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City of Louisville
COLORADO • SINCE 1882

Utility Rate Task Force

Meeting No. 2
June 6, 2013

Agenda

- **Summary of Meeting # 1: May 16, 2013**
- **2013 Budgets & Future Challenges**
- **Rate Structure Survey**
- **System Statistics**
- **Pricing Objectives**
- **Overview of Tap Fee Methodologies**
- **Closing Comments**

Financial Plans

City Budget – Water

Description	2013
Beginning Balance	$6,516,572
Revenues	
Rate Revenue	4,783,880
Tap Fees	3,114,060
Other Revenue	142,800
Total Revenue	8,040,740
Operating Expenses	(3,238,840)
Debt Service	(1,004,043)
Capital Expenditures	(6,868,240)
Surplus/(Deficit)	(3,070,383)
Ending Balance	$3,446,189
Debt Service Coverage	4.78

Large Capital Expenditures – Water

2013 Estimate

- 3 MG Tank: $1.4 million
- Sludge Treatment/Handling: $3.2 million

Planned 2014-2018

- Waterline Replacement: $1.0 million
- 3 MG Tank: $2.0 million
- City Services Facility: $1.2 million
- Sludge Treatment/Handling: $3.0 million
- North WTP Pump Station Replacement: $2.3 million
- NCWD-Windy Gap Firming Project: $2.2 million
- North Clear Well Upgrade: $3.2 million

City Budget – Wastewater

Description	2013
Beginning Balance	$8,923,770
Revenues	
Rate Revenue	1,860,580
Tap Fees	418,630
Other Revenue	256,950
Total Revenue	2,536,160
Operating Expenses	(1,606,680)
Debt Service	0
Capital Expenditures	(2,212,670)
Surplus/(Deficit)	(1,288,190)
Ending Balance	$7,635,580
Debt Service Coverage	N/A

Large Capital Expenditures – Wastewater

2013 Estimate

- WWTP Upgrade: $1.0 million

Planned 2014-2018

- Sewer Line Replacement: $1.5 million
- City Services Facility: $1.1 million
- WWTP Upgrade: $21.9 million

City Budget – Storm Water

Description	2013
Beginning Balance	$1,832,103
Revenues	
Rate Revenue	516,280
System Development Fees	0
Other Revenue	367,700
Total Revenue	883,980
Operating Expenses	(181,620)
Debt Service	0
Capital Expenditures	(837,210)
Surplus/(Deficit)	(134,850)
Ending Balance	$1,697,253
Debt Service Coverage	N/A

Large Capital Expenditures – Storm Water

2013 Estimate

- Drainage Way “A-2”: $412,710

Planned 2014-2018

- City-Wide Storm Sewer Outfall Improvements: $7.0 million
- BNSF RR Underpass/N Drainway: $750,000

Rate Structure Survey Results
Single Family Residential

	Flat	Declining Block	Uniform	Seasonal	Inclining Block	Budget / Individualized
Arvada					X	
Aurora					X	
Boulder						X
Broomfield			X			
Fort Collins					X	
Lafayette					X	
Longmont					X	
Louisville					X	
Loveland			X			
Superior					X	
Thornton						X

