

ORDINANCE NO. 1230

AN ORDINANCE OF THE CITY OF GIG HARBOR, WASHINGTON; RELATING TO UTILITY RATES; ESTABLISHING THE MONTHLY SEWER SERVICE RATE TO BE PAID FOR THE PROVISION OF SEWER SERVICES TO THE SHORECREST COMMUNITY SYSTEM AND REMOVING THE FIFTY PERCENT SURCHARGE ON SEWER SERVICE TO CUSTOMERS OUTSIDE OF THE CITY; ESTABLISHING THE GENERAL FACILITY CHARGE (GFC) FOR NEW CONNECTIONS TO THE SHORECREST SYSTEM; ESTABLISHING A "SHORECREST SEWER RESERVE FUND" AND PROVIDING A BEGINNING CASH RESERVE FOR THIS FUND; AMENDING GIG HARBOR CODE SECTIONS 13.32.015, 13.32.030 AND 13.32.060; PROVIDING FOR SEVERABILITY; AND ESTABLISHING AN EFFECTIVE DATE OF MARCH 1, 2012.

WHEREAS, the Shorecrest Community Septic System is self-contained and does not use conveyance or treatment systems provided by the Gig Harbor Sewer System; and

WHEREAS, it is desirable to account for operations of the Shorecrest Community Septic System separately from the Gig Harbor Sewer System; and

WHEREAS, a rate study was performed in 2011 by Peninsula Financial Consulting and attached herein as Exhibit 'A' and recommends rates and general facilities charges that will adequately fund the Shorecrest Community Septic System operations and equipment replacement; and

WHEREAS, the rate study was performed in 2011 by Peninsula Financial Consulting identified a cash reserve equal to the amount that would have been saved by the Shorecrest Community Septic System beginning in 1988 to present; Now, therefore,

THE CITY COUNCIL OF THE CITY OF GIG HARBOR, WASHINGTON, ORDAINS AS FOLLOWS:

Section 1. Section 13.32.015 - Amended. Section 13.32.015 of the Gig Harbor Municipal Code is hereby amended to read as follows:

13.32.015 Sewer Rates – Community Systems.

Effective March 1, 2012, the monthly sewer service rates for the Shorecrest community system shall be set at the \$96.15 per month.

Section 2. Section 13.32.030 - Amended. Section 13.32.030 of the Gig Harbor Municipal Code is hereby amended as follows:

13.32.030 Outside Sewer Service.

Sewer service extended outside the city limits shall be charged at 1.5 times the city rates established in this chapter. This surcharge shall not apply to the Shorecrest Community Septic System.

Section 3. Section 13.32.060 - Amended. Section 13.32.060 of the Gig Harbor Municipal Code is hereby amended as follows:

13.32.060 Sewer general facilities charges.

A. The city shall impose a sewer general facilities charge of \$8,540 per equivalent residential unit to connect to the sewer system. The sewer general facilities charge for connection to the Shorecrest Community Septic System is \$13,300 per equivalent residential unit.

Section 4. Shorecrest Sewer Reserve Fund - Created. A special fund of the City known as the "Shorecrest Sewer Reserve Fund" is created by the City. This fund will be used for the sole purpose of receiving Shorecrest Community Septic System revenues and to pay the costs of maintenance and operation of the Shorecrest Community Septic System. The beginning balance of this fund shall be \$29,482 plus any fees collected from Shorecrest customers in 2011 and 2012. The funds shall be transferred from the Sewer Operating fund.

Section 5. Severability. If any section, sentence, clause or phrase of this Ordinance is held to be invalid or unconstitutional by a court of competent jurisdiction, such invalidity or unconstitutionality shall not affect the validity or constitutionality of any other section, clause or phrase of this Ordinance.

Section 6. Effective Date. This ordinance shall be in full force and take effect March 1, 2012.

PASSED by the Council and approved by the Mayor of the City of Gig Harbor, this 13th day of February, 2012.

