOD (per pound-day)	\$1,239,948	\$1,299,175	\$1,339,576	\$1,381,997	\$1,426,539	\$1,473,309	\$1,522,416	\$1,573,979	\$1,628,121	\$1,684,969	\$1,744,659	\$1,807,335	\$1,873,144	\$1,942,243	\$2,014,797	\$2,090,980
TSS (per pound-day)	\$323,472	\$345,209	\$355,944	\$367,216	\$379,062	\$391,479	\$404,527	\$418,228	\$432,615	\$447,720	\$463,581	\$480,234	\$497,721	\$516,081	\$535,360	\$555,603
<b>Equivalent Single Family Dwelling Unit Costs</b>																
Flow	\$3,895	\$4,081	\$4,208	\$4,341	\$4,481	\$4,628	\$4,782	\$4,944	\$5,114	\$5,293	\$5,480	\$5,677	\$5,884	\$6,101	\$6,329	\$6,568
BOD	\$600	\$628	\$648	\$668	\$690	\$713	\$736	\$761	\$788	\$815	\$844	\$874	\$906	\$940	\$975	\$1,011
TSS	\$159	\$167	\$172	\$178	\$183	\$188	\$196	\$202	\$209	\$217	\$224	\$232	\$241	\$250	\$259	\$269
Total	\$4,654	\$4,876	\$5,028	\$5,187	\$5,355	\$5,530	\$5,714	\$5,908	\$6,111	\$6,325	\$6,549	\$6,784	\$7,031	\$7,290	\$7,563	\$7,849

**Notes:**

- Assumes all capital costs are debt financed and includes all financing costs. Capital costs for new customers are from Table 3.3.

Table 3.13  
Alt 3 Projected Capacity Charge Unit Costs  
Total PV Financing Costs Included

Facility Description	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	FY 2035	FY 2036	FY 2037
<b>Capital and Interest Costs <sup>(1)</sup></b>																
Capital Costs for New Customers	\$396,123	\$415,929	\$436,726	\$458,562	\$481,490	\$505,565	\$530,843	\$557,385	\$585,255	\$614,517	\$645,243	\$677,505	\$711,381	\$746,950	\$784,297	\$823,512
Total PV Interest on Debt	\$115,821	\$115,821	\$115,821	\$115,821	\$115,821	\$115,821	\$115,821	\$115,821	\$115,821	\$115,821	\$115,821	\$115,821	\$115,821	\$115,821	\$115,821	\$115,821
Total Costs for New Customers	\$511,944	\$531,751	\$552,547	\$574,383	\$597,312	\$621,386	\$646,664	\$673,206	\$701,076	\$730,338	\$761,064	\$793,326	\$827,202	\$862,771	\$890,118	\$939,333
<b>Cost Allocation</b>																
Flow	\$393,198	\$393,482	\$398,480	\$414,227	\$430,762	\$448,124	\$466,354	\$485,495	\$505,594	\$526,697	\$548,856	\$572,122	\$596,552	\$622,203	\$649,137	\$677,417
BOD	\$117,884	\$122,444	\$127,233	\$132,261	\$137,541	\$143,084	\$148,905	\$155,017	\$161,434	\$168,173	\$175,248	\$182,677	\$190,477	\$198,667	\$207,267	\$216,297
TSS	\$24,863	\$25,824	\$26,834	\$27,895	\$29,008	\$30,178	\$31,405	\$32,694	\$34,048	\$35,469	\$36,961	\$38,528	\$40,173	\$41,900	\$43,714	\$45,619
<b>Capacity Added</b>																
Flow (million gallons-day)	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7
BOD (pounds-day)	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300
TSS (pounds-day)	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100
<b>Unit Costs</b>																
Flow (per gallons-day)	\$23,516	\$24,426	\$25,381	\$26,384	\$27,437	\$28,543	\$29,704	\$30,923	\$32,203	\$33,548	\$34,959	\$36,441	\$37,997	\$39,631	\$41,346	\$43,148
BOD (per pound-day)	\$2,170,971	\$2,254,961	\$2,343,152	\$2,435,752	\$2,532,981	\$2,635,073	\$2,742,269	\$2,854,824	\$2,973,008	\$3,097,100	\$3,227,397	\$3,364,210	\$3,507,862	\$3,658,698	\$3,817,075	\$3,983,371
TSS (per pound-day)	\$576,857	\$599,175	\$622,608	\$647,213	\$673,049	\$700,176	\$728,659	\$758,567	\$789,970	\$822,943	\$857,565	\$893,918	\$932,088	\$972,167	\$1,014,250	\$1,058,438
<b>Equivalent Single Family Dwelling Unit Costs</b>																
Flow	\$6,820	\$7,083	\$7,360	\$7,651	\$7,957	\$8,277	\$8,614	\$8,968	\$9,339	\$9,729	\$10,138	\$10,568	\$11,019	\$11,493	\$11,990	\$12,513
BOD	\$1,050	\$1,091	\$1,133	\$1,178	\$1,225	\$1,275	\$1,326	\$1,381	\$1,438	\$1,498	\$1,561	\$1,627	\$1,697	\$1,770	\$1,846	\$1,927
TSS	\$279	\$290	\$301	\$313	\$326	\$339	\$352	\$367	\$382	\$398	\$415	\$432	\$451	\$470	\$491	\$512
Total	\$8,149	\$8,464	\$8,795	\$9,143	\$9,508	\$9,891	\$10,293	\$10,716	\$11,159	\$11,625	\$12,114	\$12,628	\$13,167	\$13,733	\$14,327	\$14,952