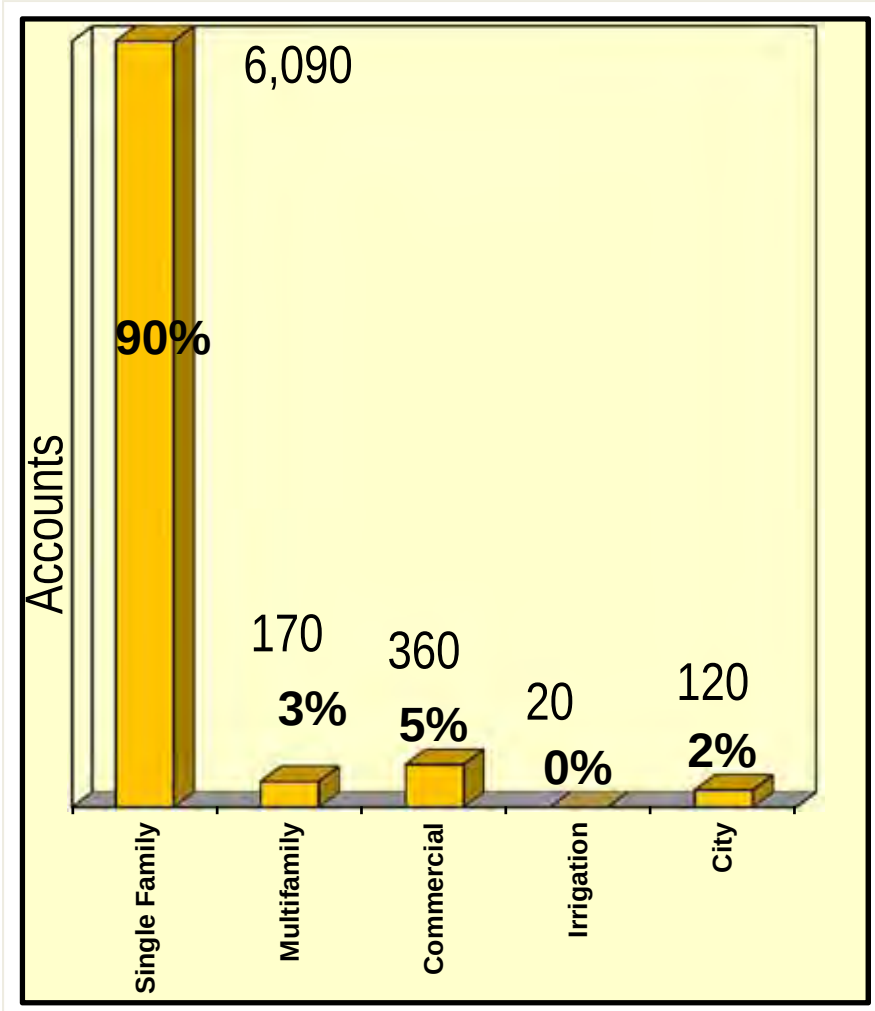
Rate Structure Survey Results
Multifamily Residential

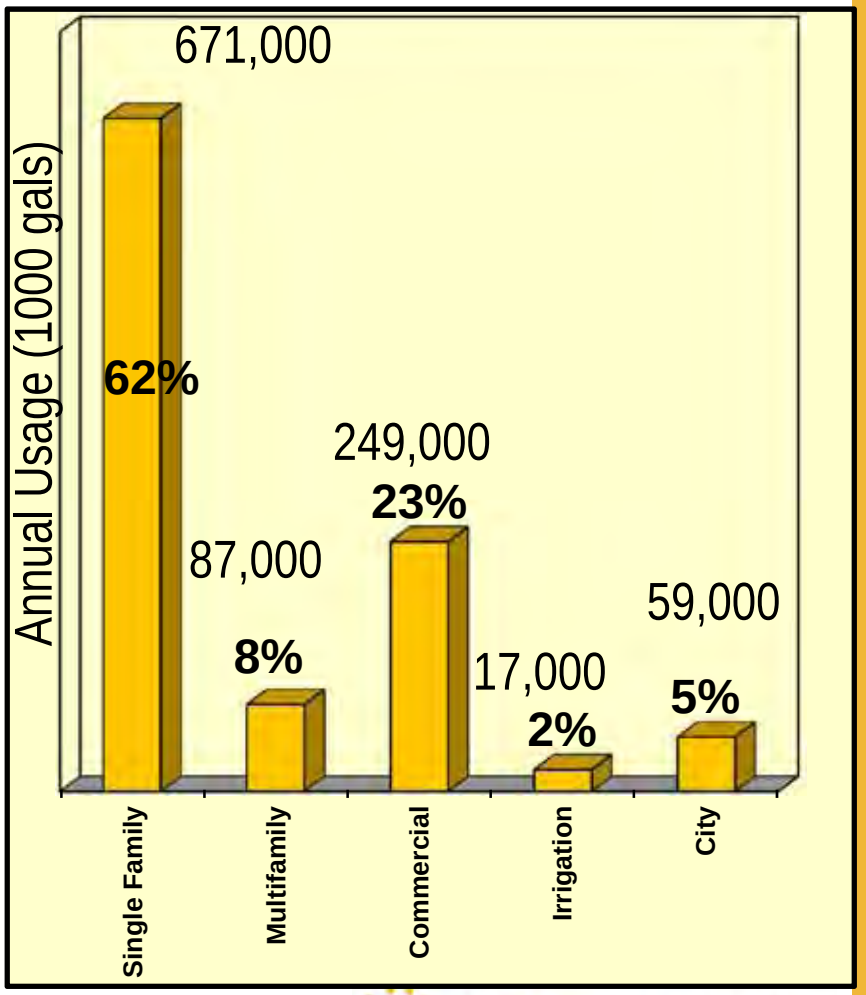
	Flat	Declining Block	Uniform	Seasonal	Inclining Block	Budget / Individualized
Arvada					X	
Aurora						X
Boulder						X
Broomfield			X			
Fort Collins				X		
Lafayette					X	
Longmont			X			
Louisville					X	
Loveland			X			
Superior					X	
Thornton						X