CITY OF GIG HARBOR



Mayor Charles L. Hunter

ATTEST/AUTHENTICATED:



Molly M. Towslee, City Clerk

APPROVED AS TO FORM:
Office of the City Attorney



Angela S. Belbeck

FILED WITH THE CITY CLERK: 01/18/12
PASSED BY THE CITY COUNCIL: 02/13/12
PUBLISHED: 02/22/12
EFFECTIVE DATE: 03/01/12
ORDINANCE NO: 1230

MEMORANDUM

TO: City of Gig Harbor
Date: 12/22/11
Prepared by: Peninsula Financial Consulting

NOTE: The original memo documenting this analysis and presented earlier to Shorecrest residents was dated 5/26/11. In the original memo proposed rates were specified as ranging from \$75 to \$112 per month before taxes are applied. The rates proposed in this memo are unchanged from \$75 to \$112 per month but have been modified to reflect a 2 month billing cycle and the addition of taxes (State tax of 3.852% and City tax of 5%).

EXECUTIVE SUMMARY

This memo addresses the financial impact of establishing the Shorecrest community septic system as a separate rate class that can self-finance the operation of its septic system. The analysis includes proposed Bi-Monthly rates that range from \$192.30 to \$243.40 per 2 months (previously identified as \$75 to \$112 per month before taxes) as well the establishment of a general facility charge (GFC) of \$13,300 per new residential connection that will be charged to any of the 5 additional residential connections that the Shorecrest system has been evaluated to have the capacity to serve.

In recognition of this change to existing Shorecrest customers the City will undertake the following actions:

- Establish a cash reserve fund equal to the amount that would have been saved by the existing customers beginning in 1988 until present;
- Waive application of the 50% surcharge on sewer service to customers outside of the City;
- All revenues and GFCs collected minus costs to operate the Shorecrest system will be saved within a dedicated Shorecrest sewer reserve fund.

The most significant impact of becoming self-financing is the need to “catch up” with depreciation funding. The Shorecrest system was installed in 1983 and therefore all components are 27 years old. As can be inferred from the cash reserve analysis in a subsequent section of this memo (see Table 2), even with \$29,500 accumulated depreciation reserves, the Shorecrest system has not been charged rates since 1988 sufficient to pay for annual depreciation. If appropriate rates had been charged, after 22 years of City operation the cash reserve fund for the Shorecrest system would have a total balance of from \$150K to \$290K depending on whether original or replacement cost depreciation was used to set monthly rates. Thus the most critical aspect of setting an appropriate rate for Shorecrest is the question of how quickly Shorecrest reserve funds are to be accumulated and what target balance is acceptable after which the rate component for depreciation can be decreased.

While it is expected that rates over the near term will be higher than other City rate classes, over the long term it is reasonable to expect Shorecrest rates to be lower due to the relative inexpensiveness of septic treatment and longevity of system components as well as the lessening of rates after sufficient depreciation reserves are accumulated

INTRODUCTION

This memo documents the calculation of a sewer general facility charge (GFC) and a range of monthly service rates for customers served by the Shorecrest community septic sewer system. The City's goal is that the Shorecrest system be self financing. Therefore this analysis includes the establishment of cash reserves for the Shorecrest system as well as a forecast of cash flows from operations.

A GFC, also referred to as a connection or system development charge, is a one-time charge paid by a new customer connecting to a utility system. A GFC may include a pro-rata share of the cost of existing facilities (existing facility component) and a pro-rata share of planned facilities (future facility component). The existing facility component offsets the historical contributions from existing customers used to acquire existing assets of benefit to a new customer. The future facility component is a new customer's proportional share of the cost of capital improvements required to serve future growth and is intended to minimize the impact to existing customers to fund the construction of growth related facilities. The GFC calculated herein is stated in terms of a cost per ERU or equivalent residential unit. By definition an ERU equals an average single family residence. Note that the calculation of the GFC for the Shorecrest subdivision utilizes the same methodology previously utilized in the determination of the GFC for the entire City municipal sewer system in 2007.

This analysis utilizes asset information about the Shorecrest sewer system provided by the City and a study by the engineering consulting firm of Parametrix.