**Notes:**

- Assumes all capital costs are debt financed and includes all financing costs. Capital costs for new customers are from Table 3.3.

Table 3.13  
All 3 Projected Capacity Charge Unit Costs  
Total PV Financing Costs Included

Facility Description	FY 2038	FY 2039	FY 2040	FY 2041	FY 2042	FY 2043	FY 2044	FY 2045	FY 2046	FY 2047	FY 2048	FY 2049
<b>Capital and Interest Costs <sup>(1)</sup></b>												
Capital Costs for New Customers	\$864,668	\$907,922	\$953,318	\$1,000,984	\$1,051,033	\$1,103,585	\$1,158,764	\$1,216,702	\$1,277,537	\$1,341,414	\$1,408,485	\$1,478,909
Total PV Interest on Debt	\$115,821	\$115,821	\$115,821	\$115,821	\$115,821	\$115,821	\$115,821	\$115,821	\$115,821	\$115,821	\$115,821	\$115,821
Total Costs for New Customers	\$980,509	\$1,023,743	\$1,069,139	\$1,116,805	\$1,166,854	\$1,219,406	\$1,274,585	\$1,332,523	\$1,393,358	\$1,457,235	\$1,524,306	\$1,594,730
<b>Cost Allocation</b>												
Flow	\$707,112	\$738,291	\$771,029	\$805,405	\$841,498	\$879,397	\$919,191	\$960,974	\$1,004,846	\$1,050,912	\$1,099,281	\$1,150,069
BOO	\$225,778	\$235,734	\$246,187	\$257,163	\$268,688	\$280,788	\$293,494	\$306,836	\$320,844	\$335,553	\$350,997	\$367,213
TSS	\$47,618	\$49,718	\$51,923	\$54,236	\$56,688	\$59,220	\$61,900	\$64,714	\$67,668	\$70,771	\$74,028	\$77,448
<b>Capacity Added</b>												
Flow (million gallons-day)	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7
BOO (pounds-day)	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300	54,300
TSS (pounds-day)	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100	43,100
<b>Unit Costs</b>												
Flow (per gallons-day)	\$45,039	\$47,025	\$49,110	\$51,300	\$53,599	\$56,013	\$58,547	\$61,209	\$64,003	\$66,937	\$70,018	\$73,253
BOO (per pound-day)	\$4,157,981	\$4,341,323	\$4,539,831	\$4,735,965	\$4,948,205	\$5,171,058	\$5,405,053	\$5,650,748	\$5,908,727	\$6,179,606	\$6,464,029	\$6,762,672
TSS (per pound-day)	\$1,104,834	\$1,153,551	\$1,204,703	\$1,258,412	\$1,314,808	\$1,374,023	\$1,436,199	\$1,501,483	\$1,570,032	\$1,642,008	\$1,717,583	\$1,796,937
<b>Equivalent Single Family Dwelling Unit Costs</b>												
Flow	\$13,061	\$13,837	\$14,242	\$14,877	\$15,544	\$16,244	\$16,979	\$17,750	\$18,561	\$19,412	\$20,305	\$21,243
BOO	\$2,011	\$2,100	\$2,193	\$2,291	\$2,394	\$2,501	\$2,615	\$2,733	\$2,856	\$2,989	\$3,127	\$3,271
TSS	\$534	\$558	\$583	\$609	\$636	\$665	\$695	\$726	\$759	\$794	\$831	\$869
Total	\$15,607	\$16,295	\$17,018	\$17,776	\$18,573	\$19,410	\$20,288	\$21,210	\$22,178	\$23,195	\$24,263	\$25,384