Rate Structure Survey Results
Non-Residential

	Flat	Declining Block	Uniform	Seasonal	Inclining Block	Budget / Individualized
Arvada					X	
Aurora						X
Boulder						X
Broomfield			X			
Fort Collins				X	X	
Lafayette					X	
Longmont			X			
Louisville					X	
Loveland			X			
Superior					X	
Thornton						X

Water Customer Background





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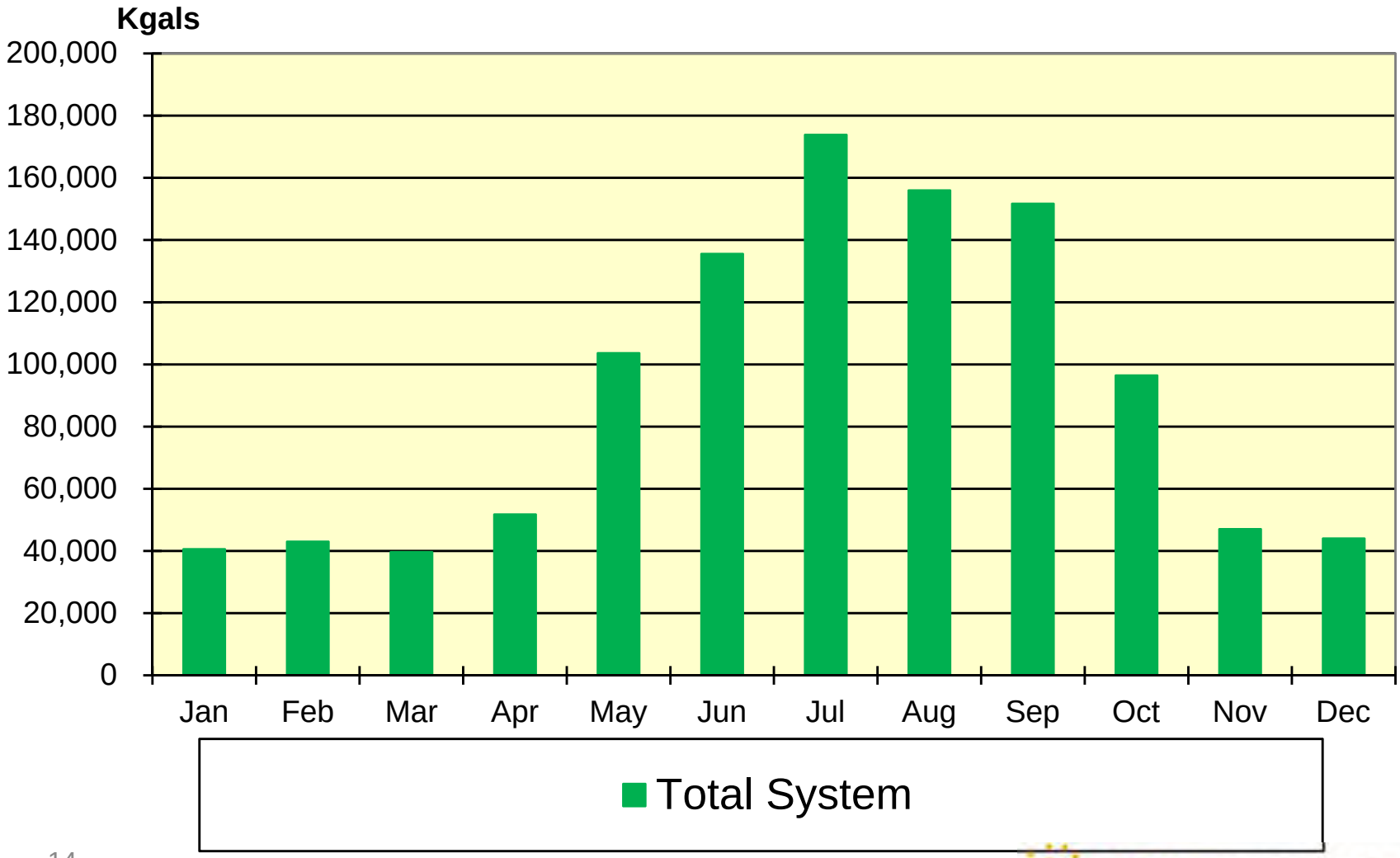
Total Monthly Water Use – System Wide



