A landscape photograph showing a vast, flat, grassy field in the foreground and middle ground. The sky is a deep blue with large, white, billowing clouds. A bright sunburst effect is visible through a gap in the clouds, casting a glow. In the distance, a long, low structure, possibly a train or a pipeline, stretches across the horizon. The overall mood is dramatic and somewhat somber, reflecting the 'stormy times' mentioned in the text.

Can your water utility be  
financially healthy in  
stormy times?



*The 2009 Experiences of:*

Pueblo

Englewood

Greeley

Denver Water



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# Board of Water Works of Pueblo, Colorado



# BOARD OF WATER WORKS OF PUEBLO, COLORADO

## DEMOGRAPHICS

Population Served	107,000
Customer Accounts	40,000
Avg. Annual Consumption	8.2 billion gallons
Avg. Annual Billable Consumption	7.5 billion gallons
Avg. Consumption per Inside-City Residential Customer	127,000 gallons
Raw Water Leasing Program	Avg. 20% of Operating Revenue
Rate Structure	Uniform



## 2009 EXPERIENCE

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### ➤ Effects of Mother Nature

#### ➤ Metered Water Sales

➤ 5% Decline vs. Average

#### ➤ Water Sales Revenue

➤ 4.25% Decrease – Despite 4.75% Rate Increase

➤ Use of Reserves

### ➤ Effects of Economy

➤ Connection Fees

➤ Increased Receivables



## 2009 EXPERIENCE

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### ➤ Major Capital Projects

- Vestas
- Water Rights Acquisition

### ➤ Cost Reduction Initiatives

- O&M
- Capital





## FINANCIAL IMPACT

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- Rate Increases
- Use of Water Supply
- Metered Water Shortfall
- Reserves





## STRATEGIES

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- Budgeting O&M
- Use of “One-Time” Revenues
- Projecting Consumption Levels
- Projecting Connection Fees
- Creating a “Nimble” Organization



## GOING FORWARD

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- Eye to the Future
- Constant Evaluation of Plans
- Covering Increased Costs with Reduced Consumption





# **City of Englewood Utilities Department**

JTAC Luncheon

Can Your Water Utility Be Financially  
Healthy In Stormy Times?

# Number of Water Accounts



Single Family Residential Accounts	8,702
Commercial Accounts	1,075
Multi-Family Accounts	945
Municipal Accounts	58
Car washes	9
Industrial Accounts	9
Mobile Home Parks	6
School Accounts	4
Special Handling	1
<b>Total</b>	<b>10,810</b>

*Average Single Family Annual Water Use = 93,100 Gallons*

# Existing Inside City Water Rates



## Quarterly Volume Charge

First 400,000 gallons	\$3.11 per kgal
Over 400,000 gallons	\$1.93 per kgal

## Quarterly Minimum Charge:

<u>Meter Size</u>	<u>Amount</u>	<u>Volume Allowance</u>
5/8"	\$8.03	None
3/4"	\$9.16	None
1"	\$78.91	22,000 gallons
1.5"	\$149.82	45,000 gallons
2"	\$235.53	72,000 gallons
3"	\$435.52	135,000 gallons
4"	\$721.23	225,000 gallons
6"	\$1,375.40	450,000 gallons

# Monthly Billed Water Sales Revenue



	2007	2008	2009
January	\$433,330	\$483,418	\$496,971
February	\$422,083	\$444,045	\$457,712
March	\$192,552	\$208,317	\$214,625
April	\$393,783	\$412,342	\$424,606
May	\$428,277	\$428,954	\$501,005
June	\$192,552	\$242,353	\$257,546
July	\$393,783	\$515,084	\$501,963
August	\$544,144	\$629,201	\$544,614
September	\$527,749	\$645,088	\$503,930
October	\$707,635	\$782,369	\$770,421
November	\$634,978	\$667,892	\$643,017
December	\$412,419	\$435,015	\$462,046
Total	\$5,283,284	\$5,894,079	\$5,778,458
Percent Change	0%	12%	-2%*

# Impact of Lower Water Sales in 2009



- 2008 Billed water sales were \$5,894,000.
- 2009 Actual water sales were anticipated to be \$6,354,000 with a 7% rate increase.
- 2009 Billed water sales were 2% lower than 2008.
- *The overall 2009 revenue loss is 9% or \$570,000.*

# Water Sales Revenue from Base Charges vs. Volume Charges



\* Unaudited, incomplete numbers

	2007	2008	2009
Base Charges	\$232,932	\$263,292	\$285,133*
Volume Charges	\$5,201,640	\$5,635,353	\$4,548,105*
Percentages	4.4%	4.6%	6.3%

# Financial Strategies



- Five-year cash flow projection models set up in such a way that we can delay certain, non-critical capital projects until revenues allow for their accomplishment.
  - Examples:
    - Routine water main replacement.
    - Routine ditch lining or piping.
- Package large capital projects and issue bonds to spread the costs to future customers who will use the facilities.
- Passed multi-year rate increases. Previous two multi-year increases were each 3 years in duration. The Water and Sewer Board likes uniform increases as opposed to sudden large increases.

