



# **DeKalb County Water and Sewer Rate Study**



**Presented to Board of Commissioners  
October 2, 2007**

# Water and Sewer Assets



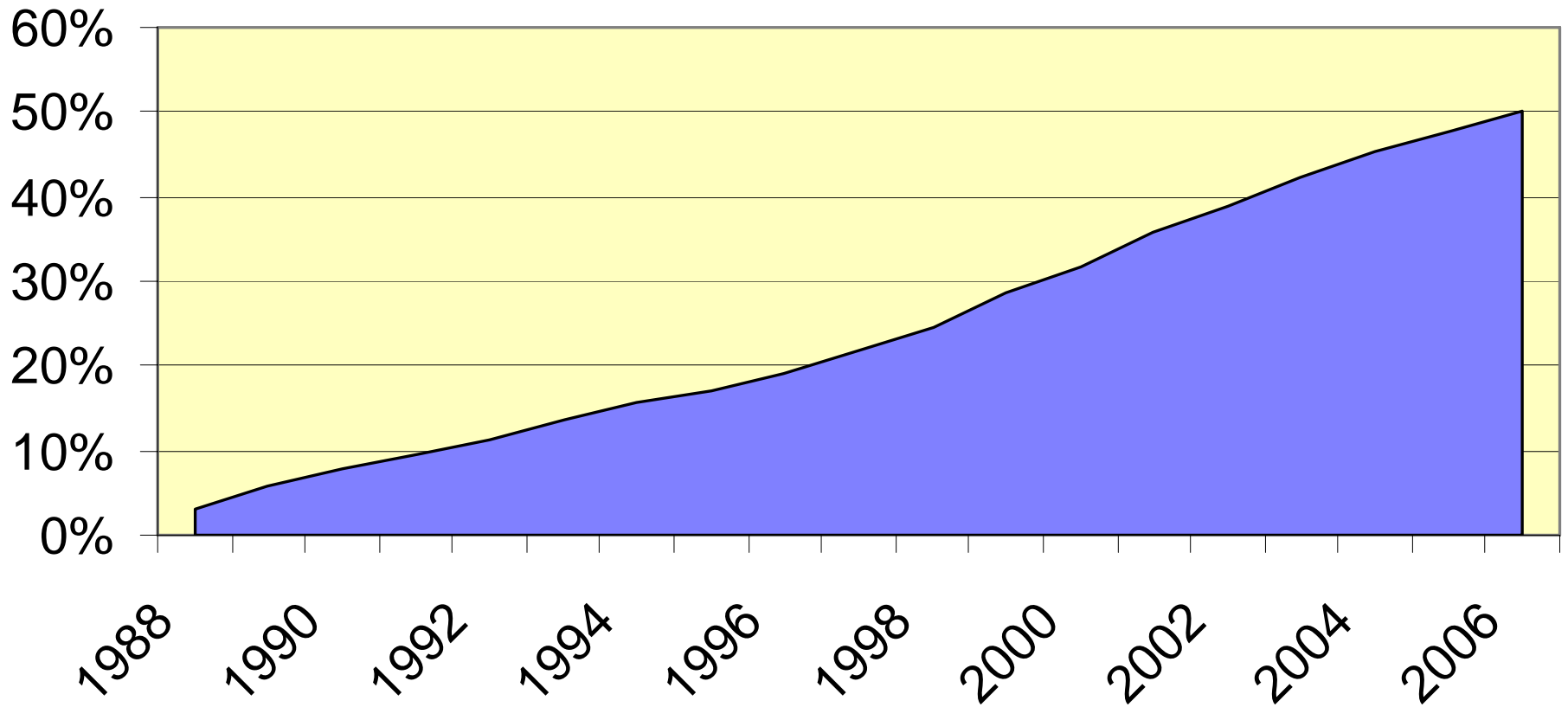
# DeKalb County is One of the Largest Economic Growth Areas in the State of Georgia

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- Replacement value of aboveground and underground assets is worth more than **\$5 Billion.**
- Proposed assets to be added over the next five years: **\$1.4 Billion.**
- Annual revenue: **\$150 Million.**
- Estimated Population: **700,000.**