Notes:

- Assumes all capital costs are debt financed and includes all financing costs. Capital costs for new customers are from Table 3.3.

**Table 3.14**

**Alt 3 Projected Single Family and Restaurant Capacity Charges, FYs 2007 - 2011**  
**Total PV Financing Costs Included**

**Single Family Residential**

	<b>Flow</b>	<b>BOD</b>	<b>TSS</b>	
<b>Unit Costs</b>	<u>\$/gallons/day</u>	<u>\$/lb/day</u>	<u>\$/lb/day</u>	
FY 2007	<b>\$14.073</b>	<b>\$1,299.175</b>	<b>\$345.209</b>	
FY 2008	<b>\$14.510</b>	<b>\$1,339.576</b>	<b>\$355.944</b>	
FY 2009	<b>\$14.970</b>	<b>\$1,381.997</b>	<b>\$367.216</b>	
FY 2010	<b>\$15.452</b>	<b>\$1,426.539</b>	<b>\$379.052</b>	
FY 2011	<b>\$15.959</b>	<b>\$1,473.309</b>	<b>\$391.479</b>	
<b>Estimated Peak Month Discharge</b>				
	290	< gallons per day		
mgd or mg/l	<i>amount</i> >	0.000290	200	200
	<i>unit of measure</i> >	mgd	mg/l	mg/l
gallons or pounds per day	<i>amount</i> >	290	0.483720	0.483720
	<i>unit of measure</i> >	gallons/day	pounds/day	pounds/day
gallons or pounds per month	<i>amount</i> >	8,821	14.71	14.71
	<i>unit of measure</i> >	gallons/month	pounds/month	pounds/month
<b>Capacity Charge</b>				
	<b>Flow</b>	<b>BOD</b>	<b>TSS</b>	<b>Total</b>
FY 2007	\$4,081.05	\$628.44	\$166.98	<b>\$4,876</b>
FY 2008	\$4,207.96	\$647.98	\$172.18	<b>\$5,028</b>
FY 2009	\$4,341.21	\$668.50	\$177.63	<b>\$5,187</b>
FY 2010	\$4,481.13	\$690.05	\$183.35	<b>\$5,355</b>
FY 2011	\$4,628.05	\$712.67	\$189.37	<b>\$5,530</b>

**Restaurant (Commercial Group 4)**

	<b>Flow</b>	<b>BOD</b>	<b>TSS</b>	
<b>Unit Costs</b>	<u>\$/gallons/day</u>	<u>\$/lb/day</u>	<u>\$/lb/day</u>	
FY 2007	<b>\$14.073</b>	<b>\$1,299.175</b>	<b>\$345.209</b>	
FY 2008	<b>\$14.510</b>	<b>\$1,339.576</b>	<b>\$355.944</b>	
FY 2009	<b>\$14.970</b>	<b>\$1,381.997</b>	<b>\$367.216</b>	
FY 2010	<b>\$15.452</b>	<b>\$1,426.539</b>	<b>\$379.052</b>	
FY 2011	<b>\$15.959</b>	<b>\$1,473.309</b>	<b>\$391.479</b>	
<b>Estimated Peak Month Discharge</b>				
	3,000	< gallons per day		
mgd or mg/l	<i>amount</i> >	0.003000	1,000	600
	<i>unit of measure</i> >	mgd	mg/l	mg/l
gallons or pounds per day	<i>amount</i> >	3,000	25.020000	15.012000
	<i>unit of measure</i> >	gallons/day	pounds/day	pounds/day
gallons or pounds per month	<i>amount</i> >	91,250	761.03	456.62
	<i>unit of measure</i> >	gallons/month	pounds/month	pounds/month
<b>Capacity Charge</b>				
	<b>Flow</b>	<b>BOD</b>	<b>TSS</b>	<b>Total</b>
FY 2007	\$42,217.74	\$32,505.37	\$5,182.28	<b>\$79,905</b>
FY 2008	\$43,530.60	\$33,516.20	\$5,343.44	<b>\$82,390</b>
FY 2009	\$44,909.11	\$34,577.57	\$5,512.65	<b>\$84,999</b>
FY 2010	\$46,356.54	\$35,692.02	\$5,690.32	<b>\$87,739</b>
FY 2011	\$47,876.34	\$36,862.18	\$5,876.88	<b>\$90,615</b>