The Revised Code of Washington (RCW) addresses some aspects of how a GFC should be determined. However, GFCs are determined primarily based on practices that have been upheld by State courts and are consistent with industry standards (e.g. American Water Works Association). RCW 35.92.025, which authorizes cities and towns to charge for connecting to a water, wastewater, or stormwater system, requires that the charge be an equitable share of the cost of the existing system and may include up to ten years of interest charges at a rate commensurate with the rate of interest applicable to the City at the time of construction. RCW 57.08.005, which address connection charges for special purpose districts, also specifically allows districts to charge a pro rata share of the cost of future facilities planned in the next ten years. An opinion provided by Foster, Pepper, and Shefelman, PLLC concluded that cities might also include costs of future facilities intended to serve growth.

Under RCW 57.08.005, special districts are not allowed to include costs associated with facilities that are funded from grants or donations. In 1999, the Washington State Supreme Court ruled in the case

Landmark Development, Inc. versus the City of Roy that there was no implied statutory requirement that a city include an offset for grants or donations when calculating water connection charges. Therefore, this analysis includes the costs of all existing facilities that will benefit future customers, regardless of how these assets were funded.

GFC CALCULATION

The Shorecrest septic system has a capacity to serve 20 single family residences and all of the existing communal components are in good working order and will therefore provide benefit to both the existing 15 customers as well as an additional 5. The community system consists of the following components: 700 feet of 8" pipe and 3 manholes, a lift station and storage tank, and 1,700 feet of drain field PVC piping. The existing community system was constructed in 1983 without utilization of debt. The City was unable to obtain original construction cost data for the system in 1983 so an alternative method was used to estimate the original system cost. The City provided estimated costs to replace each of the existing system components as summarized in Table 1.

TABLE 1
Estimated Replacement Costs for the Shorecrest Septic System & Drain Field

DESCRIPTION	Year Installed	Est. Replacement Cost	Useful Life
700' 8" Gravity Sewer and 3 Manholes	1983	\$ 111,400	50
Lift Station and Storage Tank	1983	\$ 50,000	25
1700' 4" PVC Force Main	1983	\$ 265,100	40
Drain Field (property not included)	1983	\$ 90,400	40
Total		\$ 516,900	

The total cost to replace the system today of \$516,900 must now be converted into 1983 dollars in order to estimate the original construction cost. This conversion is accomplished using the construction cost index (CCI) from the Engineering News Record for the Seattle area. The CCI for Jan 2011 is 8,703.51 and the CCI from Dec of 1982 is 4,490.38, or a ratio of .5159. Therefore the original cost of the system can be estimated at \$266,700 (.5159 x \$516,885).

Since there is no outstanding debt, the entire original cost of \$266,700 can be included in the GFC. As previously discussed, a GFC can also include 10 years of accumulated interest. An appropriate interest rate for use is 6.99% that is the average US Treasury Bill rate from 1983 through 1992. Based on a total original cost of \$266,700 and 6.99% annual interest, 10 years of accumulated simple interest is \$186,400. The existing facility component of the GFC can now be calculated based on the total original cost plus accumulated interest divided by the total number of connections, or \$22,650 per connection ($[\$266,700 + \$186,400] / 20$ connections). Although staff has compiled a preliminary list of potential

capital projects for the system the projects have not been adopted by the City and therefore to be conservative none of these potential capital costs are included in the determination. Hence the total GFC equals the existing facility component, or \$22,650.

However, after consultation with City staff it was concluded that the estimated replacement cost of \$516,700 likely overestimates the original cost to some extent. The use of the CCI method to estimate original costs using current replacement costs sometimes overestimates the original cost of construction due to factors that change over time such as safety procedures, equipment, technological changes, etc. The negative impact these changes can have on the accuracy of the method can be exacerbated when it is applied to a relatively small project (installation of a septic system) that occurs within a larger project such as the construction of a 15 house subdivision. Therefore the City elected to compensate for this possible overestimation by revising the GFC to not include 10 years of accumulated interest. As a result the recommended GFC is **\$13,300 per connection** (\$266,700/20 connections).