# Financial Strategies



- Continue updating 5-year cash flow projections. Great tool for rapidly make decisions when revenues fall short.
- View Budget numbers only as an authorization to spend. Division managers prepare the budget using the projected revenue requirements and manage their expenditures within that context.

# Utility Management Approach



- 1. Areas of Management – The Vicious Circle.
  - A. Political
  - B. Engineering
  - C. Financial
  - D. Legal.

When engineering doesn't work, it will destroy the other three. The other three often prevent the proper engineering. Often the political body is gone before the consequences are realized. All three of these must be in focus.

# Utility Management Approach



## 2. The Cash Flow.

The principle management tool is the 5 year cash flow which is in context of the long range capital program: 5 – 50 years. It projects for each year income, expenses, bonding and year end balances as well as bond coverage.

# Utility Management Approach



## Cash Flow:

- A. Shows the entire operation in one understandable summary.
- B. Allows rapid calculation of options, i.e., adding this project or lowering salaries results in this much rate variance.
- C. Can be used to foster engineering, financial and legal understanding to result in political acceptance because it shows consequences for various strategies. Allows the political body to join in strategic decision making on an informed basis.

# City of Englewood Utilities Department



## Cash Flow:

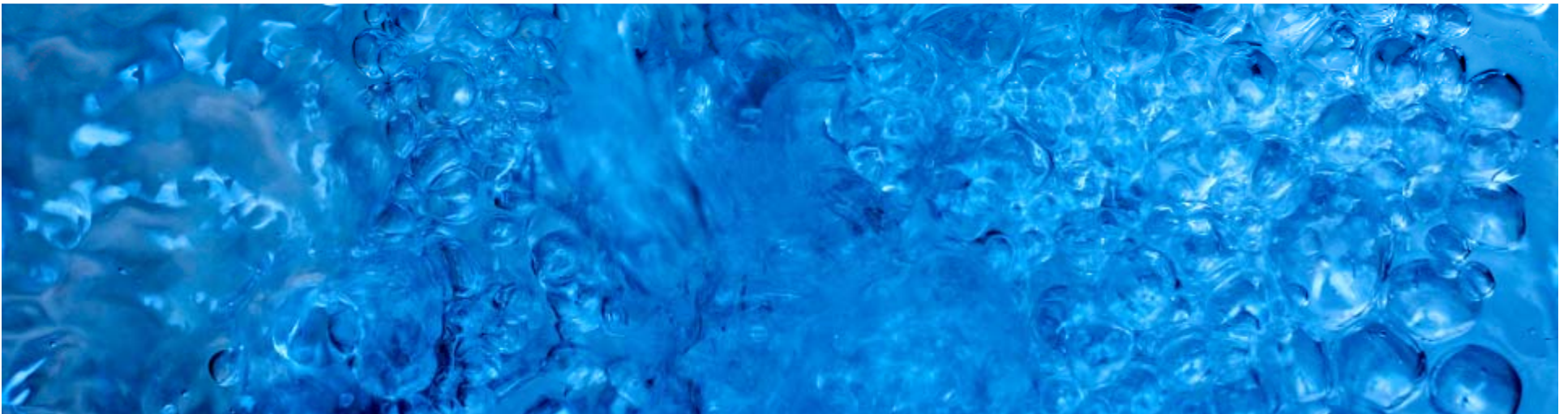
- Our cash flow is computerized and tied to the budget line items. Managers budget in context of the cash flow.

# City of Englewood Utilities Department



3. For correct revenue reductions we may do all or part of:
  - A. Lower fund balances.
  - B. Postpone non-critical capital projects.
  - C. Accept salary freezes with the rest of the City.
  - D. Analyze cash flow with much lower increases in O&M.

# City of Greeley Water Utility



# Water Utility

- 25,965 accounts serving 93,000. Growth of 0.2% in 2009
- Five customers account for **23.6%** of water sales revenue:
  - JBS Swift & Co.
  - City of Evans
  - Town of Windsor
  - Eastman Kodak
  - Town of Milliken
- Water Rates: Residential service charge **\$6.95** / mo + **\$2.86** / 1,000 gals
- 75.05 FTE's in Water Department
- Single Family Residential represents approximately 55% of total revenue.
- Average Single Family use decreased 16.9% from **153,500** gallons in 2008 to **127,600** in 2009.

