

Rate Increases:

1. Reasons
2. Methods

Reasons:

1. Capital Projects
2. Cost of Service

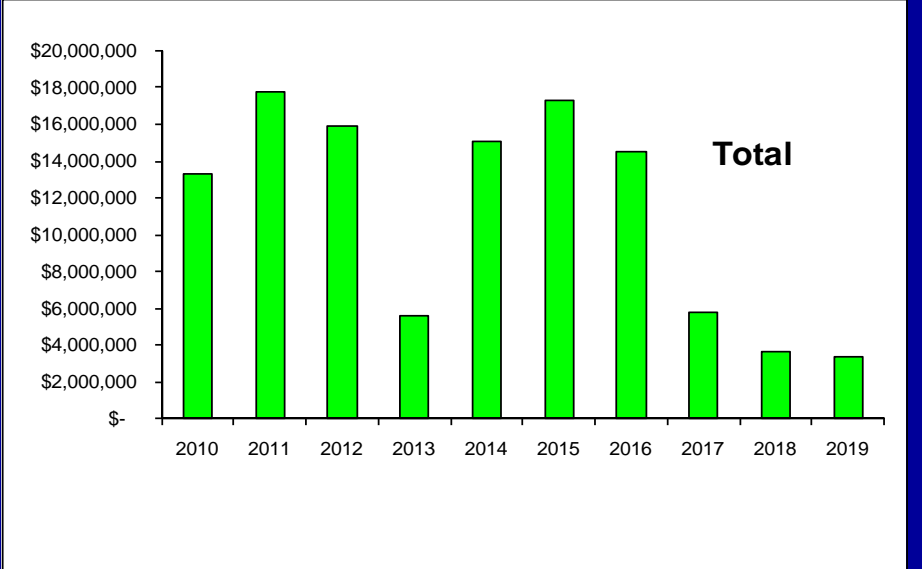
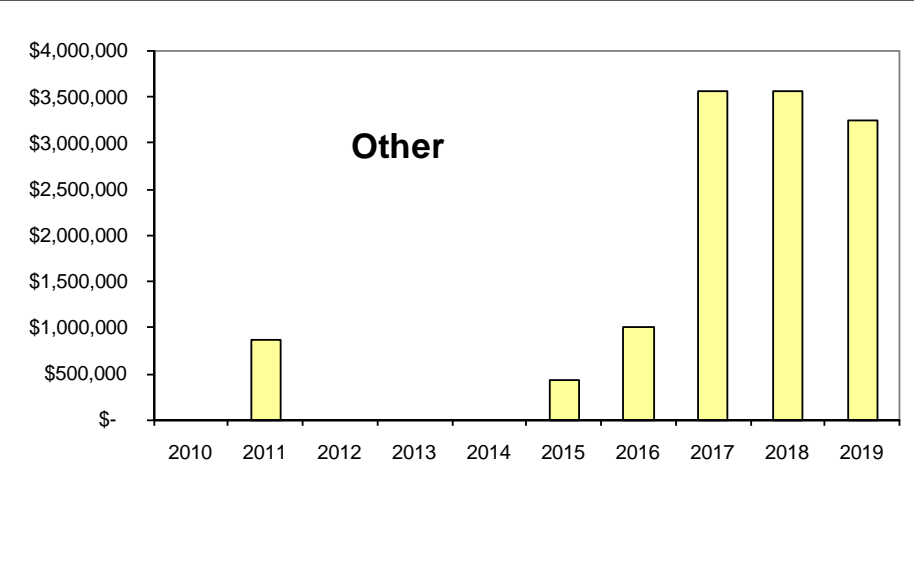
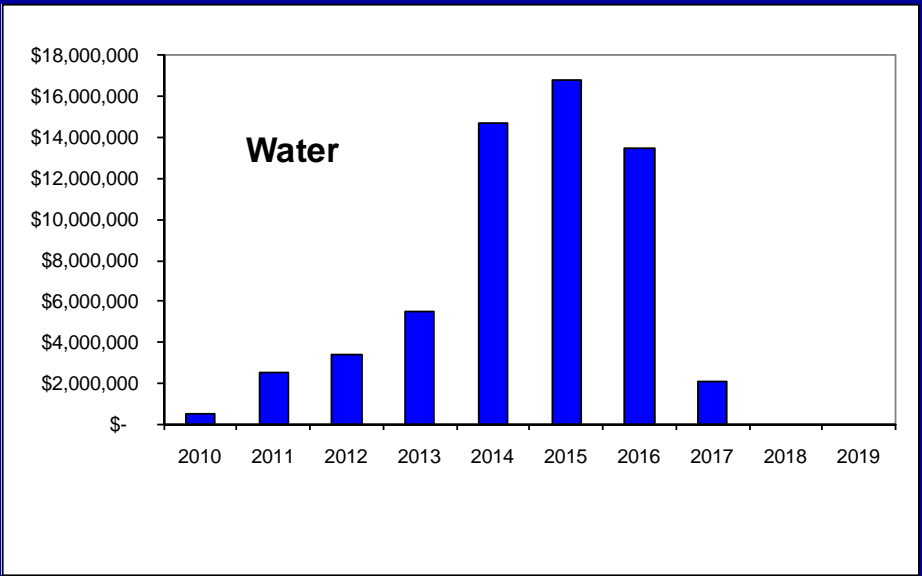
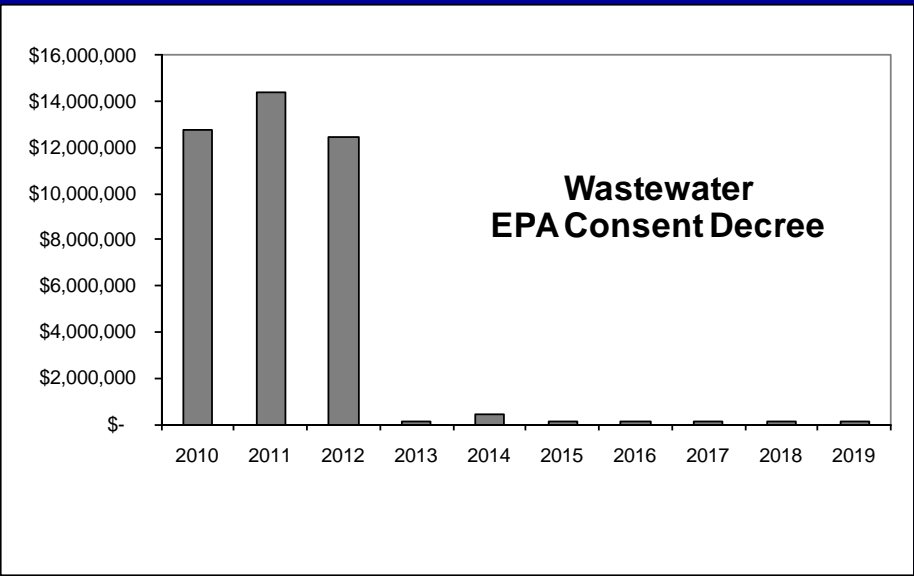
Capital Projects