# Growth of Customer Base Since 1988\*

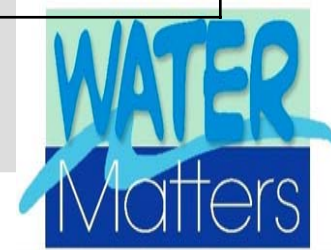


\* *Cumulative percentage increase in number of meters*



# History of Rate Adjustments

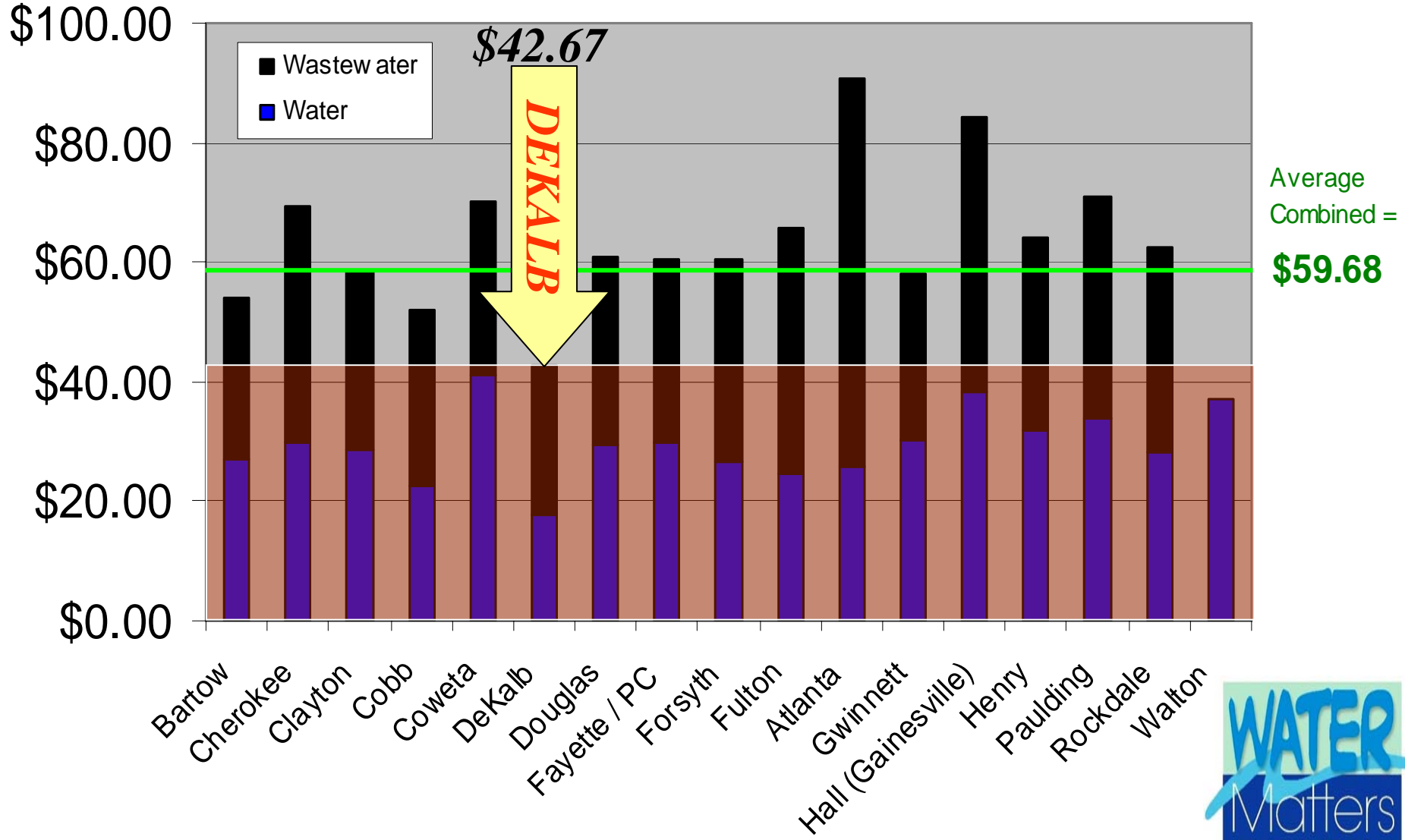
<b>Year</b>	<b>Water Rate</b> (per 1000 gallons)	<b>% Change</b>	<b>Sewer Rate</b> (per 1000 gallons)	<b>% Change</b>
<b>1983</b>	<b>\$0.65</b>		<b>\$1.10</b>	
<b>1991</b>	<b>\$0.85</b>	<b>31%</b>	<b>\$1.40</b>	<b>27%</b>
<b>1992</b>	<b>\$1.10</b>	<b>29%</b>	<b>\$1.70</b>	<b>21%</b>
<b>1999</b>	<b>\$1.60</b>	<b>45%</b>	<b>\$1.90</b>	<b>12%</b>
<b>2002</b>	<b>\$1.85</b>	<b>16%</b>	<b>\$2.45</b>	<b>29%</b>
<b>2005</b>	<b>\$2.19</b>	<b>18%</b>	<b>\$3.22</b>	<b>31%</b>



2006

# County Comparison

Water and Sewer Combined Monthly Billing  
7,000 GPM





# Purpose of Rate Study



# The Long-Term View

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*HIGH QUALITY WATER  
AND SEWER SERVICES  
THROUGH*

RESPONSIBLE,  
SUSTAINABLE, AND  
CREATIVE  
STEWARDSHIP OF  
RESOURCES AND  
ASSETS

- **Sustainability** – meet the needs of the present without compromising the ability of future generations to meet their own needs.
- **Financial Stability** – operate in an economically sound and responsible manner to provide sufficient revenues to manage systems effectively.
- **Competency** – a productive, empowered, talented, and diverse workforce which strives for excellence.





# Water and Sewer Rate-Setting Goals

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- Revenue Sufficiency
- Fair and Equitable Rates
- Conservation Promotion
- General Health and Welfare