# 2009 Precipitation

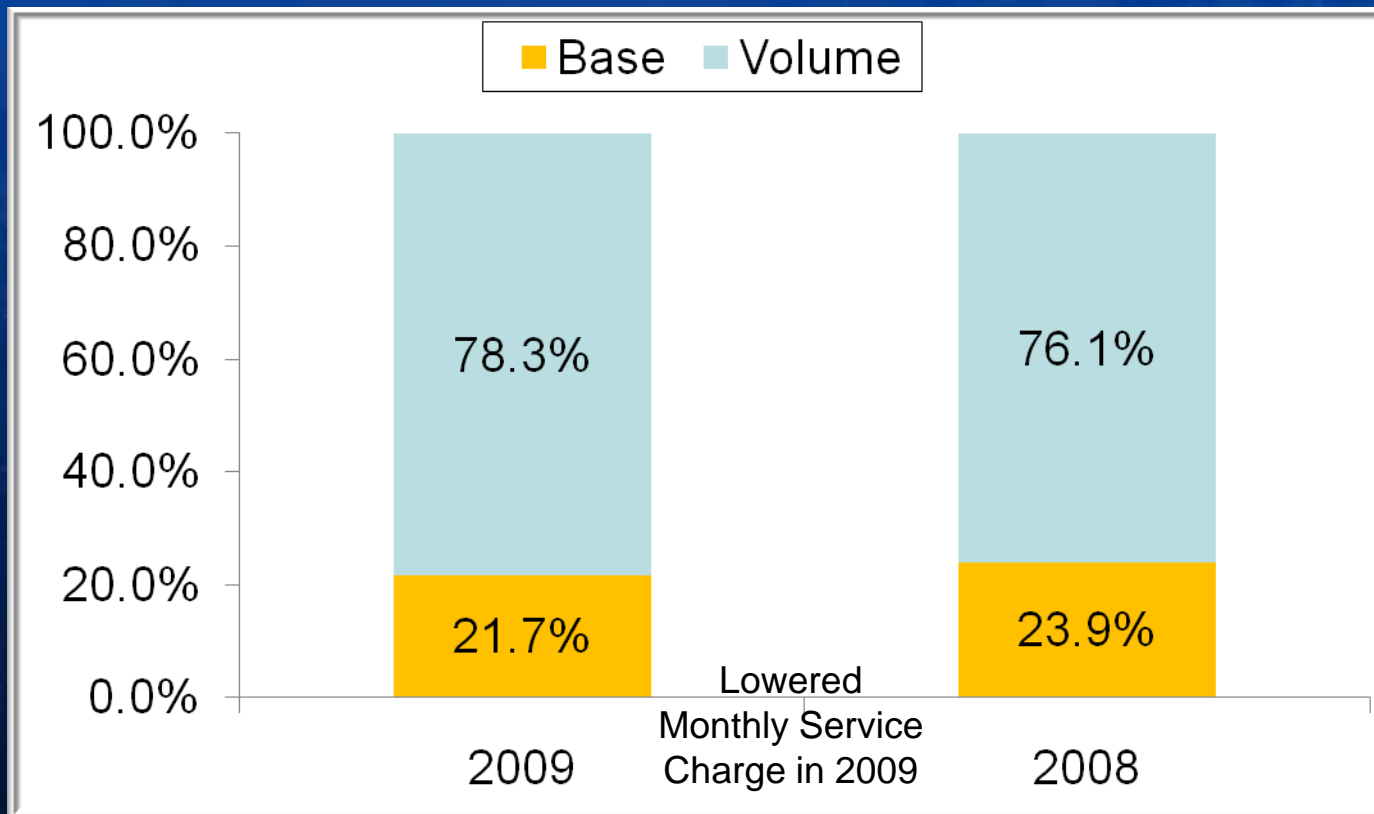
- 20.2 inches (44% greater than long-term average of 14.02 inches)
- Wettest year in 30 years
- Third wettest year in the 42 years that Department has collected statistics

