

2018 WATER RATE & GFC STUDY

*Prepared by Peninsula
Financial Consulting*



Peninsula Financial Consulting
PO Box 354
Brinnon, WA 98320 ~ (360) 796-4903

Summary

2019 Rate Study elements

- **Water rates**
- **General facility charges**
- **Golf Course**

Financial Budget Forecast

- **Forecast Model**

Review Projected Utility Cash Flows & Monthly Rates

- **Depreciation/capital funding**
 - **Low debt**
- **Volume versus fixed base rate increases**

General Facility Charge

- **General Facility Charge (GFC)**
 - One time fee paid by a new customer to connect to a water or sewer utility
 - Currently set at \$6,590 for a standard 5/8x3/4" meter
- **GFCs can include a buy in component based on a pro rata share of existing facilities as well as a share for planned facilities**
- **Analysis determined a maximum GFC of \$5,300**
 - Since the current analysis results in a lower GFC the District should keep the existing GFC unchanged
 - Not unusual
 - Review the GFC when the next water comp plan is completed

Golf Course Irrigation Rate

- **Served through a 4" meter**
- **Interruptible**
- **Irrigation (Non potable use)**
- **Current charges**
 - **Base \$1,482.15/bimonth and \$5.55/ccf**
- **Base rate either \$1,520 or \$2,280**
 - **Range is dependent on what size meter is used as the standard size (either 5/8x3/4" or 3/4")**
- **Volume rate \$3.20/ccf**
 - **Based on annual expenses divided by Metro contract volume**
- **Can apply a discount for interruptible and irrigation**

* See memo for more details

Financial Forecast

- **Based on a review of historical expenses**
 - **Forecast uses the following annual adjustment factors**
 - **Inflation 2.5%**
 - **Electricity 5%**
 - **Labor (COLA) 3%**
 - **Metro Vancouver increases 4%**
 - **Growth 10 ERUs/year**
- **New employee in 2019 at \$54K/year)**
- **Low debt level (<\$30K)**
- **Capital**
 - **New office**
 - **AC pipe replacement**
 - **PRVs**

Financial Model Existing Rates

Residential Water Monthly Bill	\$79.20	\$79.20	\$79.20	\$79.20	\$79.20	\$79.20	\$79.20
% Rate Increase	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Accounts	2017	2018	2019	2020	2021	2022	2023
OPERATIONAL SUMMARY							
(+) Total Operating Revenues	1,340,400	1,340,400	1,347,000	1,353,600	1,360,200	1,366,900	1,373,600
(-) Total Operation & Maintenance	1,226,800	1,267,600	1,367,100	1,415,800	1,466,400	1,519,000	1,573,800
(-) Total Debt	<u>30,700</u>	<u>30,300</u>	<u>30,000</u>	<u>29,700</u>	<u>29,300</u>	<u>29,000</u>	<u>23,200</u>
NET REVENUE	82,900	42,500	50,100	91,900	135,500	181,100	223,400
CAPITAL SUMMARY							
Start of Year Cash	<u>2,200,000</u>	<u>2,362,700</u>	<u>2,490,100</u>	<u>1,103,000</u>	<u>664,000</u>	<u>474,300</u>	<u>100,800</u>
(+) Connection Charges & Interest Inc.	79,800	84,900	128,800	96,800	85,800	72,400	65,900
(+) Transfer from Operations	82,900	42,500	0	0	0	0	0
(+) Total Loan Funds	0	0	0	0	0	0	0
(+) Total CIAC Funds	0	312,000	0	0	0	0	0
(-) Total Capital Expenses	0	312,000	1,465,800	443,900	140,000	466,400	147,100
(-) Transfer to Operations	<u>0</u>	<u>0</u>	<u>50,100</u>	<u>91,900</u>	<u>135,500</u>	<u>181,100</u>	<u>223,400</u>
NET CAPITAL REVENUE	162,700	127,400	1,387,100	439,000	189,700	575,100	304,600
End of Year Cash	2,362,700	2,490,100	1,103,000	664,000	474,300	100,800	405,400

Financial Model New Rates

Accounts	2017	2018	2019	2020	2021	2022	2023
Residential Water Monthly Bill	\$79.20	\$79.20	\$87.12	\$91.48	\$96.05	\$100.85	\$105.89
% Rate Increase	0.0%	0.0%	10.0%	5.0%	5.0%	5.0%	5.0%
OPERATIONAL SUMMARY							
(+) Total Operating Revenues	1,340,400	1,340,400	1,479,000	1,559,200	1,643,800	1,733,200	1,827,400
(-) Total Operation & Maintenance	1,226,800	1,267,600	1,373,700	1,426,000	1,480,600	1,537,300	1,596,500
(-) Total Debt	30,700	30,300	30,000	29,700	29,300	29,000	23,200
NET REVENUE	82,900	42,500	75,300	103,500	133,900	166,900	207,700
CAPITAL SUMMARY							
Start of Year Cash	2,200,000	2,362,700	2,490,100	1,230,600	995,000	1,091,300	892,400
(+) Connection Charges & Interest Inc.	79,800	84,900	131,000	104,800	102,400	100,600	99,900
(+) Transfer from Operations	82,900	42,500	75,300	103,500	133,900	166,900	207,700
(+) Total Loan Funds	0	0	0	0	0	0	0
(+) Total CIAC Funds	0	312,000	0	0	0	0	0
(-) Total Capital Expenses	0	312,000	1,465,800	443,900	140,000	466,400	147,100
(-) Transfer to Operations	0	0	0	0	0	0	0
NET CAPITAL REVENUE	162,700	127,400	1,259,500	235,600	96,300	198,900	160,500
End of Year Cash	2,362,700	2,490,100	1,230,600	995,000	1,091,300	892,400	1,052,900