Category

Cost

EPA Consent Decree	6 LHC Improvements	\$ 36,628,000	\$ 40,750,000
EPA Consent Decree	Other Consent Decree	\$ 4,122,000	
Water Supply	Site Work	\$ 3,100,000	\$ 58,900,000
Water Supply	Raw Water Transmission	\$ 6,300,000	
Water Supply	Plant	\$ 36,200,000	
Water Supply	Finished Water Transmission	\$ 13,300,000	
Other	Water	\$ 12,663,000	\$ 12,663,000
TOTAL			\$ 112,313,000

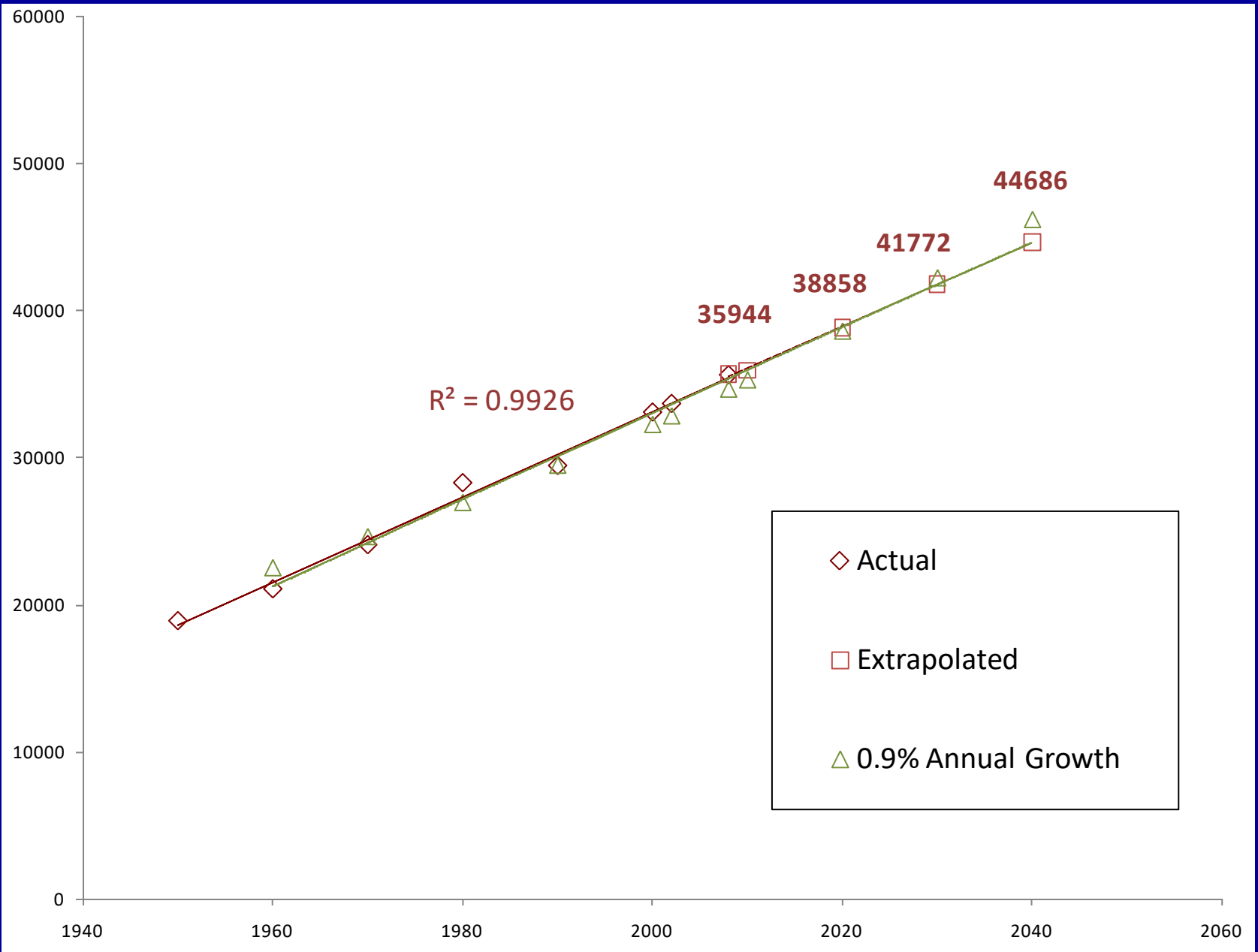
Bel Air Sanitary Sewer												
Improvements		\$ 900,000										\$ 900,000
Forest Park Sanitary Sewer	\$ -	\$ 750,000										\$ 750,000
CMOM Programs/BAN	\$ 120,000	\$ 120,000	\$ 120,000	\$ 120,000	\$ 120,000	\$ 120,000	\$ 120,000	\$ 120,000	\$ 120,000	\$ 120,000	\$ 120,000	\$ 1,200,000
Lynnway Drive Phase II Sanitary Sewer					\$ 300,000							\$ 300,000
Lyndale/Calmes Sanitary Sewer	\$ -	\$ 250,000										\$ 250,000
Supplemental Environ Proj	\$ 203,000											\$ 203,000
Rate Study	\$ 125,000											\$ 125,000
Lynnway Drive Sewer Improvements	\$ -	\$ 22,000										\$ 22,000
Finished Water Transmission												
Improvements			\$ 3,325,000	\$ 3,325,000	\$ 3,325,000	\$ 3,325,000						\$ 13,300,000
Site Work	\$ 500,000	\$ 2,500,000	\$ 100,000									\$ 3,100,000
Redwing Dr, Chickadee, etc.		\$ 262,000										\$ 262,000
