City of Key West

Sewer Rate Study Update Presentation

July 27, 2010



Project Highlights

- Financial Forecast Drivers
 - Inflation (CPI), capital needs, debt service coverage, and ending cash balances
 - GIS Conversion
 - Debt Service (includes FEMA repayment)
- Capital Improvement Program
- The Utility fulfills debt service coverage requirements over the forecast period (FY 2011 through FY 2015).
- Maintaining the minimum ending cash balances
 - 60 Day Cash Balance (Acceptable)
 - 90 Day Cash Balance (Target)



Capital Improvement Program ("CIP")

CIP Drivers:

- North Roosevelt Force Main Replacement D.O.T.
- Pump Station F & Force Main Capacity Expansion
- 30" Force Main Extension & Headworks Capacity Expansion

Description	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
Lightning Protection Rehab	\$125,183	\$0	\$0	\$0	\$0
Misc Sewer System Repairs	200,000	210,000	220,000	230,000	240,350
Fleming Key Pipe Bridge Repair	30,000	69,000	700,000	0	0
N.Roosevelt Force Main Replacement D.O.T.	1,986,000	0	0	0	0
Pump Station F Force Main Capacity Exp.	935,215	0	1,050,000	0	0
30" Forcemain Extention	1,517,288	4,356,485	0	0	0
Wastewater Reuse (City-FKAA)	0	0	0	0	0
P.S. B Gravity Front to Green	0	0	0	250,000	2,993,500
CAT Generator Enclosure	<u>313,000</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total Capital Projects	\$5,106,686	\$4,635,485	\$1,970,000	\$480,000	\$3,233,850

Capital Improvement Program ("CIP")

CIP Drivers:

- North Roosevelt Force Main Replacement D.O.T.
- Pump Station F & Force Main Capacity Expansion
- 30" Force Main Extension & Headworks Capacity Expansion

Description	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Lightning Protection Rehab	\$0	\$0	\$0	\$0	\$0
Misc Sewer System Repairs	877,000	250,000	261,250	273,006	285,291
Fleming Key Pipe Bridge Repair	0	0	0	0	0
N.Roosevelt Force Main Replacement D.O.T.	0	0	0	0	0
Pump Station F Force Main Capacity Expansion	0	0	0	0	0
30" Forcemain Extention	0	0	0	0	0
Wastewater Reuse (City-FKAA)	0	500,000	0	0	0
P.S. B Gravity Front to Green	0	0	0	0	0
CAT Generator Enclosure		<u>o</u>	<u>0</u>	<u>o</u>	<u>o</u>
Total Capital Projects	\$877,000	\$750,000	\$261,250	\$273,006	\$285,291

Historical & Proposed BCUs (FY 2011)

		Calculated
Line	Description	BCUs
1	2003	3,625
2	2004	3,624
3	2005	3,619
4	2006	3,889
5	2007	3,626
6	2008	3,740
7	2009	3,467
8	2010	3,398
	Currently in Effect	3,700
	Calculated per City Code:	
9	 3-Yr Rolling Average 	3,535
10	 5-Yr Rolling Average 	3,624
11	- 7-Yr Rolling Average	3,623
12	Proposed FY 2010	3,600

	Fiscal	Monthly	Res	sidential BC	Us
<u>Line</u>	Year	Flow (Gals.)	Billed	Inactive	Active
1	2008	42,313,387	11,313	316	10,997
2	2009	38,557,040	11,120	276	10,844
3	2010	38,586,880	11,357	274	11,083
			Resident	ial Wastewa	ater Flow
			Billed		Active
4	2008		3,740		3,848
5	2009		3,467		3,556
6	2010		3,398		3,481
6			Propos	ed BCU	3,600



Scenario 1:

- Hold Monthly BCU at 3,700, no FY 2011 rate increase
- Utilize a 0.3% annual customer growth rate