# Rate Study Methodology





# Multi-Year Revenue Needs



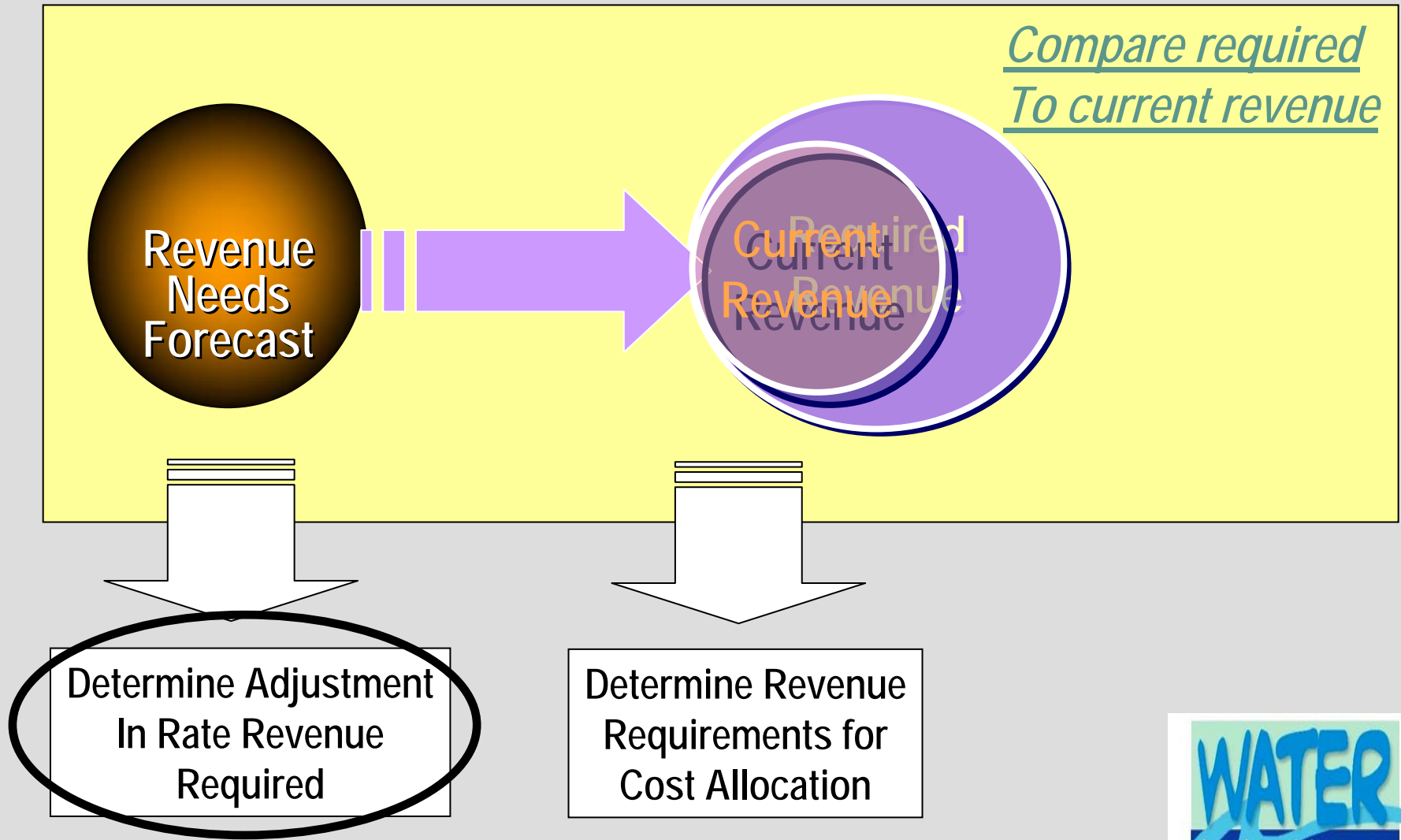
# Water and Sewer Rate-Setting Goals

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- Revenue Sufficiency
- Fair and Equitable Rates
- Conservation Promotion
- General Health and Welfare



# Determining Revenue Needs



# Why Rate Adjustments Occur

CIP:  
\$1.4 Billion

*PRIMARY DRIVER*

- *Growth*
- *Inflation*
- *Regulation*

REVENUE

COSTS

THIS  
HAPPENS  
WITHOUT

• *Growth*

• *Rate Adjustments*

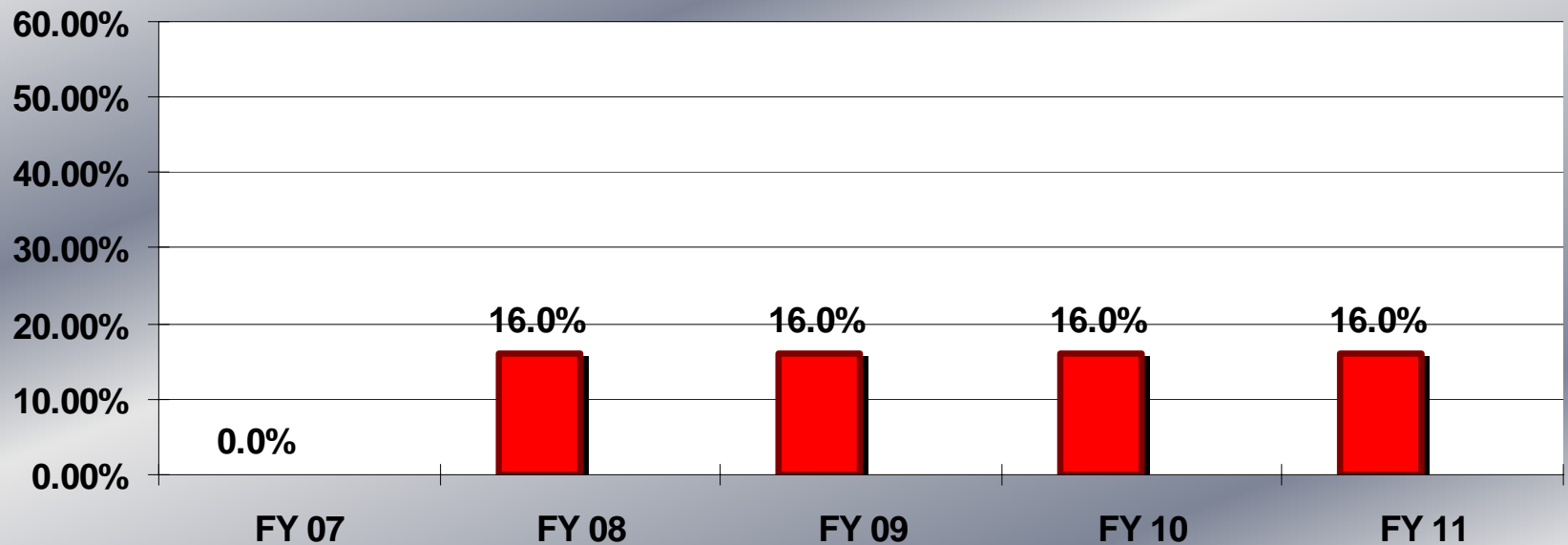
CURRENT  
YEAR

*Time*

# Results of Revenue Needs Analysis

To support this CIP, an annual 16% adjustment in total rate revenue is needed over the next four years.

