



2013 WATER & SEWER RATE & GFC STUDY

DRAFT



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STUDY OBJECTIVES

The objectives of the 2013 utility study are:

- Update the Water and Sewer general facility charges (**Completed**)
- Define a 5 year forecast of revenue requirements to fund continuing operations and needed capital improvements (**Completed**)
- Analyze water and sewer rates and make recommendations that will improve equity between customers and customer classes (**Completed**)
- Should revenue enhancements be combined with structural changes?



WATER & SEWER REVENUE REQUIREMENTS

Multi-year budget forecasts were developed for the water and sewer utilities based on:

- **The City's current forecast of 2013 water and sewer revenues and expenses adjusted for:**
- **Growth of 50 ERUs per year (equivalent to 1% growth in ERUs)**
- **Planned capital improvements over next 6 years**
 - **12.3M in water**
 - **13.2M in sewer**



WATER REVENUE REQUIREMENTS

Water Budget Forecast with 2014 Water Rates & GFCs and no additional rate or GFC increases through 2018

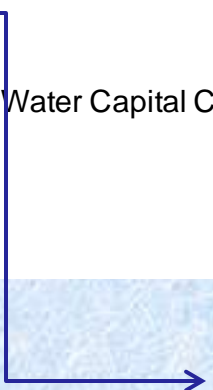
Accounts	2014	2015	2016	2017	2018
OPERATIONAL SUMMARY					
(+) Total Operating Revenues	1,801,400	1,818,200	1,835,100	1,852,300	1,869,600
(-) Total Operation & Maintenance	1,514,600	1,555,600	1,597,100	1,640,700	1,685,400
(-) Total Debt	0	0	0	0	0
NET REVENUE	286,800	262,600	238,000	211,600	184,200
CAPITAL SUMMARY					
Start of Year Cash	3,631,800	452,400	1,908,800	2,776,500	4,035,800
(+) Connection Charges & Interest Inc.	325,400	305,000	305,000	305,000	305,000
(+) Transfer from Operations	286,800	262,600	238,000	211,600	184,200
(+) Total Loan Funds	0	0	0	0	0
(+) Total CIAC Funds	0	0	137,400	1,033,600	0
(-) Transfer to Sewer for Reclaimed Water Capital Costs	370,800	381,900	87,400	0	0
(-) Total Capital Expenses	3,420,800	2,546,900	1,460,700	2,809,500	2,047,400
(-) Transfer to Operations	0	0	0	0	0
NET CAPITAL REVENUE	3,179,400	2,361,200	867,700	1,259,300	1,558,200
End of Year Cash	452,400	1,908,800	2,776,500	4,035,800	5,594,000



WATER REVENUE REQUIREMENTS

Water Budget Forecast with Recommended 1.5% Annual Rate Adjustments over Inflation, New Debt and Annual GFC Increases

Accounts	2014	2015	2016	2017	2018
OPERATIONAL SUMMARY					
(+) Total Operating Revenues	1,801,400	1,889,200	1,981,400	2,078,200	2,179,900
(-) Total Operation & Maintenance	1,514,600	1,565,100	1,616,500	1,670,600	1,726,500
(-) Total Debt	0	275,800	371,800	429,000	517,000
NET REVENUE	286,800	48,300	6,900	21,400	63,600
CAPITAL SUMMARY					
Start of Year Cash	3,631,800	3,362,000	2,878,000	2,629,700	2,451,800
(+) Connection Charges & Interest Inc.	340,000	348,700	357,500	367,900	378,400
(+) Transfer from Operations	286,800	48,300	0	0	0
(+) Total Loan Funds	3,561,200	1,364,900	811,800	1,251,500	1,510,000
(+) Total CIAC Funds	0	0	137,400	1,033,600	0
(-) Transfer to Sewer for Reclaimed Water Capital Costs	370,800	381,900	87,400	0	0
(-) Total Capital Expenses	4,087,000	1,864,000	1,460,700	2,809,500	2,047,400
(-) Transfer to Operations	0	0	6,900	21,400	63,600
NET CAPITAL REVENUE	269,800	484,000	248,300	177,900	222,600
End of Year Cash	3,362,000	2,878,000	2,629,700	2,451,800	2,229,200



A total of about \$8.5M in new loan funds is assumed to be issued gradually over the next 5 years



SEWER REVENUE REQUIREMENTS

Sewer Budget Forecast with 2014 Sewer Rates & GFCs and no additional increases in rates or GFCs through 2018