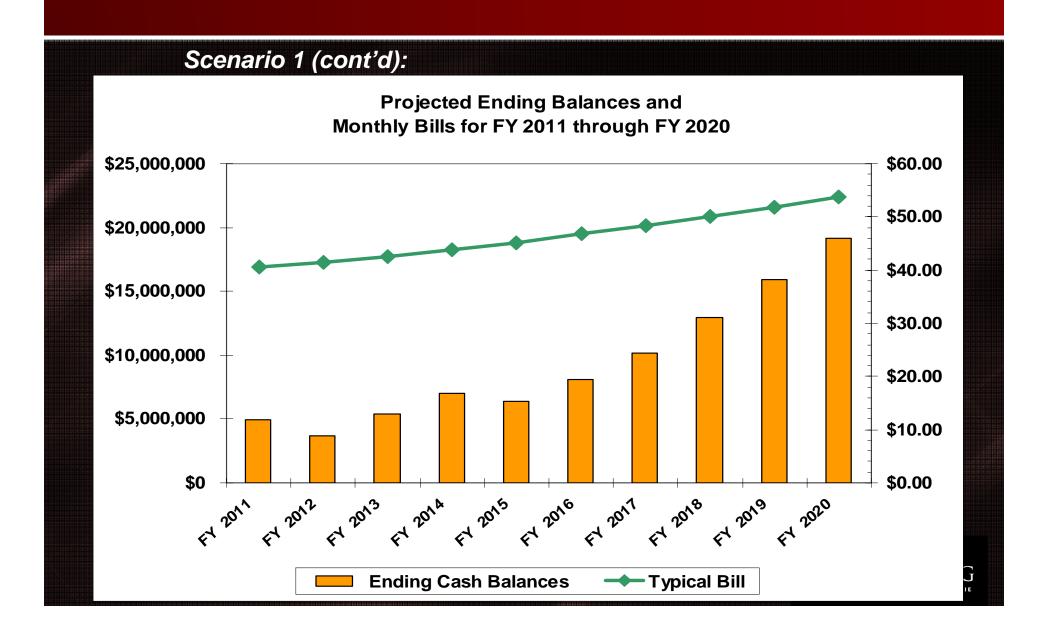
Line	Description		FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
	Revenues:						
1	Operating Revenues	\$	11,902,333	\$ 12,171,227	\$ 12,484,432	\$ 12,856,365	\$ 13,241,770
2	Other Income		124,590	106,358	76,981	75,367	91,063
3	Total Operating Revenues	\$	12,026,923	\$ 12,277,585	\$ 12,561,414	\$ 12,931,732	\$ 13,332,833
4	Total Operating Expenditures	\$	8,096,571	\$ 8,098,986	\$ 8,301,460	\$ 8,550,504	\$ 8,807,019
5	Operating Income	\$	3,930,352	\$ 4,178,599	\$ 4,259,953	\$ 4,381,228	\$ 4,525,814
6	Sewer Connection Fees		60,000	60,000	60,000	60,000	60,000
7	Net Revenues	\$	3,990,352	\$ 4,238,599	\$ 4,319,953	\$ 4,441,228	\$ 4,585,814
8	Debt Service Requirements		2,908,443	2,906,513	2,907,063	2,904,833	2,910,283
9	Income Avail. After Debt Service	\$	1,081,909	\$ 1,332,087	\$ 1,412,891	\$ 1,536,396	\$ 1,675,532
10	Debt Service Coverage	POLICE POLICE	1.37	1.46	1.49	1.53	1.58

Scenario 1 (cont'd):

- Hold Monthly BCU at 3,700, no FY 2011 rate increase

- Utilize a 0.3% annual customer growth rate

Line	Description Description	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
	Other Needs & Transfers:					
11	Renewal and Replacement	\$ 1,500,000	\$ 1,500,000	\$ 1,500,000	\$ 1,500,000	\$ 1,500,000
12	Grant Funding - ACOE	(1,594,127)	0	0	0	0
13	Inter-Fund Loan	0	0	0	0	0
14	Inter-Fund Loan Repayment	(158,312)	(158,312)	(158,312)	(158,312)	(158,312)
15	Total Other Needs & Trans.	\$ (252,439)	\$ 1,341,688	\$ 1,341,688	\$ 1,341,688	\$ 1,341,688
16	Operating Balance	\$ 1,334,348	\$ (9,601)	\$ 71,203	\$ 194,708	\$ 333,844
	Beginning Cash Balance:					
17	Revenue Surplus/Deficit	\$ 7,967,541	\$ 6,508,893	\$ 4,158,661	\$ 4,029,497	\$ 5,285,263
18	Operating Balance	1,334,348	(9,601)	71,203	194,708	333,844
19	Renewal and Replacement Func	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000
19	Capital Funded fron Rate Rev.	(4,292,996)	(3,840,630)	(1,700,367)	(438,942)	(2,957,234)
20	Ending Cash Balance	\$ 6,508,893	\$ 4,158,661	\$ 4,029,497	\$ 5,285,263	\$ 4,161,873
21	Required Cash Balance	\$ 2,024,143	\$ 2,024,746	\$ 2,075,365	\$ 2,137,626	\$ 2,201,755
22	Surplus/Deficit Cash Balance	\$ 4,484,750	\$ 2,133,915	\$ 1,954,132	\$ 3,147,637	\$ 1,960,118