CASH RESERVES

The County turned the Shorecrest sewer system over to the City in 1988 at which time the City began to operate the system as well as collect monthly rates from Shorecrest customers. As discussed the City's goal is that the Shorecrest sewer system be self financing and as a result the City has elected to establish the Shorecrest operating fund with a transfer of money from the sewer general fund. Table 2 provides an estimate of how much cash would have been generated assuming net revenues after paying operating expenses were saved and invested at an average annual interest rate of 3.5%. Note that records for historical operating expenses back to 1988 are unavailable and therefore known expenses from 2006 through 2010 were used with the cost from 2006 of \$5,442 deflated for earlier years using the construction cost index (CCI) from the engineering news record. Metrics other than the CCI such as the CPI for urban wages were investigated but the CCI from ENR resulted in the maximum amount of cash reserves and was therefore the most conservative. As shown in Table 2, it is estimated that the Shorecrest sewer fund would have a total balance of approximately \$29,500 if Shorecrest revenues had been segregated beginning in 1988.

TABLE 2
Estimated Cash Reserves

Year	No. of New Cust.	No. of Cust.	Bi-Monthly Rate	Annual Revenue	ENR Index	Est. Annual O&M Exp.	Total Est. Net Revenue	Earned Interest	Total Funds
1988	9	9	\$60.00	\$3,240	4,738.35	\$ 2,984	\$256		\$ 256
1989	1	10	\$60.00	\$3,600	4,898.01	\$ 3,085	\$515	\$ 9	\$780
1990	1	11	\$60.00	\$3,960	4,933.39	\$ 3,107	\$853	\$ 27	\$1,660
1991		11	\$60.00	\$3,960	5,120.63	\$ 3,225	\$735	\$ 58	\$2,453
1992		11	\$60.00	\$3,960	5,320.37	\$ 3,351	\$609	\$ 86	\$3,149
1993	2	13	\$66.00	\$5,148	5,630.25	\$ 3,546	\$1,602	\$ 110	\$4,861
1994		13	\$66.00	\$5,148	5,818.49	\$ 3,664	\$1,484	\$ 170	\$6,514
1995		13	\$66.00	\$5,148	5,924.09	\$ 3,731	\$1,417	\$ 228	\$8,159
1996		13	\$66.00	\$5,148	6,086.77	\$ 3,833	\$1,315	\$ 286	\$9,760
1997		13	\$48.51	\$3,784	6,639.85	\$ 4,182	-\$398	\$ 342	\$9,703
1998		13	\$48.51	\$3,784	6,957.81	\$ 4,382	-\$598	\$ 340	\$9,445
1999		13	\$50.94	\$3,973	7,137.17	\$ 4,495	-\$522	\$ 331	\$9,253
2000		13	\$50.94	\$3,973	7,368.25	\$ 4,641	-\$667	\$ 324	\$8,910
2001		13	\$50.94	\$3,973	7,335.24	\$ 4,620	-\$646	\$ 312	\$8,576
2002		13	\$53.49	\$4,172	7,561.98	\$ 4,763	-\$590	\$ 300	\$8,285
2003		13	\$53.49	\$4,172	7,866.58	\$ 4,954	-\$782	\$ 290	\$7,793
2004		13	\$81.66	\$6,369	8,165.36	\$ 5,143	\$1,227	\$ 273	\$9,293
2005		13	\$81.66	\$6,369	8,458.55	\$ 5,327	\$1,042	\$ 325	\$10,661
2006		13	\$85.74	\$6,688	8,640.58	\$ 5,442	\$1,246	\$ 373	\$12,280
2007	1	14	\$94.35	\$7,925		\$ 5,442	\$2,484	\$ 430	\$15,193
2008	1	15	\$103.77	\$9,339		\$ 5,572	\$3,767	\$ 532	\$19,492
2009		15	\$119.31	\$10,738		\$ 5,978	\$4,760	\$ 682	\$24,934
2010		15	\$137.21	\$12,349		\$ 8,673	\$3,676	\$ 873	\$29,482