Water Utility Financial Review

- **Increasing operating costs**
 - **Metro**
 - **New employee**
- **Capital costs result in decreasing capital reserves**
 - **New office**
 - **Pipe replacement**
 - **PRVs**
- **Low level of capitalization**
 - **Little debt**
 - **Low growth**
- **Capital reserves need to be restored and built up for future replacement costs**
 - **Especially important for smaller utilities that are built out**
- **Exchange rates**

Water Utility Financial Review

Review model and recommended rate increases

Rate Modeling

model accuracy		2015	2016		
total revenue from model		\$1,364,291	\$1,274,588		
total revenue from billing data		\$1,336,156	\$1,283,264		
Error		2.11%	-0.68%		
revenue stability		2015	%	2016	%
total base revenue from model		\$ 1,083,250	85.5%	\$ 1,089,914	79.4%
Total volume revenue from model		\$ 281,041	14.5%	\$ 184,674	20.6%
		\$ 1,364,291		\$ 1,274,588	

RATE STRUCTURE CHANGES

- **Rate increases should not inhibit water sales**
 - **Metro costs are fixed**
 - **Very little variable costs**
 - **Zero cost to District to sell additional water**
- **Preferred revenue increases are to base rates**
 - **Tiered set of base rates based on past water use**
 - **e.g. high water user base charge**
 - **Peaking factor surcharge**
 - **AWWA Meter factor ratios**
- **High water use tiers do not impact seasonal customers**
- **Use peaking factors to establish a surcharge base rate**
 - **Impacts all customers including seasonal**
 - **Correlates well with the amount of water contractually purchased from Metro**

RATE STRUCTURE CHANGES

Peaking Factor Surcharge

SFR Customers	2014	2015	2016	Average	Cust. Count	Annual Revenue Impact per dollar surcharge	Annual Revenue from \$5 peak surcharge
2 or less	378	361	383	370		\$ -	\$ -
>=2 and less than 4	514	523	540	530	1650	\$ 9,900	\$ 49,500
>=4 and less than 6	318	307	340	320	1120	\$ 6,720	\$ 33,600
>=6 and less than 8	179	201	164	180	800	\$ 4,800	\$ 24,000
>=8 and less than 10	137	140	145	140	620	\$ 3,720	\$ 18,600
>=10	483	485	465	480	480	\$ 2,880	\$ 14,400

* The data in this table only reflects single family residential customers

RATE STRUCTURE CHANGES

AWWA Meter Flow Ratios

- **AWWA maximum flow through meters**
 - **Commonly used to set base rates for larger meters**

Meter Size	Residential Base Rate	Ratio	Commercial Base Rate	Ratio	AWWA Meter Ratio using 5/8 x 3/4" as Base	AWWA Meter Ratio using 3/4" as Base
3/4"	\$ 79.20	1.00	\$ 91.22	1.00	1.00	1.00
1"	\$ 106.50	1.34	\$ 123.45	1.35	2.50	1.67
1.5"			\$ 155.65	1.71	5.00	3.33
2"			\$ 174.20	1.91	8.00	5.33
4"			\$ 896.90	9.83	25.00	16.66

RATE STRUCTURE CHANGES

AWWA Meter Flow Ratios

Rate Code	No of customers	Rate Code Description	Meter Size	Est. New Rev. using 3/4"	Est. New Rev. using 5/8x3/4"
4	14	Single-family, multi family 2-4 units	1"	\$ 2,164.18	\$ 7,686.00
8	8	Commercial, multi family + 5 people	1"	\$ 1,386.60	\$ 5,020.80
10	5	Commercial, multi family + 5 people	1.5"	\$ 4,443.38	\$ 9,013.50
12	15	Commercial, multi family + 5 people	2.0"	\$ 28,080.23	\$ 50,000.40
15	2	Government	1"	\$ 346.65	\$ 1,255.20
16	1	Government	1.5"	\$ 888.68	\$ 1,802.70
17	3	Government	2"	\$ 5,616.05	\$ 10,000.08
			Total	\$ 42,926	\$ 84,779

AWWA maximum flow through meters

- Commonly used to set base rates for larger meters

RATE STRUCTURE CHANGES

- **The revenue enhancements from adopting AWWA meter factors and a peaking factor surcharge can be used to offset a portion of additional revenue increases**
- **Programmatic increases (planned annual cost of inflation increases) can ensure a utility's rate keep pace with rising costs**