Scenario 2:

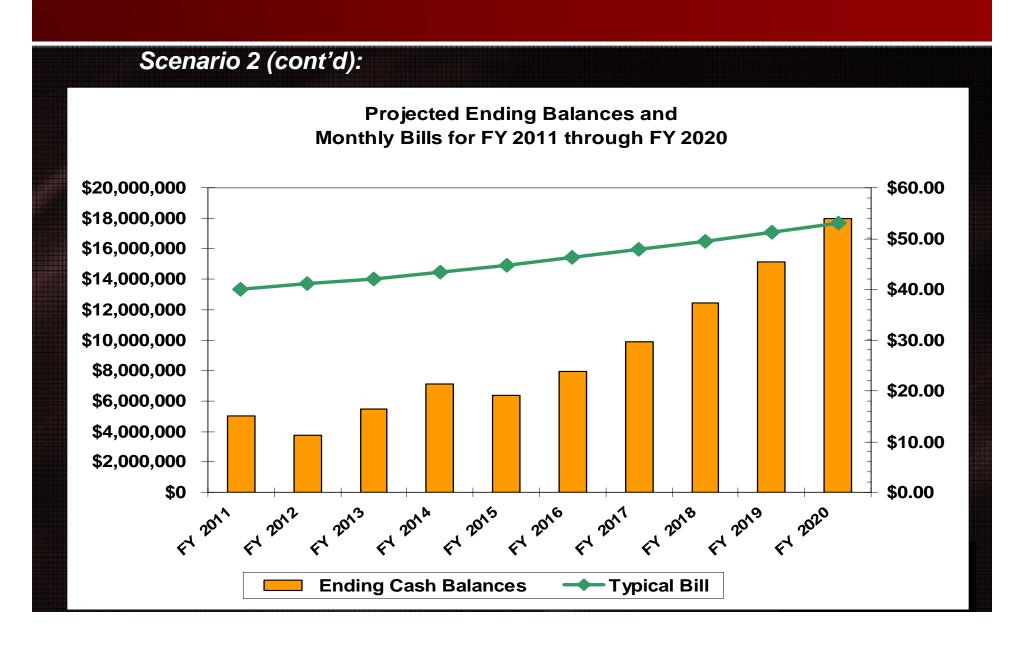
- Adjust Monthly BCU to 3,600, no FY 2011 rate increase
- Assume a 0.0% annual customer growth rate

Line	Description	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
1 2	Revenues: Operating Revenues Other Income	\$ 11,996,425 124,590	\$ 12,267,496 107,534	\$ 12,582,955 79,375	\$ 12,957,669 79,022	\$ 13,345,930 96,031
3	Total Operating Revenues	\$ 12,121,015	\$ 12,375,030	\$ 12,662,330	\$ 13,036,691	\$ 13,441,961
4	Total Operating Expenditures	\$ 8,096,571	\$ 8,098,986	\$ 8,301,460	\$ 8,550,504	\$ 8,807,019
5	Operating Income	\$ 4,024,444	\$ 4,276,045	\$ 4,360,870	\$ 4,486,187	\$ 4,634,942
6	Sewer Connection Fees	60,000	60,000	60,000	60,000	60,000
7	Net Revenues	\$ 4,084,444	\$ 4,336,045	\$ 4,420,870	\$ 4,546,187	\$ 4,694,942
8	Debt Service Requirements	2,908,443	2,906,513	2,907,063	2,904,833	2,910,283
9	Income Avail. After Debt Service	\$ 1,176,001	\$ 1,429,532	\$ 1,513,808	\$ 1,641,355	\$ 1,784,659
10	Debt Service Coverage	1.40	1.49	1.52	1.57	1.61

Scenario 2 (cont'd):

- Adjust Monthly BCU to 3,600, no FY 2011 rate increase
- Assume a 0.0% annual customer growth rate