Accounts	2014	2015	2016	2017	2018
OPERATIONAL SUMMARY					
(+) Total Operating Revenues	3,567,900	3,602,500	3,637,500	3,672,900	3,708,600
(-) Total Operation & Maintenance	3,101,400	3,185,900	3,272,400	3,362,600	3,455,200
(-) Total Debt	<u>660,700</u>	<u>684,000</u>	<u>684,000</u>	<u>684,000</u>	<u>547,500</u>
NET REVENUE	194,200	267,400	318,900	373,700	294,100
CAPITAL SUMMARY					
Start of Year Cash	<u>4,183,100</u>	<u>1,735,700</u>	<u>1,666,400</u>	<u>4,392,300</u>	<u>5,616,500</u>
(+) Connection Charges & Interest Inc.	432,100	402,800	402,500	402,500	402,500
(+) Transfer from Operations	0	0	0	0	0
(+) Transfer from Water for Reclaimed Water Capital Costs	370,800	381,900	87,400	0	0
(+) Total Loan Funds	226,800	0	0	0	0
(+) Total CIAC Funds	0	0	46,300	349,900	0
(-) Total Capital Expenses	3,282,900	3,919,400	2,943,200	1,602,900	1,698,400
(-) Transfer to Operations	<u>194,200</u>	<u>267,400</u>	<u>318,900</u>	<u>373,700</u>	<u>294,100</u>
NET CAPITAL REVENUE	2,447,400	3,402,100	2,725,900	1,224,200	1,590,000
End of Year Cash	1,735,700	1,666,400	4,392,300	5,616,500	7,206,500



SEWER REVENUE REQUIREMENTS

Sewer Budget Forecast with Recommended 1.5% Annual Rate Adjustments over Inflation and New Debt

Accounts	2014	2015	2016	2017	2018
OPERATIONAL SUMMARY					
(+) Total Operating Revenues	3,567,900	3,745,000	3,930,900	4,126,500	4,331,500
(-) Total Operation & Maintenance	3,101,400	3,200,200	3,301,700	3,407,900	3,517,400
(-) Total Debt	660,700	936,800	1,142,700	1,323,700	1,236,400
NET REVENUE	194,200	392,000	513,500	605,100	422,300
CAPITAL SUMMARY					
Start of Year Cash	4,183,100	4,316,100	4,449,600	4,171,000	3,491,100
(+) Connection Charges & Interest Inc.	445,000	458,800	470,600	478,300	480,500
(+) Transfer from Operations	0	0	0	0	0
(+) Transfer from Water for Reclaimed Water Capital Costs	370,800	381,900	87,400	0	0
(+) Total Loan Funds	3,460,500	2,921,300	2,573,800	699,900	254,600
(+) Total CIAC Funds	0	0	46,300	349,900	0
(-) Total Capital Expenses	3,949,100	3,236,500	2,943,200	1,602,900	1,698,400
(-) Transfer to Operations	194,200	392,000	513,500	605,100	422,300
NET CAPITAL REVENUE	133,000	133,500	278,600	679,900	1,385,600
End of Year Cash	4,316,100	4,449,600	4,171,000	3,491,100	2,105,500

A total of about \$10M in new loan funds is assumed to be issued gradually over the next 5 years



WATER & SEWER RATE STRUCTURE ANALYSIS

INTRODUCTION

- **All rate structures can be subdivided into two main charges**
 - **Fixed or base charge**
 - **Volume charge**

Base charges reflect the price of availability (turn on tap or flush toilet) while Volume charges are based on the amount of water or sewer flow a customer uses

How the total rate is balanced between base and volume charges is based on local policies because there is no industry standard



WATER & SEWER RATE STRUCTURE ANALYSIS

INTRODUCTION

- **It has been many years since existing rate structures have been reviewed (at least 10 years)**
- **Focus of the review:**
 - **Inconsistencies**
 - **Balance between use and revenues**
 - **Progressive/consistent with current industry practice**
 - **Promote conservation**
 - **More customer control of monthly bills**