Table 3.15  
 Alt 3 Projected Revenue  
 Total PV Financing Costs Included

Item	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
<b>New Connections (EDUs) <sup>(1)</sup></b>																		
Subject to Current Charges	1,857	1,841	698	478	546	408	0	0	0	0	0	0	0	0	0	0	0	0
Subject to New Charges	0	415	1,423	1,598	1,573	1,530	1,773	1,804	1,836	1,868	1,901	1,934	1,968	2,002	2,037	2,073	2,109	2,146
<b>Equivalent Dwelling Unit Charges <sup>(2)</sup></b>																		
Current Charges	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500
Projected New Charges	\$4,876	\$5,028	\$5,187	\$5,355	\$5,530	\$5,714	\$5,908	\$6,111	\$6,325	\$6,549	\$6,784	\$7,031	\$7,290	\$7,563	\$7,849	\$8,149	\$8,464	
<b>Revenue from Capacity Charge</b>																		
Annual																		
Current Charges	\$928,500	\$1,024,250	\$349,000	\$239,000	\$273,000	\$204,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Projected New Charges	\$0	\$1,011,868	\$7,155,068	\$8,289,375	\$8,422,680	\$8,461,025	\$10,133,468	\$10,680,022	\$11,219,669	\$11,814,621	\$12,447,238	\$13,120,045	\$13,835,786	\$14,597,187	\$15,407,472	\$16,269,874	\$17,187,960	\$18,165,292
Cumulative	\$928,500	\$2,964,618	\$10,468,626	\$18,997,001	\$27,692,681	\$36,357,705	\$46,491,173	\$57,151,196	\$68,370,865	\$80,185,486	\$92,832,724	\$105,752,770	\$119,588,506	\$134,185,692	\$149,593,164	\$165,863,039	\$183,050,938	\$201,216,230

**Notes:**

1. See Table 3.5
2. Current charges are for the Sewer Bond Redemption Charge. Projected new charges are from Table 3.13.

Table 3.15  
 Alt 3 Projected Revenue  
 Total PV Financing Costs Included

Item	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	FY 2035	FY 2036	FY 2037	FY 2038	FY 2039	FY 2040	FY 2041	
<b>New Connections (EDUs) <sup>(1)</sup></b>																			
Subject to Current Charges	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Subject to New Charges	2,184	2,222	2,261	2,300	2,341	2,382	2,423	2,206	0	0	0	0	0	0	0	0	0	0	0
<b>Equivalent Dwelling Unit Charges <sup>(2)</sup></b>																			
Current Charges	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500
Projected New Charges	\$6,795	\$9,143	\$9,508	\$9,891	\$10,293	\$10,716	\$11,159	\$11,625	\$12,114	\$12,628	\$13,167	\$13,733	\$14,327	\$14,952	\$15,607	\$16,295	\$17,018	\$17,776	\$17,776
<b>Revenue from Capacity Charge</b>																			
Annual	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Current Charges	\$19,206,052	\$20,314,451	\$21,495,053	\$22,752,731	\$24,092,692	\$25,520,497	\$27,042,087	\$25,650,012	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Projected New Charges	\$220,422,282	\$240,736,733	\$262,231,786	\$284,984,517	\$309,077,209	\$334,597,706	\$361,639,793	\$387,289,805	\$387,289,805	\$387,289,805	\$387,289,805	\$387,289,805	\$387,289,805	\$387,289,805	\$387,289,805	\$387,289,805	\$387,289,805	\$387,289,805	\$387,289,805
Cumulative																			