Line	Description	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
	Other Needs & Transfers:					
11	Renewal and Replacement	\$ 1,500,000	\$ 1,500,000	\$ 1,500,000	\$ 1,500,000	\$ 1,500,000
12	Grant Funding - ACOE	(1,594,127)	0	0	0	0
13	Inter-Fund Loan	0	0	0	0	0
14	Inter-Fund Loan Repayment	(158,312)	(158,312)	(158,312)	(158,312)	(158,312)
15	Total Other Needs & Trans.	\$ (252,439)	\$ 1,341,688	\$ 1,341,688	\$ 1,341,688	\$ 1,341,688
16	Operating Balance	\$ 1,428,440	\$ 87,844	\$ 172,120	\$ 299,667	\$ 442,971
	Beginning Cash Balance:					
17	Revenue Surplus/Deficit	\$ 7,967,541	\$ 6,602,985	\$ 4,350,199	\$ 4,321,952	\$ 5,682,676
18	Operating Balance	1,428,440	87,844	172,120	299,667	442,971
19	Renewal and Replacement Fund	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000
19	Capital Funded fron Rate Rev.	(4,292,996)	(3,840,630)	(1,700,367)	(438,942)	(2,957,234)
20	Ending Cash Balance	\$ 6,602,985	\$ 4,350,199	\$ 4,321,952	\$ 5,682,676	\$ 4,668,414
21	Required Cash Balance	\$ 2,024,143	\$ 2,024,746	\$ 2,075,365	\$ 2,137,626	\$ 2,201,755
22	Surplus/Deficit Cash Balance	\$ 4,578,842	\$ 2,325,453	\$ 2,246,587	\$ 3,545,050	\$ 2,466,659



Customer Bill Impacts – Residential (Scenario 1)

	Metered	Est. Sewer	<u>Bill Un</u>	der Prior Yea	ar Rates	Bill Und	der Current Ye	ar Rates	
	Water Use	Volume	Base	Commodity	Total	Base	Commodity	Total	Percent
_	(gallons)	(gallons)	Charge	Charge	Charge	Charge	Charge	Charge	Charge
	2,500	2,000	\$22.91	\$9.08	\$31.99	\$22.91	\$9.08	\$31.99	0.00%
FY 2011	4,625	3,700	\$22.91	\$16.80	\$39.71	\$22.91	\$16.80	\$39.71	0.00%
2011	5,000	4,000	\$22.91	\$18.16	\$41.07	\$22.91	\$18.16	\$41.07	0.00%
	6,250	5,000	\$22.91	\$22.70	\$45.61	\$22.91	\$22.70	\$45.61	0.00%
_	2,500	2,000	\$22.91	\$9.08	\$31.99	\$23.48	\$9.30	\$32.78	2.47%
FY 2012	4,625	3,700	\$22.91	\$9.08	\$31.99	\$23.48	\$9.30	\$40.69	2.47%
F1 2012	5,000	4,000	\$22.91	\$16.80	\$39.71	\$23.48	\$17.21	\$42.08	2.46%
	6,250	5,000	\$22.91	\$18.16	\$41.07	\$23.48	\$18.60	\$46.73	2.46%
_	2,500	2,000	\$23.48	\$9.30	\$32.78	\$24.07	\$9.54	\$33.61	2.53%
EV 2012	4,625	3,700	\$23.48	\$17.21	\$40.69	\$24.07	\$17.65	\$41.72	2.54%
FY 2013	5,000	4,000	\$23.48	\$18.60	\$42.08	\$24.07	\$19.08	\$43.15	2.54%
	6,250	5,000	\$23.48	\$23.25	\$46.73	\$24.07	\$23.85	\$47.92	2.55%
_	2,500	2,000	\$24.07	\$9.54	\$33.61	\$24.79	\$9.82	\$34.61	2.98%
EV 2014	4,625	3,700	\$24.07	\$17.65	\$41.72	\$24.79	\$18.17	\$42.96	2.97%
FY 2014	5,000	4,000	\$24.07	\$19.08	\$43.15	\$24.79	\$19.64	\$44.43	2.97%
	6,250	5,000	\$24.07	\$23.85	\$47.92	\$24.79	\$24.55	\$49.34	2.96%
	2,500	2,000	\$24.79	\$9.82	\$34.61	\$25.53	\$10.12	\$35.65	3.00%
EV 2015	4,625	3,700	\$24.79	\$18.17	\$42.96	\$25.53	\$18.72	\$44.25	3.01%
FY 2015	5,000	4,000	\$24.79	\$19.64	\$44.43	\$25.53	\$20.24	\$45.77	3.02%
	6,250	5,000	\$24.79	\$24.55	\$49.34	\$25.53	\$25.30	\$50.83	3.02%
_	2,500	2,000	\$25.53	\$10.12	\$35.65	\$26.42	\$10.48	\$36.90	3.51%
EV 2046	4,625	3,700	\$25.53	\$18.72	\$44.25	\$26.42	\$19.39	\$45.81	3.52%
FY 2016	5,000	4,000	\$25.53	\$20.24	\$45.77	\$26.42	\$20.96	\$47.38	3.52%
	6,250	5,000	\$25.53	\$25.30	\$50.83	\$26.42	\$26.20	\$52.62	3.52%