WATER RATE STRUCTURE ANALYSIS

2014 Water Rates:

Customer Classes	Meter Size	Base Charge	Volume Rate (0 to 800 cf)	Volume Rate (> 800 cf)	Comments
Single Family Residences	3/4"	\$23.11	\$0.008039	\$0.023774	
Commercial	3/4"	\$23.11 (increases with meter size)	\$0.007686	\$0.022734	
Multi-family	3/4"	\$21.30 per unit	\$0.008039	\$0.023774	Volume tiers are adjusted for units
Hotel/Motel/RV	3/4"	\$20.89 per unit	\$0.007103	\$0.021008	Volume tiers are adjusted for units
Public Authority	3/4"	\$22.22 (increases with meter size)	\$0.007686	\$0.022734	
Irrigation	3/4"	\$22.22 (increases with meter size)	\$0.007686	\$0.022734	
Adult Care Facilities	3/4"	\$22.22 (increases with meter size)	\$0.007686	\$0.022734	Are treated as commercial customers

2014 Base Charges for larger meters (used for commercial, public authority, and irrigation customer classes)

Meter Size	Current Base Charge	Meter Equivalent Factor
3/4-inch	\$23.11	1
1-inch	\$30.75	1.33
1 1/2-inch	\$49.71	2.15
2-inch	\$72.57	3.14
3-inch	\$133.58	5.78



WATER RATE STRUCTURE ANALYSIS

Where billing revenues are generated from 2011 water rates and usage data:

Customer Classes	% Base Revenue	% Volume Revenue	% of Total Billed	% Water Used
Residential	41.6%	30.0%	38.3%	37.4%
Commercial	14.9%	22.8%	17.6%	18.9%
Public Authority	1.4%	4.4%	2.3%	3.2%
MFR	26.3%	10.9%	21.7%	16.8%
Irrigation	3.9%	21.4%	9.5%	14.6%
HMRV	9.9%	1.7%	7.4%	3.5%
Adult Care Facilities	0.6%	8.8%	3.2%	5.6%

Inconsistencies between water use and billing revenues is an indicator that there might be an equity issue



SEWER RATE STRUCTURE ANALYSIS

2014 Sewer Rates

Customer Classes	Base Charge	Volume Rates
Residential (winter water average <801 cf)	\$57.55	\$0
Residential (winter water average >801 cf)	\$66.78	\$0
Multi-family	\$62.39 per unit	\$0
Commercial	\$62.39 per unit	\$0.06018
Public Authority	\$60.68	\$0.06018
Hotel/Motel	\$60.68	\$0.06018
Adult Care Facilities	\$60.68	\$0.06018

- **Commercial customers are billed for base charges for each additional unit (e.g. one sewer connection serving a strip mall)**
- **Commercial, Public Authority, and Hotel/Motel customers are only charged volume rates on usage above 800 cf of water consumption**



SEWER RATE STRUCTURE ANALYSIS

Where billing revenues are generated from 2011 sewer rates and usage data:

Customer Classes	Total Billed (2011)	% Billed	2011/12 Winter Water Use (cf)	% of Winter Water
Residential	\$ 1,497,052	49.1%	3,013,525	38.9%
Commercial	\$ 549,358	18.0%	1,803,928	23.3%
Public Authority	\$ 54,309	1.8%	287,000	3.7%
MFR	\$ 776,030	25.4%	1,645,630	21.2%
HMRV	\$ 71,922	2.4%	349,189	4.5%
Adult Care Facilities	\$ 102,909	3.4%	652,843	8.4%
Total	\$ 3,051,580		7,752,115	

Winter water use is based on metered water use for Nov and Dec of 2011 and Jan and Feb of 2012



RATE ACTION PLAN

Staff and three council members met and reviewed the afore listed possible changes to water and sewer rates and reached a consensus on:

- **Implement in 2015 changes that:**
 - **Promote conservation (give more control to users)**
 - **Eliminate inconsistencies**
 - **Have a broad base of financial impact**
- **Further review additional changes:**
 - **Allow more time for customer input and education**
 - **Further assess multi-year phase in of changes**
 - **Allow more time for customers to adjust to new rates**



WATER RATE STRUCTURE ANALYSIS

Proposed Changes	Est. Annual Rev. Impact	No. of Customers	Priority	Rate Structure Principle
Conservation (>Volume & <Base share of revenues)	N/A	All	High	Conservation/Progressive
Uniform volume rates for first two tiers	\$ 14,000	457 Comm, Pub, HMRV	High	Consistency
Lower first volume tier form 800 to 600 cf	\$ 27,000	All	High	Conservation/Balance
Use AWWA meter factors	\$ 75,000	417 Comm	High	Balance/Progressive
Eliminate additional unit charges	\$ (44,000)	421 Comm	High	Balance
Implement 3rd volume tier for residential	\$ 9,000	445 Comm, Pub	Low	Conservation/Progressive
Set MF unit rate at 95% of residential base rate	\$ (2,000)	49 Multi-family	Low	Balance
Set hotel unit rate at 75% of residential base rate	\$ (26,000)	12 Hotel/Motel	Low	Balance
Classify adult care facilities as multi-family customers	\$ 44,000	6 Facilities	Low	Balance
Total	\$ 97,000			