## Rate Revenue Adjustment



# Rate Design – Who Pays?





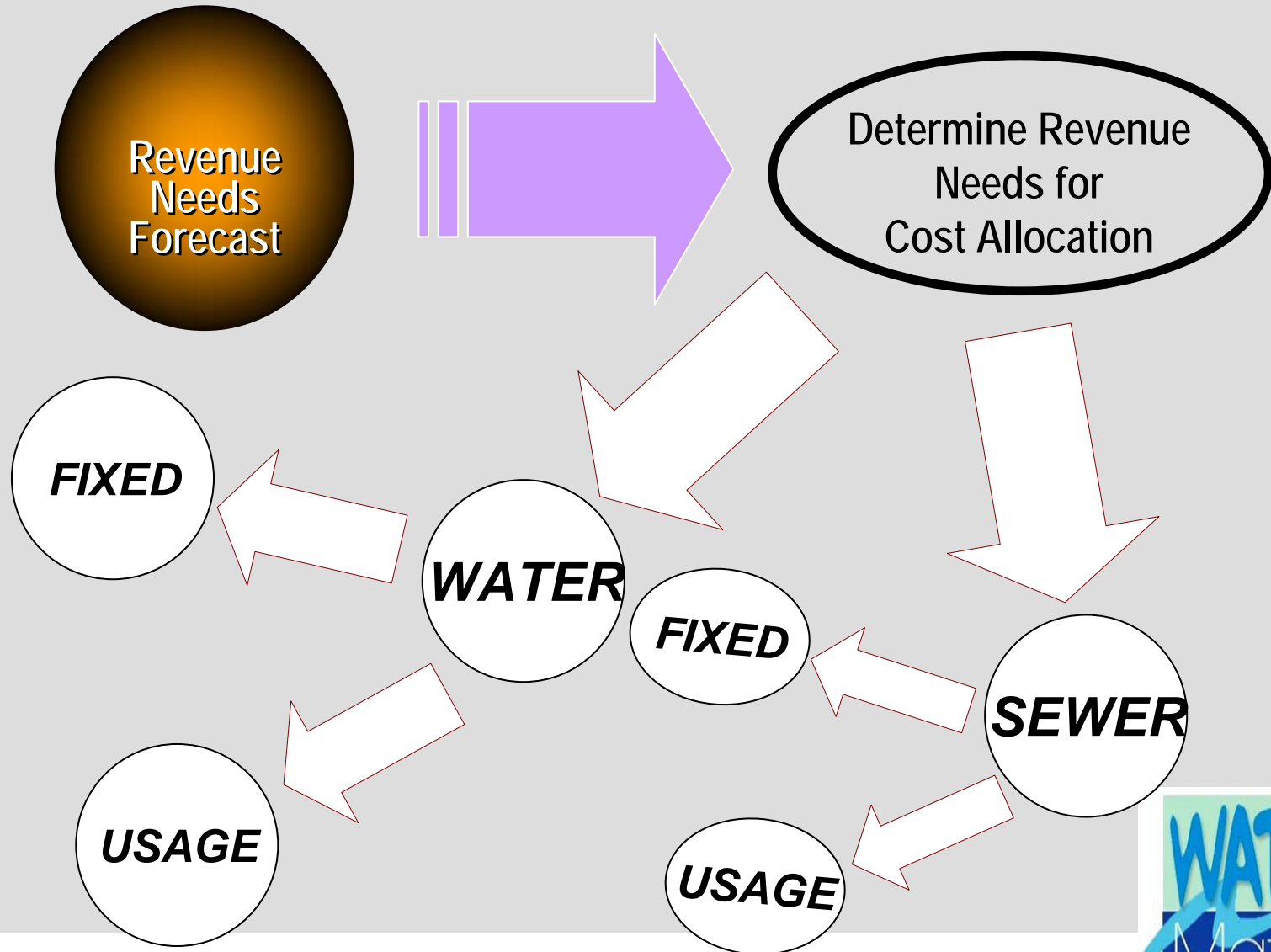
# Water and Sewer Rate-Setting Goals

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- Revenue Sufficiency
- Fair and Equitable Rates
- Conservation Promotion
- General Health and Welfare



# Cost of Service Analysis



# What the Cost of Service Analysis Accomplished

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- **Appropriate allocation of revenue needs to water and sewer systems based on actual costs, resulting in a shift of the cost burden to the sewer system.**
- **Establishment of fixed charge based on meter size in accordance with industry standards.**



# Water and Sewer Rate-Setting Goals

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- Revenue Sufficiency
- Fair and Equitable Rates
- Conservation Promotion
- General Health and Welfare