Customer Bill Impacts – Residential (Scenario 2)

	Metered	Est. Sewer	Bill Un	der Prior Yea	ar Rates	Bill Und	der Current Ye	ar Rates	
	Water Use	Volume	Base	Commodity	Total	Base	Commodity	Total	Percent
	(gallons)	(gallons)	Charge	Charge	Charge	Charge	Charge	Charge	Charge
	2,500	2,000	\$22.91	\$9.08	\$31.99	\$22.91	\$9.08	\$31.99	0.00%
FY 2011	4,500	3,600	\$22.91	\$16.34	\$39.25	\$22.91	\$16.34	\$39.25	0.00%
1 1 2011	5,000	4,000	\$22.91	\$18.16	\$41.07	\$22.91	\$18.16	\$41.07	0.00%
	6,250	5,000	\$22.91	\$22.70	\$45.61	\$22.91	\$22.70	\$45.61	0.00%
	2,500	2,000	\$22.91	\$9.08	\$31.99	\$23.48	\$9.30	\$32.78	2.47%
FY 2012	4,500	3,600	\$22.91	\$9.08	\$31.99	\$23.48	\$9.30	\$40.22	2.47%
F1 2012	5,000	4,000	\$22.91	\$16.34	\$39.25	\$23.48	\$16.74	\$42.08	2.46%
	6,250	5,000	\$22.91	\$18.16	\$41.07	\$23.48	\$18.60	\$46.73	2.46%
	2,500	2,000	\$23.48	\$9.30	\$32.78	\$24.07	\$9.54	\$33.61	2.53%
FY 2013	4,500	3,600	\$23.48	\$16.74	\$40.22	\$24.07	\$17.17	\$41.24	2.54%
F1 2013	5,000	4,000	\$23.48	\$18.60	\$42.08	\$24.07	\$19.08	\$43.15	2.54%
	6,250	5,000	\$23.48	\$23.25	\$46.73	\$24.07	\$23.85	\$47.92	2.55%
•	2,500	2,000	\$24.07	\$9.54	\$33.61	\$24.79	\$9.82	\$34.61	2.98%
FY 2014	4,500	3,600	\$24.07	\$17.17	\$41.24	\$24.79	\$17.68	\$42.47	2.97%
F1 2014	5,000	4,000	\$24.07	\$19.08	\$43.15	\$24.79	\$19.64	\$44.43	2.97%
	6,250	5,000	\$24.07	\$23.85	\$47.92	\$24.79	\$24.55	\$49.34	2.96%
-	2,500	2,000	\$24.79	\$9.82	\$34.61	\$25.53	\$10.12	\$35.65	3.00%
EV 2015	4,500	3,600	\$24.79	\$17.68	\$42.47	\$25.53	\$18.22	\$43.75	3.01%
FY 2015	5,000	4,000	\$24.79	\$19.64	\$44.43	\$25.53	\$20.24	\$45.77	3.02%
	6,250	5,000	\$24.79	\$24.55	\$49.34	\$25.53	\$25.30	\$50.83	3.02%
-	2,500	2,000	\$25.53	\$10.12	\$35.65	\$26.42	\$10.48	\$36.90	3.51%
EV 2016	4,500	3,600	\$25.53	\$18.22	\$43.75	\$26.42	\$18.86	\$45.28	3.52%
FY 2016	5,000	4,000	\$25.53	\$20.24	\$45.77	\$26.42	\$20.96	\$47.38	3.52%
	6,250	5,000	\$25.53	\$25.30	\$50.83	\$26.42	\$26.20	\$52.62	3.52%