# 2009 Water Sales

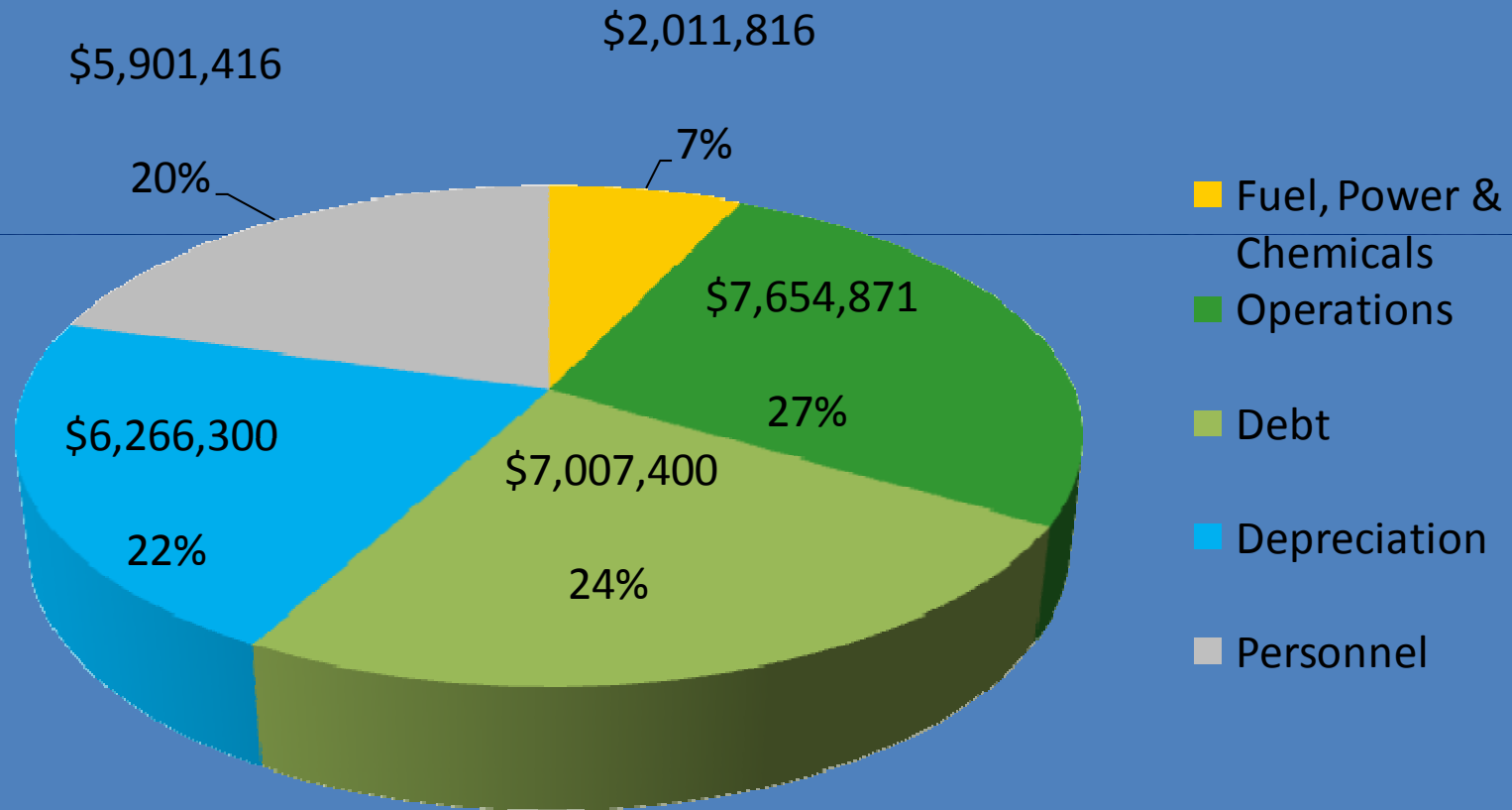
- 2009 water sales revenue of \$21,650,412 represents **revenue increase of 0.3%** over 2008 in spite of 2009 **rate increase of 12%**.
- 2009 treated **water production** of 7.78 billion gallons is **down 13%** or 1.16 billion gallons from 2008 production levels.

# Water Sales

## *Base Charge vs. Volume Charge Revenue*



# 2009 Revenue Requirements of \$28.8 million



# 2009 Financial Impact

- Missed revenue projection by approximately **\$3,000,000** or approximately 12.3%.
- Departmental O&M spending below projections by **\$2,300,000** or approximately 16.9%.
- Projected to decrease actual operating reserves by approximately **\$700,000**.

# Tactics for Reducing Expenses

Action	Consequence
Did not fill 4 vacant positions	\$243,600
Did not fill 5 seasonal labor positions not filled (operations & mowing)	92,000
Eliminated planned 3% pay increases	296,100
Minimized overtime	63,000
Reduced travel and training	24,800
Delayed 13 CIP projects – reduce depreciation	547,000
Delayed O&M items – reduced professional fees (engineering, legal)	233,000
Delayed other non-critical service purchases	85,000
Allowed parts inventory to drop	119,500
Lower than expected assessments and fees	150,000
Variable cost reduction – electrical	325,000
Variable cost reduction – chemical	<u>121,000</u>
<b>TOTAL</b>	<b>\$2,300,000</b>

# Lessons Learned

- Review revenue and expenditures monthly and react quickly to projected trends.
- Act on potential problems early in year instead of reacting to them later in year, when it may be too late!
- Rethink lowering monthly service charge rates! Our decision to lower monthly service charge rates by 11% resulted in decreasing our fixed revenue stream by approximately \$259,000!
- Price Elasticity: Was it a wet year or have rate increases of 32.5% over the last five years reached a price elasticity point with consumers?