# How Utility Rates Affect the Customer's Bill

*Periodic Bill - \$*

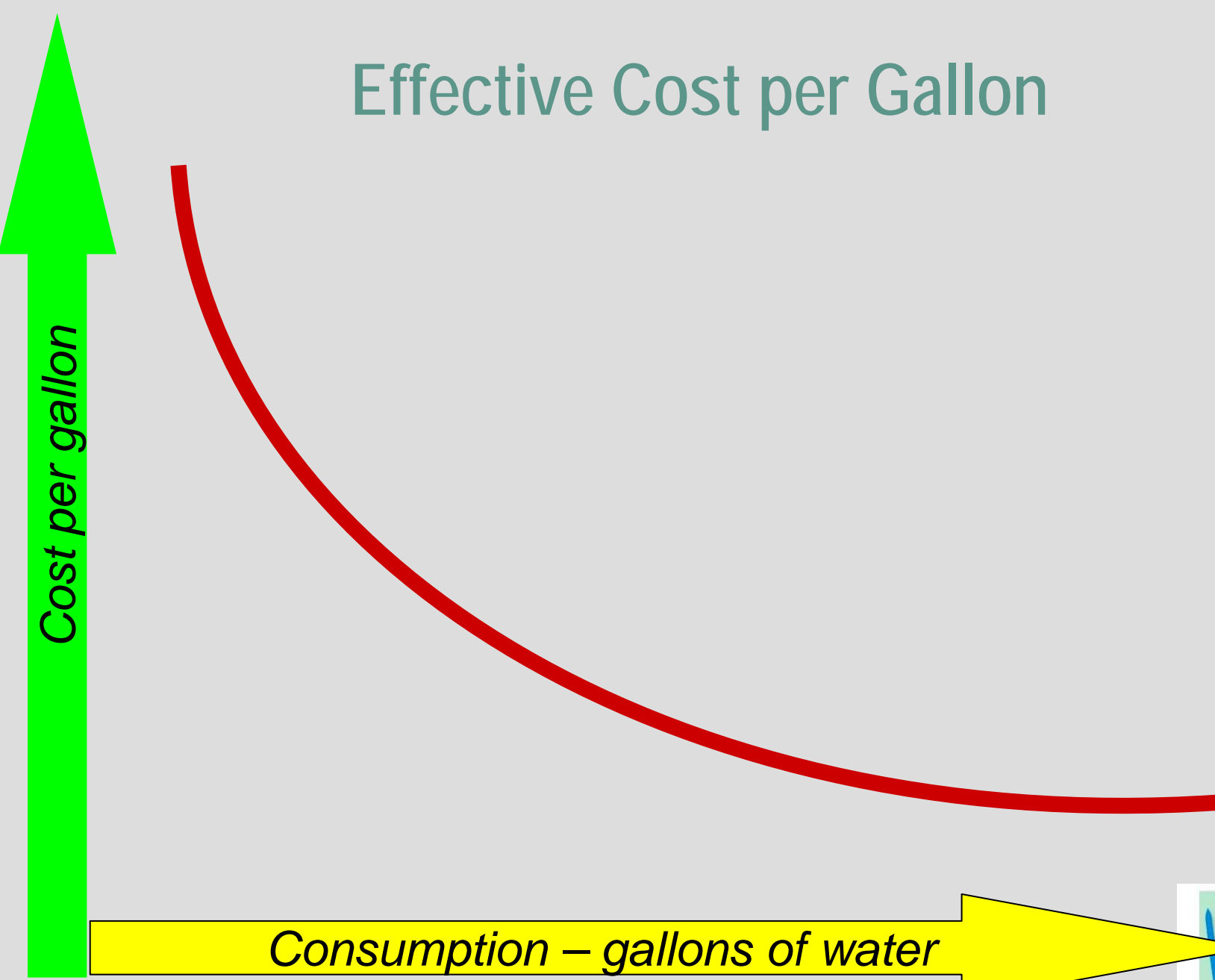
*FLOW CHARGE*

*BASE (FIXED) CHARGE*

*Consumption – gallons of water*



# Effective Cost per Gallon



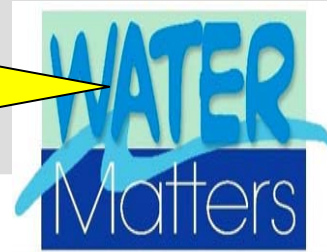
# ... we Change the Focus to Conservation

Periodic Bill - \$

*Lower the  
Fixed charges*

*BASE (FIXED) CHARGE*

*Consumption – gallons of water*



... and add Inclining Block Rates.

Periodic Bill - \$

Lifeline Rate



BASE (FIXED) CHARGE

Consumption – gallons of water





# Effective Cost per Gallon (Conservation Rates)

Cost per gallon

*Conservation  
rates flatten  
the curve*

Consumption – gallons of water

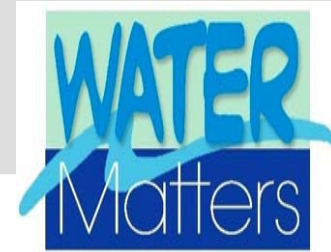


# Rates and Customer Impact



# Results of Rate Study for 3/4" Customers

Maximum Bill for a 3/4" Water / Sewer Customer									
Bi-Monthly Water Use Category (gallons)	Number of Customers	Percent of Total Customers	Cumulative Percent of Total Customers	2007	Percent Increase from 2007 to 2008	2008	2009	2010	2011
0 to 2,000	21,003	14%	14%	\$ 20.42	7%	\$ 21.76	\$ 25.24	\$ 29.28	\$ 33.97
2,001 to 4,000	18,328	12%	26%	\$ 31.24	10%	\$ 34.40	\$ 39.90	\$ 46.29	\$ 53.69
4,001 to 8,000	42,693	28%	53%	\$ 52.88	16%	\$ 61.40	\$ 71.22	\$ 82.62	\$ 95.84
8,001 to 20,000	58,618	38%	91%	\$ 117.80	21%	\$ 142.40	\$ 165.18	\$ 191.61	\$ 222.27
20,001 to 40,000	10,531	7%	98%	\$ 226.00	29%	\$ 292.00	\$ 338.72	\$ 392.92	\$ 455.78
>40,000	2,590	2%	100%	Varies with consumption.					
Totals	153,763	100%	Subsequent Year Rate Increases:				16%	16%	16%