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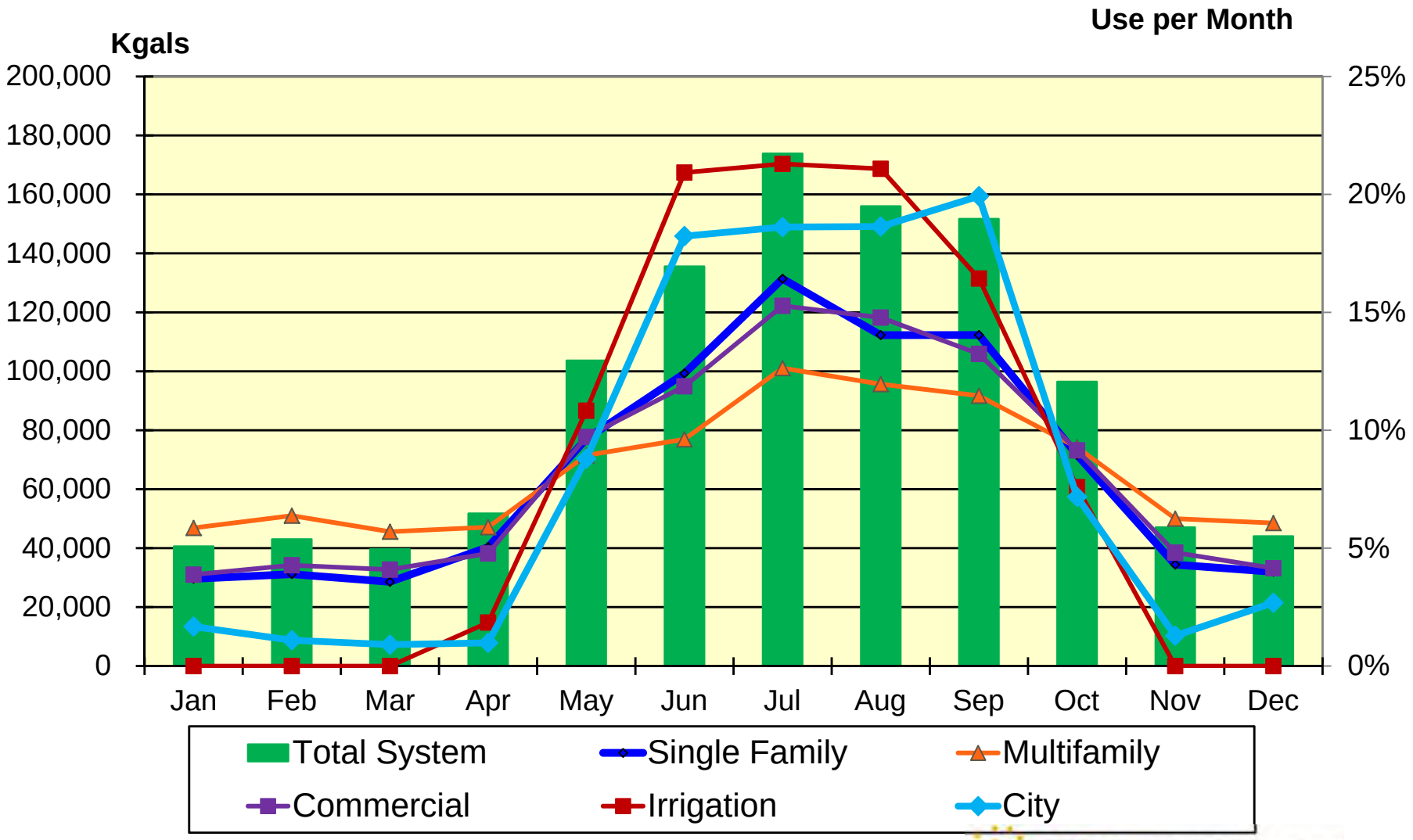
Total Monthly Water Use - City