High priority changes assumed to be implemented in 2015

Low priority changes would benefit from more date before implementation in 2016 and beyond



SEWER RATE STRUCTURE ANALYSIS

Proposed Changes	Est. Annual Rev. Impact	No. of Customers	Priority	Rate Structure Principle
Lower winter water average from 800cf to 600cf	\$ 20,000	Approx 200 SFR	Low	Conservation/Balance
Set all volume rates to begin at 600cf instead of 800cf	\$ 22,000	413 Comm, Pub, HMRV	Low	Consistency
Lower the per unit fee for Multi-family	\$ (93,000)	49 Multi-family	Low	Balance
Implement a per unit fee for Hotel/Motel	\$ 157,000	12 Hotel/Motel	Low	Balance
Remove additional unit charges	\$ (92,000)	348 Comm	Low	Balance
Implement AWWA meter factors	\$ 270,000	348 Comm, Pub	Low	Balance
Classify adult care facilities as Multi-family customers	\$ 110,000	6 Facilities	Low	Balance
Total	\$ 394,000			

High priority changes assumed to be implemented in 2015

Low priority changes would benefit from more data before implementation in 2016 and beyond



WATER RATES

Water rates in 2015 with the high priority changes to the water rate structure

Note that with these structural changes the water utility will enhance billing revenues by approximately \$70,000 and can eliminate the need for any additional water rate increase in 2015

Customer Classes	Meter Size	Base Charge	Volume Rate (0 to 600 cf)	Volume Rate (> 600 cf)	Comments
Single Family Residences	3/4"	\$23.11	\$0.008039	\$0.023774	
Commercial	3/4"	\$23.11 (increases with meter size)	\$0.008039	\$0.023774	no additional unit charge
Multi-family	3/4"	\$21.30 per unit	\$0.008039	\$0.023774	Volume tiers are adjusted for units
Hotel/Motel/RV	3/4"	\$20.89 per unit	\$0.008039	\$0.023774	Volume tiers are adjusted for units
Public Authority	3/4"	\$22.22 (increases with meter size)	\$0.008039	\$0.023774	
Irrigation	3/4"	\$22.22 (increases with meter size)	\$0.008039	\$0.023774	
Adult Care Facilities	3/4"	\$22.22 (increases with meter size)	\$0.008039	\$0.023774	Are treated as commercial customers

Meter Size	2014 Base Charge	Meter Equivalent Factor	2015 Base Charge	AWWA Meter Equivalent Factor
3/4-inch	\$23.11	1	\$23.11	1
1-inch	\$30.75	1.33	\$38.59	1.67
1 1/2-inch	\$49.71	2.15	\$76.95	3.33
2-inch	\$72.57	3.14	\$123.17	5.33
3-inch	\$133.58	5.78	\$246.34	10.66

Annual 1.5% cost adjustments above inflation will need to resume in 2016



SEWER RATES

Sewer Rates in 2014 with 4% increase and 2015 rates with no structural changes and 4% increase (1.5% over inflation) this will generate an additional \$150K a year

Customer Classes	Year 2014		Year 2015	
	Base Charge	Volume Rates	Base Charge	Volume Rates
Residential (winter water average <801 cf)	\$57.55	\$0	\$59.86	\$0
Residential (winter water average >801 cf)	\$66.78	\$0	\$69.45	\$0
Multi-family	\$62.39 per unit	\$0	\$64.89 per unit	\$0
Commercial	\$62.39 per unit	\$0.06018	\$64.89 per unit	\$0.06259
Public Authority	\$60.68	\$0.06018	\$63.11	\$0.06259
Hotel/Motel	\$60.68	\$0.06018	\$63.11	\$0.06259
Adult Care Facilities	\$60.68	\$0.06018	\$63.11	\$0.06259



WATER & SEWER STUDY

Future Actions:

- **Continue to implement conservation**
 - **Concentrate on water volume rates for next two increases**
- **Review additional changes to water and sewer rate structures**
 - **There are existing imbalances in both water and sewer rates**
 - **Any change should reflect impact to customers on both water and sewer rates**
- **Monitor capital reserves and balance growth with new debt to minimize future rate adjustments**
 - **Annual operating revenue deficits in sewer**