I-64 Bore / Hoods Creek Interceptor		\$ 200,000										\$ 200,000
Industrial Road Elevated Storage Tank		\$ 400,000										\$ 400,000
Water Treatment Plant Raw Water Pump Station and Transmission				\$ 2,200,000	\$ 11,333,333	\$ 11,333,333	\$ 11,333,334					\$ 36,200,000
Reservoir Rehabilitation						\$ 2,100,000	\$ 2,100,000	\$ 2,100,000				\$ 6,300,000
Hoods Creek Backbone/PS/FM Westmeade Sewer Outfall								\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 2,000,000	\$ 5,000,000
Water Transmission Veterans Highway								\$ 2,565,000	\$ 2,565,000			\$ 5,130,000
						\$ 421,000						\$ 421,000
										\$ 1,250,000		\$ 1,250,000
Wastewater Treatment Plant Pump Station	\$ 7,290,912	\$ 7,290,910	\$ 7,290,910									21,872,732
Old Boonesboro Trunk Sewer	\$ 2,018,080	\$ 2,018,080	\$ 2,018,080									6,054,240
Force Main	\$ 1,231,118	\$ 1,231,118	\$ 1,231,118									3,693,354
Hampton Manor Improvement	\$ 1,113,476	\$ 1,113,476	\$ 1,113,476									3,340,428
Vaught Road Improvement	\$ 471,018	\$ 471,018	\$ 471,018									1,413,054
	\$ 208,731	\$ 208,731	\$ 208,731									626,192
	\$ 12,333,335	\$ 12,333,333	\$ 12,333,333	\$ -	\$ -	\$ -						\$ 37,000,000
TOTAL	\$ 13,281,335	\$ 17,737,333	\$ 15,878,333	\$ 5,645,000	\$ 15,078,333	\$ 17,299,333	\$ 14,553,334	\$ 5,785,000	\$ 3,685,000	\$ 3,370,000		\$ 112,313,000