Customer Bill Impacts – Commercial (Scenario 1)

Line	Description	Large Hotel	Medium Hotel	Small Hotel	Guest House
	DDIOD VEAD				
_	PRIOR YEAR				
1	Actual Wastewater Usage (gal/mo.	1,301,640	686,634	28,914	16,100
2	BCUs	336	174	8	4
3	BCU Charge	\$7,698	\$3,986	\$183	\$92
4	Commodity Charge	\$5,909	\$3,117	\$131	\$73
5	Typical Monthly Bill	\$13,607	\$7,104	\$315	\$165
	PROPOSED YEAR				
6	Actual Wastewater Usage (gal/mo.	1,301,640	686,634	28,914	16,100
7	BCU	336	174	8	4
8	BCU Charge	\$7,698	\$3,986	\$183	\$92
9	Commodity Charge	\$5,909	\$3,117	\$131	\$73
10	Typical Monthly Bill	\$13,607	\$7,104	\$315	\$165
11	Percent Change	0.00%	0.00%	0.00%	0.00%

Customer Bill Impacts – Commercial (Scenario 1)

				Downtown	
Line	Description	Restaurant	Grocery	Shop	Laundry
	PRIOR YEAR				
1	Actual Wastewater Usage (gal/mo.	81,506	60,940	1,786	54,934
2	BCUs	24	19	1	16
3	BCU Charge	\$550	\$435	\$23	\$367
4	Commodity Charge	\$370	\$277	\$8	\$249
5	Typical Monthly Bill	\$920	\$712	\$31	\$616
	PROPOSED YEAR				
6	Actual Wastewater Usage (gal/mo.	81,506	60,940	1,786	54,934
7	BCU	24	19	1	16
8	BCU Charge	\$550	\$435	\$23	\$367
9	Commodity Charge	\$370	\$277	\$8	\$249
10	Typical Monthly Bill	\$920	\$712	\$31	\$616
11	Percent Change	0.00%	0.00%	0.00%	0.00%

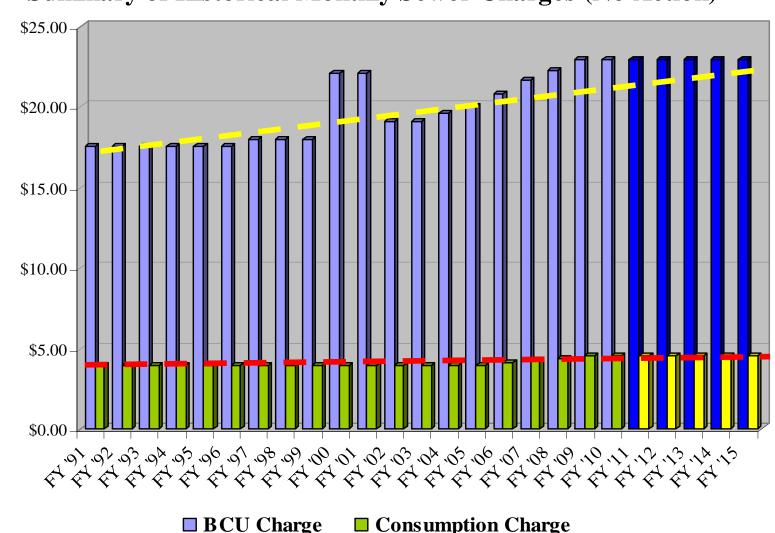
Customer Bill Impacts – Commercial (Scenario 2)

Line	Description	Large Hotel	Medium Hotel	Small Hotel	Guest House
Line	Besonption	110101	110101	110101	110430
	PRIOR YEAR				
1	Actual Wastewater Usage (gal/mo.	1,301,640	686,634	28,914	16,100
2	BCUs	336	174	8	4
3	BCU Charge	\$7,698	\$3,986	\$183	\$92
4	Commodity Charge	\$5,909	\$3,117	\$131	\$73
5	Typical Monthly Bill	\$13,607	\$7,104	\$315	\$165
	PROPOSED YEAR				
6	Actual Wastewater Usage (gal/mo.	1,301,640	686,634	28,914	16,100
7	BCU	363	191	8	4
8	BCU Charge	\$8,316	\$4,376	\$183	\$92
9	Commodity Charge	\$5,909	\$3,117	\$131	\$73
10	Typical Monthly Bill	\$14,226	\$7,493	\$315	\$165
11	Percent Change	4.55%	5.48%	0.00%	0.00%