BI-MONTHLY SERVICE RATES

Bi-monthly service rates are typically set at a level sufficient to pay for annual maintenance and operation costs as well as annual depreciation. The City retrieved recent expense data associated with the Shorecrest system and identified required operating and maintenance activities. These annual expenses are listed in Table 3. As shown under the Forecasted row in Table 3, this analysis utilizes an annual expense total of \$5,900. The forecasted amount of \$5,900 does not include the relatively large expense in 2010 to clear the entire drain field site but does include the average annual cost over 5 years for corrective work orders.

TABLE 3
Shorecrest System Annual O&M Expenses

Year	Weekly Maintenance	6 Month Maintenance	6 Month Amp. Draws	Corrective Work Orders	Air Compressor Cost	Avg. Power	Side Mowing Drain Field	Fuel Truck/Maint.	Annual Total
2006	\$ 3,398	\$ 697	\$ 349	\$ -	\$ 150	\$ 540	\$ 137	\$ 171	\$ 5,442
2007	\$ 3,398	\$ 697	\$ 349	\$ -	\$ 150	\$ 540	\$ 137	\$ 171	\$ 5,442
2008	\$ 3,398	\$ 697	\$ 349	\$ 120	\$ 160	\$ 540	\$ 137	\$ 171	\$ 5,572
2009	\$ 3,398	\$ 697	\$ 349	\$ 525	\$ 162	\$ 540	\$ 137	\$ 171	\$ 5,978
2010	\$ 3,398	\$ 697	\$ 410	\$ 1,107	\$ 165	\$ 540	\$ 2,134	\$ 221	\$ 8,673
Forecasted	\$ 3,398	\$ 697	\$ 410	\$ 350	\$ 165	\$ 540	\$ 137	\$ 221	\$ 5,900

The City also will incur indirect or administrative costs such as management, supervision, billing, and accounting costs. By policy the City utilizes an administrative and overhead fee of 20% to cover undocumented overhead costs and therefore this analysis utilizes the same rate. The annual cost of depreciation is calculated based on the cost of existing components divided by their estimated lives as shown in Table 1. Table 4 shows the determination of a range of annual depreciation from \$6,800 to \$13,100 per year based on the original costs as well as replacement costs of the system. Depreciation as used in rate setting is properly defined as a range because if it is calculated solely based on the original cost of an asset then at the end of the useful life there will not be enough money collected to replace the asset because the asset's cost will have increased.

TABLE 4
Annual Depreciation

DESCRIPTION	Year Installed	Est. Replacement Cost	Useful Life	Est. Original Cost	Annual Depreciation Based on Original Cost	Depreciation Based on Replacement Cost
700' 8" Gravity Sewer and 3 Manholes	1983	\$ 111,400	50	\$ 57,500	\$ 1,200	\$ 2,200
Lift Station and Storage Tank	1983	\$ 50,000	25	\$ 25,800	\$ 1,000	\$ 2,000
1700' 4" PVC Force Main	1983	\$ 265,100	40	\$136,800	\$ 3,400	\$ 6,600
Drain Field (property not included)	1983	\$ 90,400	40	\$ 46,600	\$ 1,200	\$ 2,300
Total		\$ 516,900		\$266,700	\$ 6,800	\$ 13,100

A Bi-monthly rate to operate and maintain the Shorecrest sewer system can now be estimated based on an annual operating cost of \$5,900, a range of depreciation from \$6,800 to \$13,100, an overhead factor of 20%, taxes (both City and State), and 17 connections. The City has elected to waive the City's 50% surcharge for sewer service outside the City due to the fact that the Shorecrest system is self contained and therefore Shorecrest customers receive no benefit from the municipal sewer system. There are currently 15 active connections but this analysis assumes that 2 additional connections will soon become active. The resulting bi-monthly rates range from \$163 to \$243 per month per connection as shown in Table 5. Based on the City's current sewer rate schedule, Shorecrest customers will be charged a total bi-monthly rate of \$192.30 per bi-month (including taxes) beginning in 2012. Based on this the City has determined that the minimum bi-monthly rate to be considered for Shorecrest in 2012 must be at least \$192.30. Therefore the range of rates to be considered for Shorecrest customers beginning in 2012 is **\$192.30 to 243.40 per bi-month**.