# Cumulative Change in Bill for ¾" Customers

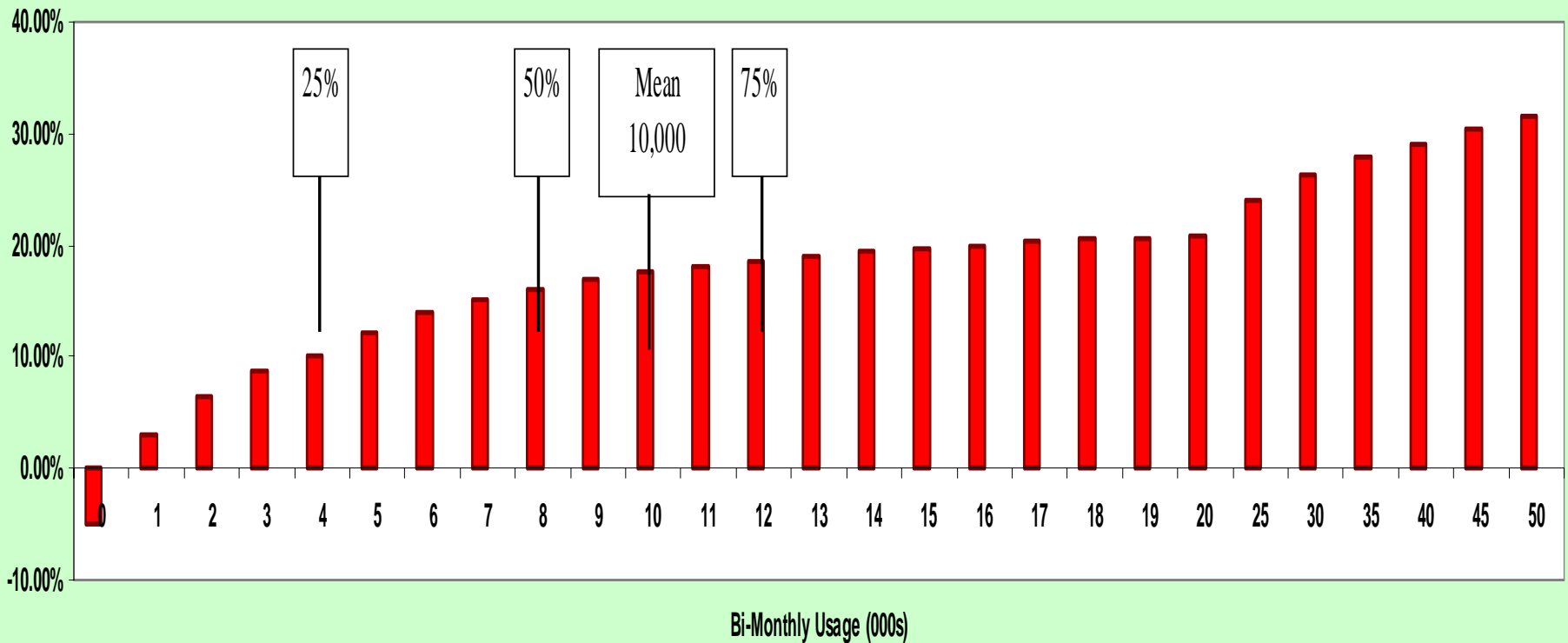
Bi-Monthly Water Use Category (gallons)	Maximum Bill for a ¾" Water / Sewer Customer								
	2007	% CHG from 2007	2008	% CHG from 2007	2009	% CHG from 2007	2010	% CHG from 2007	2011
0 to 2,000	\$ 20.42	7%	\$ 21.76	24%	\$ 25.24	43%	\$ 29.28	66%	\$ 33.97
2,001 to 4,000	\$ 31.24	10%	\$ 34.40	28%	\$ 39.90	48%	\$ 46.29	72%	\$ 53.69
4,001 to 8,000	\$ 52.88	16%	\$ 61.40	35%	\$ 71.22	56%	\$ 82.62	81%	\$ 95.84
8,001 to 20,000	\$ 117.80	21%	\$ 142.40	40%	\$ 165.18	63%	\$ 191.61	89%	\$ 222.27
20,001 to 40,000	\$ 226.00	29%	\$ 292.00	50%	\$ 338.72	74%	\$ 392.92	102%	\$ 455.78
>40,000	Varies with consumption.								