Customer Bill Impacts – Commercial (Scenario 2)

				Downtown	
Line	Description	Restaurant	Grocery	Shop	Laundry
	PRIOR YEAR				
1	Actual Wastewater Usage (gal/mo.	81,506	60,940	1,786	54,934
2	BCUs	24	19	1	16
3	BCU Charge	\$550	\$435	\$23	\$367
4	Commodity Charge	\$370	\$277	\$8	\$249
5	Typical Monthly Bill	\$920	\$712	\$31	\$616
	PROPOSED YEAR				
6	Actual Wastewater Usage (gal/mo.	81,506	60,940	1,786	54,934
7	BCU	24	19	1	16
8	BCU Charge	\$550	\$435	\$23	\$367
9	Commodity Charge	\$370	\$277	\$8	\$249
10	Typical Monthly Bill	\$920	\$712	\$31	\$616
	_				
11	Percent Change	0.00%	0.00%	0.00%	0.00%

Summary of Historical Monthly Sewer Charges (No Action)

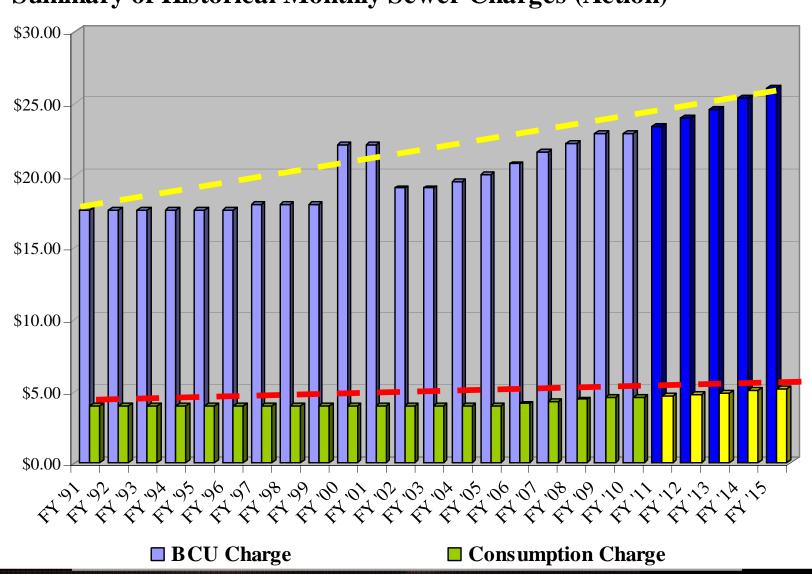


Monthly Charge Component

Historical Month Sewer Bill (Residential)

Summary of Historical Monthly Sewer Charges (Action)

Monthly Charge Component



Sound Utility Rate Making

- Implementing sufficient annual rate increases that tracks with the annual escalation in the cost to provide service.
 - Prevents a significant one-time rate increase
- Maintain rates that fully fund a Utility's asset maintenance schedule
 - Maintain adequate levels of service (aging infrastructure)
- Allows the Utility to abide by specific financial and regulatory requirements
- Allows a Utility to plan for unforeseen events
- Allows the City of Key West to develop rate that minimizes the financial impact on a customers monthly bill



Points of Uncertainty

- Recently, the south Florida region experienced a severe drought
 - Reduced drought restrictions does not equal increased revenues
 - Forecasting future water usage patterns may be difficult
 - Understanding the post drought customer usage patterns may be difficult.
- The impact of the tourism economy cannot be quantified based on the information provided to the City.
 - Low occupancy rates of vacation facilities will reduce water usage
- The impact of the real estate market (foreclosures) is not been tracked within the City.



Recommendations

- Recommend adjusting the Monthly BCU to 3,600 from 3,700 as illustrated in the Scenario 2 Financial Forecast.
- Formulate a monitoring program to track the economic and environmental characteristics of the City as it relates to the Sewer System in an effort to identify environmental, water usage, and customer attrition impacts on the Sewer System.
 - Reduced Water Usage
 - Tourism Sector