TABLE 5
BI-Monthly Rate Range for Shorecrest with 17 Customers

	O&M	Depreciation	SubTotal	Bi-Monthly Rate for	Admin Fee (20%)	SubTotal	State Sewer Tax	City Utility Tax	Total Bi-Monthly Rate
Monthly Rate with Depreciation using original costs	\$ 5,900	\$ 6,800	\$ 12,700	\$ 124.51	\$ 24.90	\$ 149.41	\$ 5.76	\$ 7.47	\$ 162.70
Monthly Rate with Depreciation using replacement costs	\$ 5,900	\$ 13,100	\$ 19,000	\$ 186.27	\$ 37.25	\$ 223.53	\$ 8.61	\$ 11.18	\$ 243.40

Please note that as shown in Table 5 the subtotal rates shown of \$149.41 and \$223.53 for 2 months are twice the rates specified in the original memo of \$75 to \$112 per month (minor differences are due to the effect of rounding).

CASH FLOW FORECAST

The most difficult aspect of maintaining self financing in the Shorecrest system is the ability of such a small system to finance large repairs and improvements. City staff has reviewed the system and has developed a list of potential capital improvements that the system may have to fund in the future. Table 6 lists potential capital improvements and their costs for the Shorecrest system.

TABLE 6
Shorecrest Capital Improvements

Capital Improvements	Cost
Pumps & Controls	\$ 35,000
lining of Settling Tanks	\$ 25,000
Coating of Man Holes	\$ 24,000
Easement Verification	\$ 8,000
Total	\$ 92,000

The most expensive future improvement would occur if the Shorecrest system is ever required to be connected to the municipal sewer system. Staff has reviewed this eventuality and estimated the current cost for this improvement at almost \$1.9 M. However, unlikely this eventuality is, it illustrates the vulnerability of the Shorecrest system and the need to establish a healthy cash reserve fund for future repairs and improvements. As with the City municipal system, the City will look towards best available technologies and practices in order to operate the Shorecrest system with minimal cost to the customers.

Tables 7 and 8 provide forecasted cash flows for the Shorecrest sewer fund assuming the lowest and highest recommended rates are utilized. As shown in the tables, the Shorecrest fund should be capable of financing the list of capital improvements in Table 6 while providing adequate reserves for contingencies. Note that as shown in Tables 7 and 8, the 20% administrative charge is an expense and

will be paid to the general sewer fund. Also note that both monthly rates as well as expenses are increased to reflect 2.5% annual inflation.

TABLE 7
Forecast of Shorecrest Sewer Fund Cash Flows with Minimum Rate of \$192.30/2-month in 2012
(Values are adjusted for 2.5% annual inflation)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Bi-Monthly Rate (assumes an annual 2.5% cost of living increase)	\$ 192.30	\$ 197.11	\$ 202.04	\$ 207.09	\$ 212.26	\$ 217.57	\$ 223.01	\$ 228.58	\$ 234.30	\$ 240.16
Cash generated over next 10 years with 17 Connections										
Initial Transfer from Sewer General Fund	\$ 29,500									
Annual revenue from Bi-Monthly Rates	\$ 19,610	\$ 20,100	\$ 20,610	\$ 21,120	\$ 21,650	\$ 22,190	\$ 22,750	\$ 23,320	\$ 23,900	\$ 24,500
Less O&M Cost	\$ (5,900)	\$ (6,050)	\$ (6,200)	\$ (6,360)	\$ (6,520)	\$ (6,680)	\$ (6,850)	\$ (7,020)	\$ (7,200)	\$ (7,380)
Less 20% Overhead	\$ (3,000)	\$ (3,080)	\$ (3,160)	\$ (3,230)	\$ (3,320)	\$ (3,400)	\$ (3,480)	\$ (3,570)	\$ (3,660)	\$ (3,750)
Less State & City Taxes	\$ (1,590)	\$ (1,630)	\$ (1,680)	\$ (1,720)	\$ (1,760)	\$ (1,800)	\$ (1,850)	\$ (1,900)	\$ (1,940)	\$ (1,990)
Total Reserve funds available at end of year	\$ 38,620	\$ 9,340	\$ 9,570	\$ 9,810	\$ 10,050	\$ 10,310	\$ 10,570	\$ 10,830	\$ 11,100	\$ 11,380
Total Reserve Fund Balance (w/o earned interest)	\$ 38,620	\$ 47,960	\$ 57,530	\$ 67,340	\$ 77,390	\$ 87,700	\$ 98,270	\$109,100	\$120,200	\$131,580