*Percent increase is over 2007 rates.*



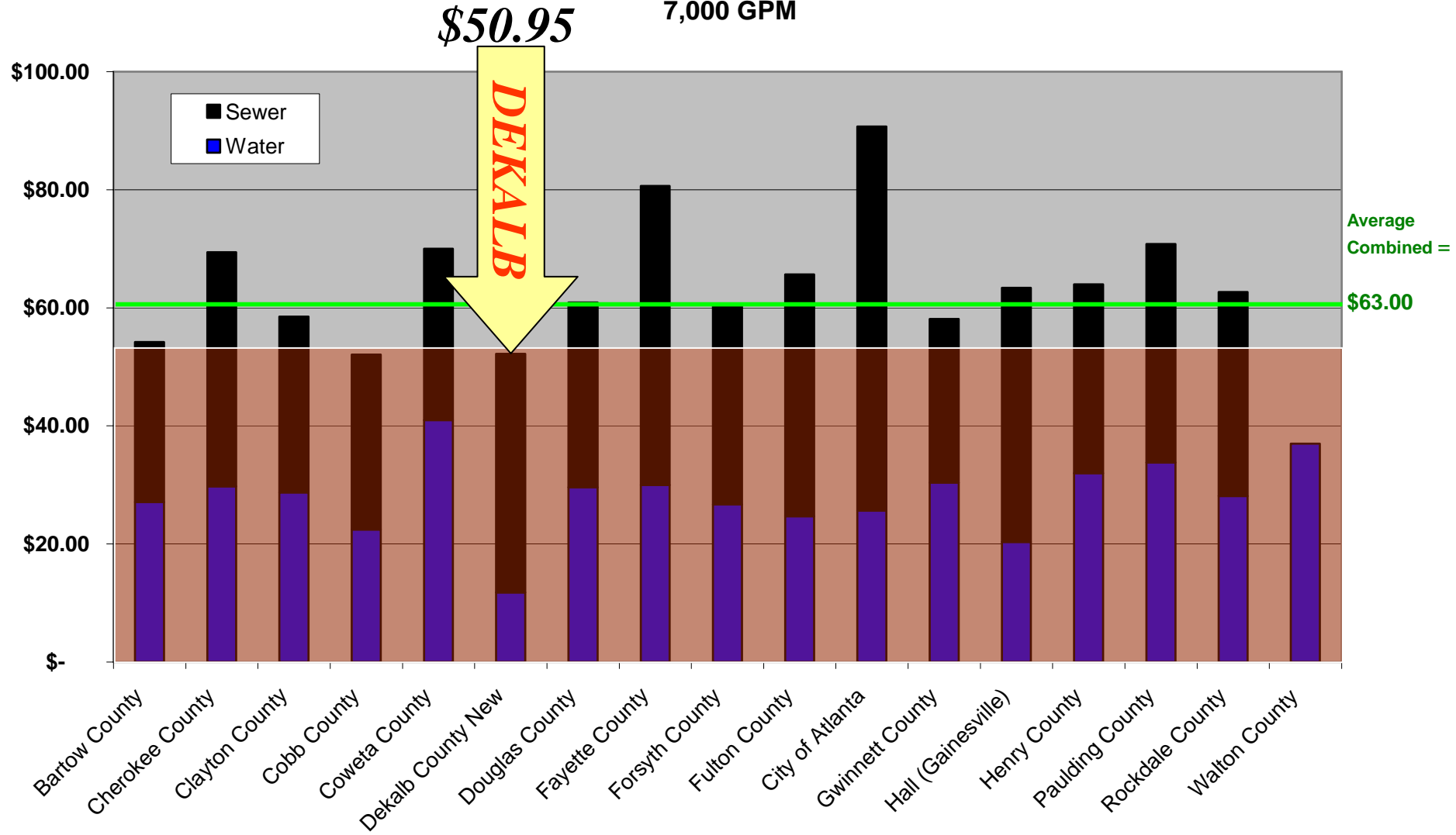
# Results of Rate Study for 3/4" Customers

Customer Impact of Proposed Rate Structure for Water & Sewer Customer with 3/4" Meter



# 2006 Compared to DeKalb 2008

**COUNTY COMPARISON**  
**Water and Sewer Combined Monthly Billing**  
**7,000 GPM**



# Results of Rate Study for Larger Meters

Maximum Bill for a 2" Water / Sewer Customer										
Bi-Monthly Water Use Category (gallons)	Number of Customers	Percent of Total Customers	Cumulative Percent of Total Customers	2007	Percent Increase from 2007 to 2008	2008	2009	2010	2011	
0 to 20,000	235	27%	27%	\$ 208.20	-12%	\$ 183.66	\$ 213.05	\$ 247.13	\$ 286.67	
20,001 to 65,000	200	23%	50%	\$ 451.65	8%	\$ 487.41	\$ 565.40	\$ 655.86	\$ 760.80	
65,001 to 210,000	214	25%	74%	\$ 1,236.10	19%	\$ 1,466.16	\$ 1,700.75	\$ 1,972.86	\$ 2,288.52	
210,001 to 400,000	116	13%	88%	\$ 2,264.00	21%	\$ 2,748.66	\$ 3,188.45	\$ 3,698.60	\$ 4,290.37	
>400,000	107	12%	100%	Varies with consumption.						
Totals	872	100%	Subsequent Year Rate Increases:				16%	16%	16%	

*Average consumption is 202,000 gallons bimonthly.*



# Proposed Rates





# Fiscal Year 2008 Rates

## FISCAL YEAR 2008

Meter Size	Monthly	Bi-Monthly
3/4"	\$ 1.33	\$ 2.67
1"	2.22	4.45
1 1/2"	4.45	8.90
2"	7.12	14.24
3"	13.35	26.69
4"	22.24	44.49
6"	44.49	88.97
8"	71.18	142.35
10"	102.32	204.64
12"	191.29	382.58

Block Range	Rate	
Monthly	Bi - Monthly	
	\$/1000 gal.	
0 - 2,000	0 - 4,000	\$ 1.01
2,001 - 10,000	4,001 - 20,000	1.44
10,001 - 20,000	20,001 -40,000	2.17
>20,001	>40,001	3.78

Block Range	Rate	
Monthly	Bi - Monthly	
	\$/1000 gal.	
0 - 2,000	0 - 4,000	\$ 1.44
2,001 - 10,000	4,001 - 20,000	1.44
10,001 - 20,000	20,001 -40,000	1.44
>20,001	>40,001	1.44

Meter Size	Monthly	Bi-Monthly
3/4"	\$ 3.23	\$ 6.45
1"	5.38	10.76
1 1/2"	10.76	21.51
2"	17.21	34.42
3"	32.27	64.54
4"	53.78	107.56
6"	107.56	215.12
8"	172.10	344.19
10"	247.39	494.77
12"	462.51	925.01
Commodity Charge	\$ 5.31 / 1,000 gallons	

Meter Size	Monthly	Bi-Monthly
3/4"	\$ 1.33	\$ 2.67
1"	2.22	4.45
1 1/2"	4.45	8.90
2"	7.12	14.24
3"	13.35	26.69
4"	22.24	44.49
6"	44.49	88.97
8"	71.18	142.35
10"	102.32	204.64
12"	191.29	382.58
Commodity Charge	\$ 3.78 / 1,000 gallons	