**Notes:**

1. See Table 3.5
2. Current charges are for the Sewer Bond Redemption Charge. Projected new charges are from Table 3.13.

Table 3.15  
 Aik 3 Projected Revenue  
 Total PV Financing Costs Included

Item	FY 2042	FY 2043	FY 2044	FY 2045	FY 2046	FY 2047	FY 2048	FY 2049	Total
<b>New Connections (EDUs) <sup>(1)</sup></b>									
Subject to Current Charges	0	0	0	0	0	0	0	0	5,828
Subject to New Charges	0	0	0	0	0	0	0	0	48,310
									54,138
<b>Equivalent Dwelling Unit Charges <sup>(2)</sup></b>									
Current Charges	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500
Projected New Charges	\$18,573	\$19,410	\$20,288	\$21,210	\$22,178	\$23,195	\$24,263	\$25,384	
<b>Revenue from Capacity Charge</b>									
Annual									
Current Charges	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Projected New Charges	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Cumulative	\$387,289,805	\$387,289,805	\$387,289,805	\$387,289,805	\$387,289,805	\$387,289,805	\$387,289,805	\$387,289,805	\$387,289,805

Notes:

1. See Table 3.5
2. Current charges are for the Sewer Bond Redemption Charge. Projected new charges are from Table 3.13.

**Table 3.16  
Comparison of Alternatives**

	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>
<b>Capacity Charges</b>																	
<i>Interest Charges Not At Present Value</i>																	
Alternative 1: No Interest Costs	\$500	\$3,033	\$3,185	\$3,344	\$3,511	\$3,687	\$3,871	\$4,064	\$4,268	\$4,481	\$4,705	\$4,940	\$5,187	\$5,447	\$5,719	\$6,005	\$6,305
Alternative 2: Total Interest Costs	\$500	\$7,200	\$7,352	\$7,511	\$7,678	\$7,854	\$8,038	\$8,232	\$8,435	\$8,648	\$8,872	\$9,107	\$9,354	\$9,614	\$9,886	\$10,172	\$10,472
<i>Interest Charges At Present Value</i>																	
Alternative 1: No Interest Costs	\$500	\$3,033	\$3,185	\$3,344	\$3,511	\$3,687	\$3,871	\$4,064	\$4,268	\$4,481	\$4,705	\$4,940	\$5,187	\$5,447	\$5,719	\$6,005	\$6,305
Alternative 3: Present Value of Total Interest Costs	\$500	\$4,876	\$5,028	\$5,187	\$5,355	\$5,530	\$5,714	\$5,908	\$6,111	\$6,325	\$6,549	\$6,784	\$7,031	\$7,290	\$7,563	\$7,849	\$8,149
<b>Cumulative Revenue from Capacity Charges</b>																	
<i>Interest Charges Not At Present Value</i>																	
Alternative 1: No Interest Costs	\$928,500	\$2,582,079	\$7,462,705	\$13,045,074	\$18,840,837	\$24,685,218	\$31,549,469	\$38,863,064	\$46,718,093	\$55,088,842	\$64,031,941	\$73,586,525	\$83,794,403	\$94,700,245	\$106,351,773	\$118,799,976	\$132,099,323
Alternative 2: Total Interest Costs	\$928,500	\$3,446,757	\$14,257,200	\$26,498,632	\$38,849,281	\$51,069,961	\$65,323,252	\$80,175,904	\$95,661,373	\$111,816,547	\$128,680,296	\$146,294,145	\$164,702,324	\$183,951,971	\$204,093,322	\$225,179,919	\$247,268,633
<i>Interest Charges At Present Value</i>																	
Alternative 1: No Interest Costs	\$928,500	\$2,582,079	\$7,462,705	\$13,045,074	\$18,840,837	\$24,685,218	\$31,549,469	\$38,863,064	\$46,718,093	\$55,088,842	\$64,031,941	\$73,586,525	\$83,794,403	\$94,700,245	\$106,351,773	\$118,799,976	\$132,099,323
Alternative 3: Present Value of Total Interest Costs	\$928,500	\$2,984,618	\$10,468,626	\$18,997,001	\$27,632,681	\$36,357,705	\$46,491,173	\$57,151,196	\$68,370,865	\$80,185,486	\$92,632,724	\$105,732,770	\$119,588,505	\$134,185,682	\$149,593,164	\$165,863,039	\$183,050,938