# Can Your Water Utility Be Financially Healthy In Stormy Times?

By

Stephanie Niemi, Rate Analyst II &  
David LaFrance, Director of Finance



**DENVER WATER**

January 21, 2010

# 2009 Denver Water Demographics

- 228,820 Retail Accounts (excluding Wholesale)
- 68.3 Billion Gallons Sold
  - Breakdown of Actual Water Sold:

Type of Water Sold	Revenue (in millions)	Consumption (in billions)	\$ / 1,000 Gallons
Treated Sales	\$182.7	61.4	\$2.97
Recycled	\$0.9	1.1	\$0.81
Raw	\$4.7	5.7	\$0.82
Total	\$188.3	68.3	\$2.76

- 2,681 Miles of Pipe
- Average Daily Consumption: 170.2 Million Gallons
- Maximum Daily Consumption: 341.8 Million Gallons

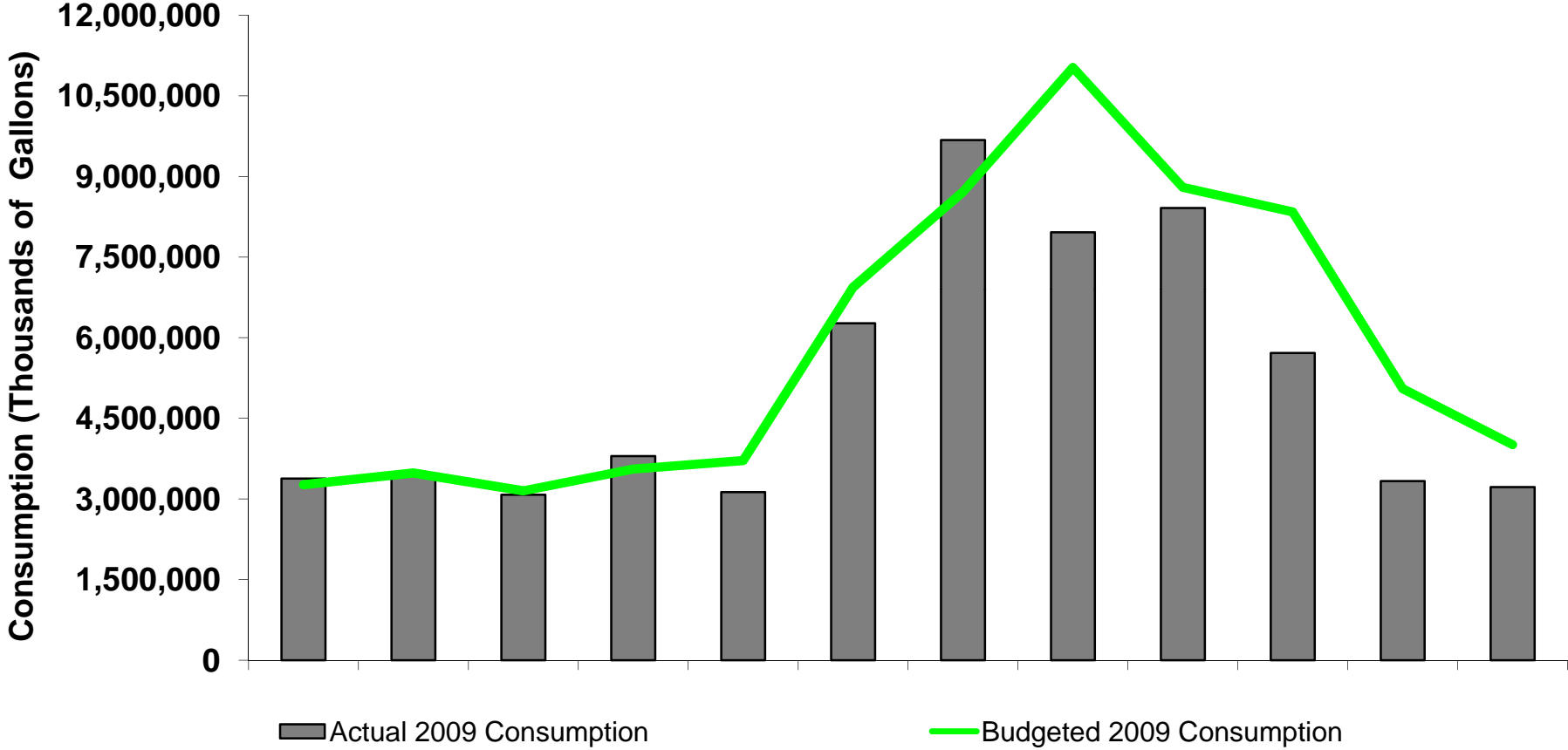


# 2009 Denver Water Demographics

- **Single Family Residential**

Single Family Residential	Inside City	Read & Bill	Total Service	Total
Water Rate Revenue	\$35,023,451	\$13,016,488	\$17,921,389	\$65,961,328
Consumption (in millions)	12,075,102	4,114,005	4,388,923	20,578,030
Estimated # of Accounts	129,119	33,288	32,038	194,445
<b>Revenue per Account</b>	<b>\$271</b>	<b>\$391</b>	<b>\$559</b>	<b>\$339</b>
<b>Consumption per Account (in thousands gallons)</b>	<b>94</b>	<b>124</b>	<b>137</b>	<b>106</b>
2004 Consumption per Account (in thousand gallons)	96	126	135	108
2005 - 2008 Consumption per Account (in thousand gallons)	112	151	164	127

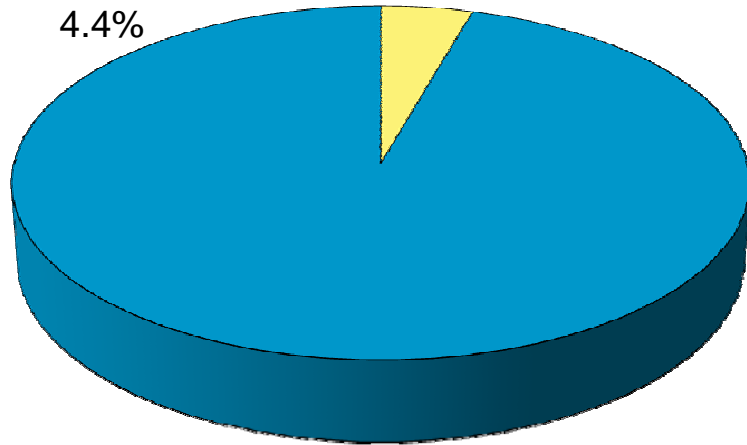
# 2009 Treated Water Sales by Month



# Water Revenue Requirement

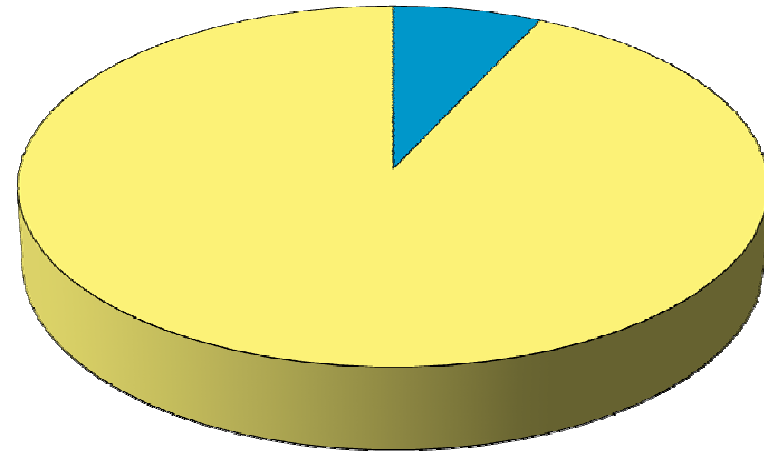
- Based on budgeted revenue of \$224.5 million from water rates in 2009