WATER TREATMENT PLANT

- Design Capacity → 5.3 MGD
- Current Daily Production → 4.1 MGD
- Current Daily Production → 77% of Capacity
- KDOW Limit = 85% Capacity → 4.5 MGD
- Available Capacity → 400,000 Gallons per Day
- At 1% Population Growth Year → 8 Years to Restrictions

Design & Construction = 3 Years



- Max Daily Production 95% or Greater in 7 of 11 Years
- Max Daily Production 100% or 101% in 3 of 11 Years
- Average Age of Plant: 39.6 Years
- Depreciation Schedule for Plant: 15 / 20 / 40 Years
- Plant is Prone to Flooding
- Water Quality Increases = Plant Capacity Decreases

Methods

2-Part Computer Model:

Part A – Revenue Increase %

Part B – Convert % to \$

Part A – Input

- Current Revenue
- Current Expenses
- Capital Plan Dollars and Dates
- Loan Terms – Interest and Time

Part A – Output

- Debt Service Ratio = $\frac{\$ \text{ Available}}{\$ \text{ Due}} = 1.4$
- Cash Reserve - 60 Days

Year	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19
Water	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%
Wastewater	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%
Solid Waste	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%
Reserve Days	-16	-59	-140	-238	-370	-533	-717	-904	-1086	-1266
Debt Service Ratio	1.40	1.37	0.11	-0.10	0.02	0.02	0.01	0.02	0.02	0.02