# Fiscal Year 2009 Rates

## FISCAL YEAR 2009

Meter Size	Monthly	Bi-Monthly
3/4"	\$ 1.55	\$ 3.10
1"	2.58	5.17
1 1/2"	5.17	10.33
2"	8.26	16.52
3"	15.49	30.97
4"	25.80	51.61
6"	51.61	103.21
8"	82.57	165.13
10"	118.70	237.39
12"	221.90	443.80

Block Range	Rate	
Monthly	Bi - Monthly	\$/1000 gal.
0 - 2,000	0 - 4,000	\$ 1.18
2,001 - 10,000	4,001 - 20,000	1.68
10,001 - 20,000	20,001 -40,000	2.52
>20,001	>40,001	4.39

Block Range	Rate	
Monthly	Bi - Monthly	\$/1000 gal.
0 - 2,000	0 - 4,000	\$ 1.68
2,001 - 10,000	4,001 - 20,000	1.68
10,001 - 20,000	20,001 -40,000	1.68
>20,001	>40,001	1.68

Meter Size	Monthly	Bi-Monthly
3/4"	\$ 3.75	\$ 7.49
1"	6.25	12.49
1 1/2"	12.49	24.96
2"	19.97	39.93
3"	37.44	74.87
4"	62.39	124.77
6"	124.77	249.54
8"	199.64	399.27
10"	286.98	573.94
12"	536.52	1,073.02
Commodity Charge	\$ 6.16 / 1,000 gallons	

Meter Size	Monthly	Bi-Monthly
3/4"	\$ 1.55	\$ 3.10
1"	2.58	5.17
1 1/2"	5.17	10.33
2"	8.26	16.52
3"	15.49	30.97
4"	25.80	51.61
6"	51.61	103.21
8"	82.57	165.13
10"	118.70	237.39
12"	221.90	443.80
Commodity Charge	\$ 4.39 / 1,000 gallons	

# Fiscal Year 2010 Rates

## FISCAL YEAR 2010

Meter Size	Monthly	Bi-Monthly
3/4"	\$ 1.79	\$ 3.60
1"	2.99	5.99
1 1/2"	5.99	11.98
2"	9.59	19.17
3"	17.97	35.92
4"	29.93	59.87
6"	59.87	119.72
8"	95.78	191.55
10"	137.69	275.37
12"	257.40	514.80

Block Range	Monthly	Bi - Monthly	Rate
			\$/1000 gal.
0 - 2,000		0 - 4,000	\$ 1.36
2,001 - 10,000		4,001 - 20,000	1.94
10,001 - 20,000		20,001 -40,000	2.92
>20,001		>40,001	5.09

Block Range	Monthly	Bi - Monthly	Rate
			\$/1000 gal.
0 - 2,000		0 - 4,000	\$ 1.94
2,001 - 10,000		4,001 - 20,000	1.94
10,001 - 20,000		20,001 -40,000	1.94
>20,001		>40,001	1.94

Meter Size	Monthly	Bi-Monthly
3/4"	\$ 4.35	\$ 8.68
1"	7.24	14.48
1 1/2"	14.48	28.95
2"	23.16	46.32
3"	43.43	86.85
4"	72.37	144.74
6"	144.74	289.47
8"	231.58	463.15
10"	332.89	665.77
12"	622.36	1,244.70
Commodity Charge	\$ 7.15 / 1,000 gallons	

Meter Size	Monthly	Bi-Monthly
3/4"	\$ 1.79	\$ 3.60
1"	2.99	5.99
1 1/2"	5.99	11.98
2"	9.59	19.17
3"	17.97	35.92
4"	29.93	59.87
6"	59.87	119.72
8"	95.78	191.55
10"	137.69	275.37
12"	257.40	514.80
Commodity Charge	\$ 5.09 / 1,000 gallons	

# Fiscal Year 2011 Rates

## FISCAL YEAR 2011

Meter Size	Monthly	Bi-Monthly
3/4"	\$ 2.08	\$ 4.17
1"	3.47	6.95
1 1/2"	6.95	13.90
2"	11.12	22.23
3"	20.84	41.67
4"	34.72	69.45
6"	69.45	138.88
8"	111.11	222.20
10"	159.72	319.43
12"	298.59	597.17

Block Range	Monthly	Bi - Monthly	Rate
			\$/1000 gal.
0 - 2,000		0 - 4,000	\$ 1.58
2,001 - 10,000		4,001 - 20,000	2.25
10,001 - 20,000		20,001 -40,000	3.39
>20,001		>40,001	5.91

Block Range	Monthly	Bi - Monthly	Rate
			\$/1000 gal.
0 - 2,000		0 - 4,000	\$ 2.25
2,001 - 10,000		4,001 - 20,000	2.25
10,001 - 20,000		20,001 -40,000	2.25
>20,001		>40,001	2.25

Meter Size	Monthly	Bi-Monthly
3/4"	\$ 5.05	\$ 10.07
1"	8.40	16.80
1 1/2"	16.80	33.58
2"	26.87	53.73
3"	50.38	100.75
4"	83.95	167.89
6"	167.89	335.78
8"	268.64	537.25
10"	386.16	772.29
12"	721.94	1,443.85
Commodity Charge	\$ 8.29 / 1,000 gallons	

Meter Size	Monthly	Bi-Monthly
3/4"	\$ 2.08	\$ 4.17
1"	3.47	6.95
1 1/2"	6.95	13.90
2"	11.12	22.23
3"	20.84	41.67
4"	34.72	69.45
6"	69.45	138.88
8"	111.11	222.20
10"	159.72	319.43
12"	298.59	597.17
Commodity Charge	\$ 5.91 / 1,000 gallons	