Service Charge Revenue  
(Fixed Revenue Source)  
\$9.9 million  
4.4%



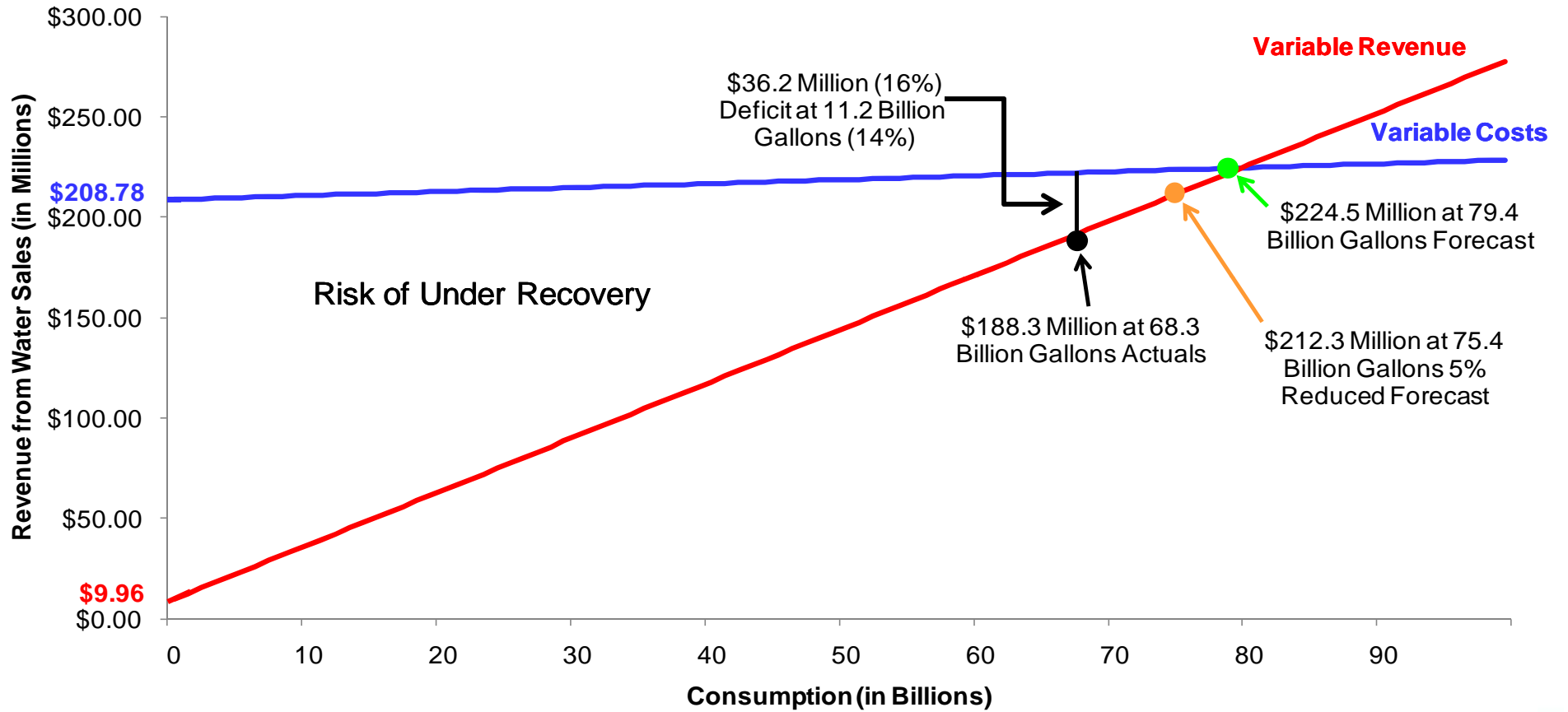
Consumption Charge Revenue  
(Variable Revenue Source)  
\$214.6 million  