Year	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19
Water	18.5%	17.0%	14.0%	12.0%	4.0%	2.4%	2.4%	2.4%	2.4%	2.4%
Wastewater	20.5%	20.5%	20.5%	20.5%	5.0%	5.0%	2.4%	2.4%	2.4%	2.4%
Solid Waste	10.4%	10.4%	10.4%	10.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%
Reserve Days	5	29	60	60	60	60	60	60	56	48
Debt Service Ratio	1.74	4.14	4.05	4.15	2.76	2.05	1.68	1.59	1.55	1.52

Part A Output \longrightarrow Part B

Part B Output \longrightarrow \$ Rate

Part B

Water Rates		18.5%	17.0%	14.0%	12.0%	4.0%
INSIDE	Current	Step 1	Step 2	Step 3	Step 4	Step 5
1	\$3.46	\$4.10	\$4.80	\$5.47	\$6.12	\$6.37
5	\$2.53	\$2.89	\$3.39	\$3.86	\$4.06	\$4.22
20	\$2.38	\$2.89	\$3.39	\$3.86	\$4.06	\$4.22
170	\$2.26	\$2.89	\$3.39	\$3.86	\$4.06	\$4.22
3500	\$1.76	\$1.98	\$2.32	\$2.64	\$4.06	\$4.22
>3500	\$1.08	\$1.34	\$1.56	\$1.78	\$1.35	\$1.40
OUTSIDE						
1	\$4.49	\$5.32	\$6.23	\$7.10	\$7.95	\$8.27
5	\$3.33	\$3.84	\$4.49	\$5.12	\$5.30	\$5.51
20	\$3.11	\$3.84	\$4.49	\$5.12	\$5.30	\$5.51
170	\$2.96	\$3.84	\$4.49	\$5.12	\$5.30	\$5.51
3500	\$2.25	\$2.58	\$3.02	\$3.45	\$5.30	\$5.51
>3500	\$1.58	\$1.87	\$2.19	\$2.50	\$2.80	\$2.91
WATER DISTRICT						
	\$1.62	\$1.92	\$2.25	\$2.56	\$2.87	\$2.98
Revenue Increase Factor		18.5%	17.0%	14.0%	12.0%	4.0%



$$\frac{\text{@ } \$0.70}{\text{@ } \$0.40} = 1.75$$

Industrial
Increase 75%

$$\frac{\text{@ } \$0.70}{\text{@ } \$0.60} = 1.17$$

Residential
Increase 17%

$$\frac{\$70.00}{\$50.00} = 1.40$$

Overall Revenue
Increase 40%

Water Rates		18.5%	17.0%	14.0%	12.0%	4.0%
INSIDE	Current	Step 1	Step 2	Step 3	Step 4	Step 5
1	\$3.46	\$3.46	\$4.05	\$4.60	\$4.76	\$4.97
5	\$2.53	\$3.10	\$3.66	\$4.25	\$4.33	\$4.53
20	\$2.38	\$3.10	\$3.66	\$4.25	\$4.33	\$4.53
170	\$2.26	\$3.10	\$3.66	\$4.25	\$4.33	\$4.53
3500	\$1.76	\$1.97	\$2.30	\$2.77	\$4.33	\$4.53
>3500	\$1.08	\$1.38	\$1.61	\$1.97	\$1.97	\$2.08
OUTSIDE						
1	\$4.49	\$4.49	\$5.17	\$6.12	\$6.20	\$6.52
5	\$3.33	\$4.07	\$4.81	\$5.56	\$5.64	\$5.93
20	\$3.11	\$4.07	\$4.81	\$5.56	\$5.64	\$5.93
170	\$2.96	\$4.07	\$4.81	\$5.56	\$5.64	\$5.93
3500	\$2.25	\$2.60	\$3.04	\$3.63	\$5.64	\$5.93
>3500	\$1.58	\$1.94	\$2.27	\$2.73	\$2.73	\$2.89
WATER DISTRICT						
	\$1.62	\$1.62	\$1.62	\$1.62	\$1.62	\$1.62
Revenue Increase Factor		18.9%	16.2%	15.9%	10.4%	4.6%