TABLE 8
Forecast of Shorecrest Sewer Fund Cash Flows with Maximum Rate of \$243.40/2-month in 2012
(Values are adjusted for 2.5% annual inflation)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Bi-Monthly Rate (assumes an annual 2.5% cost of living increase)	\$ 243.40	\$ 249.49	\$ 255.72	\$ 262.12	\$ 268.67	\$ 275.38	\$ 282.27	\$ 289.33	\$ 296.56	\$ 303.97
Cash generated over next 10 years with 17 Connections										
Initial Transfer from Sewer General Fund	\$ 29,500									
Annual revenue from Bi-Monthly Rates	\$ 24,830	\$ 25,450	\$ 26,080	\$ 26,740	\$ 27,400	\$ 28,090	\$ 28,790	\$ 29,510	\$ 30,250	\$ 31,010
Less O&M Cost	\$ (5,900)	\$ (6,050)	\$ (6,200)	\$ (6,360)	\$ (6,520)	\$ (6,680)	\$ (6,850)	\$ (7,020)	\$ (7,200)	\$ (7,380)
Less 20% Overhead	\$ (3,800)	\$ (3,900)	\$ (3,990)	\$ (4,090)	\$ (4,190)	\$ (4,300)	\$ (4,410)	\$ (4,520)	\$ (4,630)	\$ (4,750)
Less State & City Taxes	\$ (2,020)	\$ (2,070)	\$ (2,120)	\$ (2,170)	\$ (2,230)	\$ (2,280)	\$ (2,340)	\$ (2,400)	\$ (2,460)	\$ (2,520)
Total Reserve funds available at end of year	\$ 44,630	\$ 15,500	\$ 15,890	\$ 16,290	\$ 16,690	\$ 17,110	\$ 17,530	\$ 17,970	\$ 18,420	\$ 18,880
Total Reserve Fund Balance (w/o earned interest)	\$ 44,630	\$ 60,130	\$ 76,020	\$ 92,310	\$109,000	\$126,110	\$143,640	\$161,610	\$180,030	\$198,910

As indicated in Tables 7 and 8, if rates are properly set the Shorecrest sewer fund will slowly build reserves over time. These reserves are solely earmarked for the capital needs of the Shorecrest system.

Also note that all cash flows in Tables 7 and 8 reflect the impact of 2.5% annual inflation. However, even though total cash flows into reserves increase each year as a result of the impact of 2.5% inflation being applied to both rates as well as expenses, this increased reserve funding is appropriate because annual depreciation will also increase each year as inflation impacts capital replacement costs.

Tables 7 & 8 do not include any revenue from connections associated with the remaining 5 ERUs of available capacity. While it is expected that two new connections will be utilized in the near future both of these connections were previously vested and are therefore not eligible to be charged the new GFC proposed in this analysis. There is no time frame associated with the remaining 3 ERUs of capacity and therefore no new GFC revenue is forecasted over the next ten years.

Lastly, as indicated the City should annually adjust the Shorecrest rate for inflation and should further review the basic rate after several years of additional operating and maintenance costs are available.