95.6%

Chemicals and Pumping Costs  
(Variable Costs)  
\$15.7 million  
7.0%



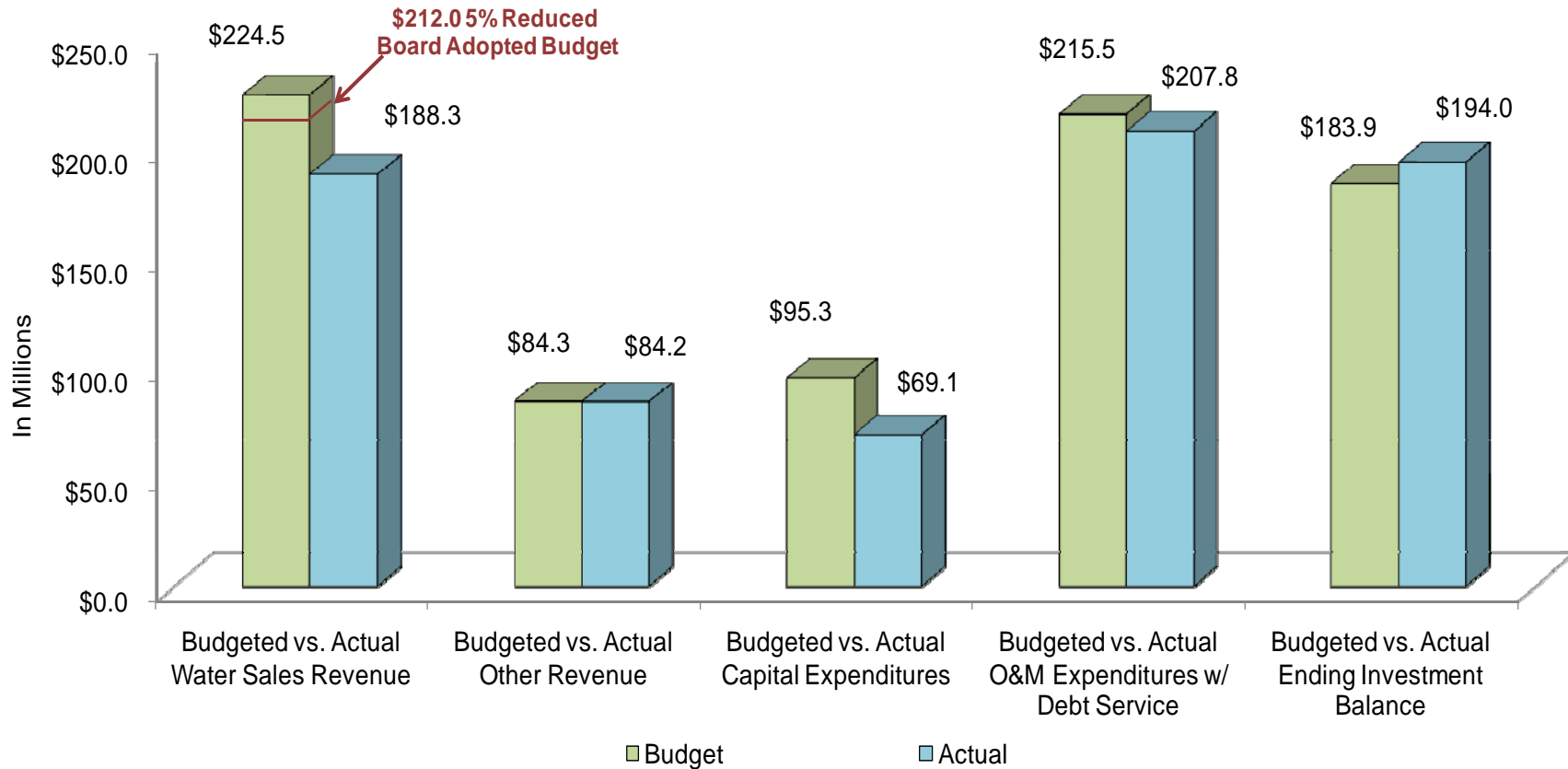
Fixed Costs Covered  
by Rate Revenue  
\$208.8 million  
93.0%