Wastewater Rates		20.5%	20.5%	20.5%	20.5%	5.0%
INSIDE	Current	Step 1	Step 2	Step 3	Step 4	Step 5
3500	\$3.61	\$4.35	\$5.24	\$6.32	\$7.61	\$7.99
>3500	\$3.15	\$3.80	\$4.57	\$5.51	\$6.64	\$6.97
OUTSIDE						
3500	\$4.78	\$5.76	\$6.94	\$8.36	\$10.08	\$10.58
>3500	\$4.15	\$4.50	\$4.88	\$5.29	\$5.74	\$5.42

Solid Waste Rates		18.7%	18.7%	18.7%	18.7%	5.0%
Current	Step 1	Step 2	Step 3	Step 4	Step 5	
\$15.42	\$18.30	\$21.73	\$25.79	\$30.61	\$32.14	

Average Bills - Wastewater

INSIDE	Current	Step 1	Step 2	Step 3	Step 4	Step 5	Step 4 Factor
1	\$ 3.61	\$ 4.35	\$ 5.24	\$ 6.32	\$ 7.61	\$ 7.99	2.21
5	\$ 12.66	\$ 15.25	\$ 18.38	\$ 22.15	\$ 26.69	\$ 28.02	2.21
20	\$ 30.60	\$ 36.88	\$ 44.43	\$ 53.54	\$ 64.52	\$ 67.75	2.21
170	\$ 185.82	\$ 223.91	\$ 269.82	\$ 325.13	\$ 391.78	\$ 411.37	2.21
3500	\$ 1,759.27	\$ 2,119.92	\$ 2,554.51	\$ 3,078.18	\$ 3,709.21	\$ 3,894.67	2.21
>3500	\$ 20,434.40	\$ 24,623.45	\$ 29,671.26	\$ 35,753.87	\$ 43,083.41	\$ 45,237.58	2.21
OUTSIDE							
1	\$ 4.78	\$ 5.76	\$ 6.94	\$ 8.36	\$ 10.08	\$ 10.58	2.21
5	\$ 17.67	\$ 21.29	\$ 25.65	\$ 30.91	\$ 37.25	\$ 39.11	2.21
20	\$ 38.64	\$ 46.56	\$ 56.10	\$ 67.60	\$ 81.46	\$ 85.53	2.21
170	\$ 267.68	\$ 322.55	\$ 388.68	\$ 468.36	\$ 564.37	\$ 592.59	2.21
3500	\$ 2,135.07	\$ 2,572.76	\$ 3,100.17	\$ 3,735.71	\$ 4,501.52	\$ 4,726.60	2.21
>3500							NA

Solid Waste Rates

18.7%

18.7%

18.7%

18.7%

5.0%

Current

Step 1

Step 2

Step 3

Step 4

Step 5

\$15.42

\$18.30

\$21.73

\$25.79

\$30.61

\$32.14

INSIDE							
Typical Residential	Current	Step 1	Step 2	Step 3	Step 4	Step 5	4-YR Factor
Water	\$ 18.34	\$ 22.06	\$ 26.01	\$ 30.10	\$ 30.74	\$ 32.15	1.7
Wastewater	\$ 25.27	\$ 30.45	\$ 36.69	\$ 44.21	\$ 53.28	\$ 55.94	2.1
Solid Waste	\$ 15.42	\$ 18.30	\$ 21.73	\$ 25.79	\$ 30.61	\$ 32.14	2.0
TOTAL	\$ 59.03	\$ 70.81	\$ 84.43	\$ 100.10	\$ 114.63	\$ 120.23	1.9

OUTSIDE							
Typical Residential	Current	Step 1	Step 2	Step 3	Step 4	Step 5	4-YR Factor
Water	\$ 24.03	\$ 28.93	\$ 34.03	\$ 39.48	\$ 40.04	\$ 42.10	1.7
Wastewater	\$ 33.46	\$ 40.32	\$ 48.58	\$ 58.54	\$ 70.55	\$ 74.07	2.1
TOTAL	\$ 57.49	\$ 69.25	\$ 82.61	\$ 98.02	\$ 110.59	\$ 116.17	1.9