# Revenue Risk



# Financial Impact

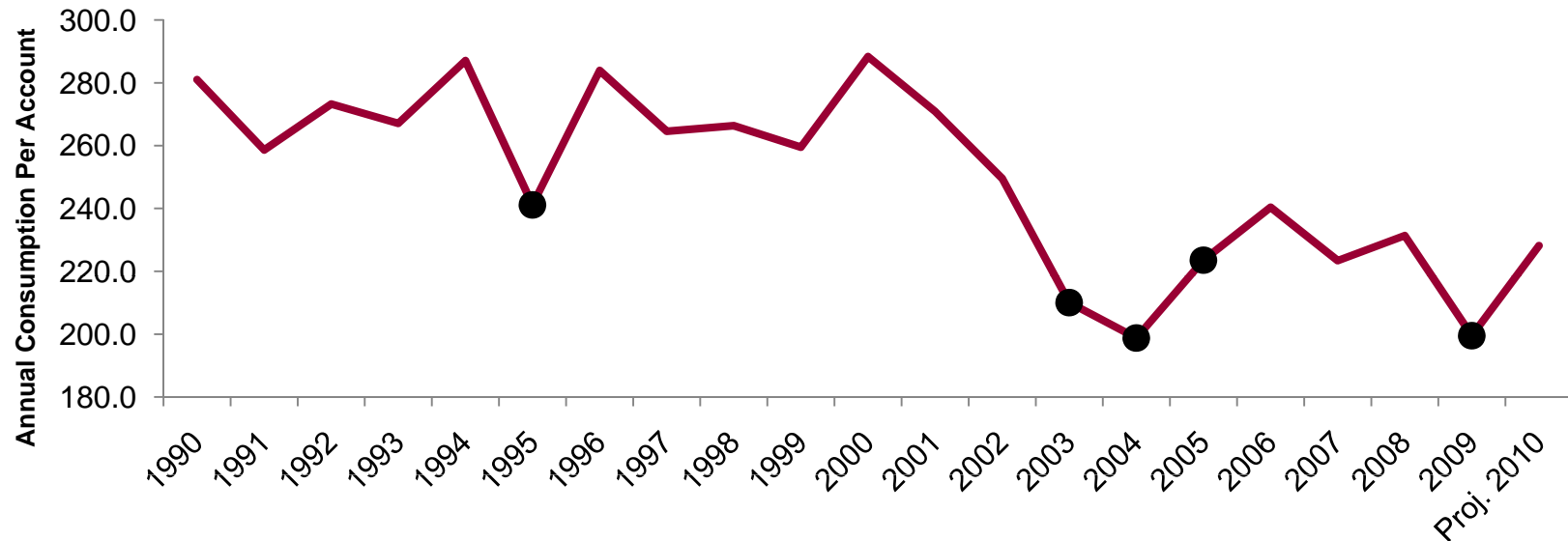
## Budgeted vs. Actual



# Lessons Learned:

## Annual Consumption Varies Over Time

Treated Average Consumption per Account (Excluding Wholesale)



- Plan for long-term trends in financial plans.
- Carry investment balances for annual fluctuations that allow for operations and construction projects to continue.

# Discussion