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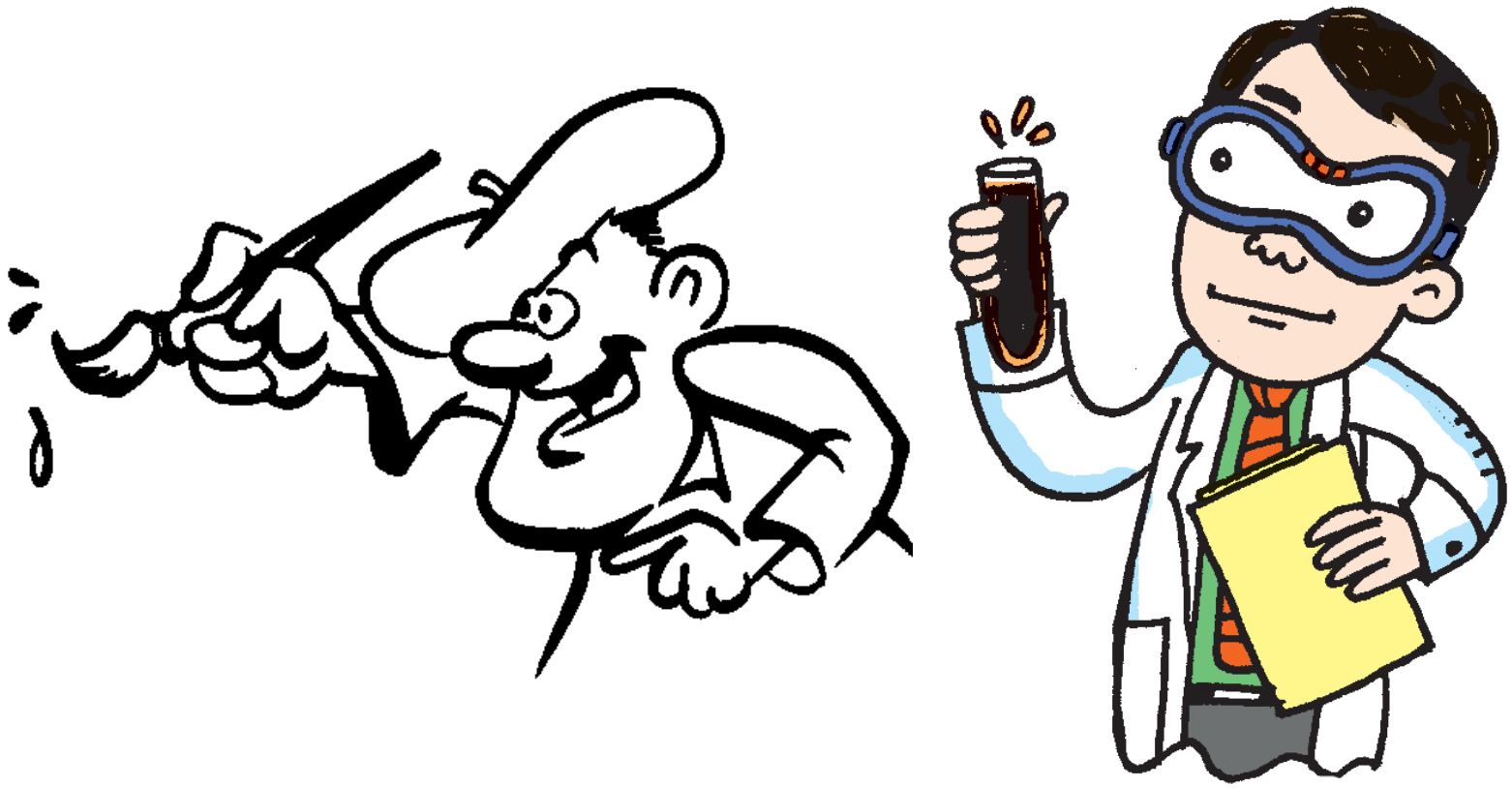
Pricing Objectives– an art & a science



Pricing Objectives

Revenue Stability

Effective in providing a stable revenue stream to recover revenue requirements in the face of variable external factors such as tourism and weather.

Peak Usage Reduction

Assigns cost of providing peaking facilities to those customers having significant peak to average water use patterns, i.e., discourages use of water during periods of peak demand.

Water Conservation

Effective in promoting efficient use of resources on a year-round basis.

Fixed Income/Affordability

Having rate structure that mitigates rates/cost to low income users.

Customer Acceptance

Having rate structure that is both understandable and acceptable to customers

Growth Pays for Itself

Supports new housing, commercial, and industrial development

Pricing Objectives

Cost-of-Service Equity

Developing rates so that each customer's water bill equals the cost borne by the City in providing that service.

Customer Impact

Minimizes rate impact among customers in similar classes, in both the short-term and long-term.

Large Volume Customers

Has minimum to moderate financial impacts on large water users and significant sewer accounts.

Administrative Ease

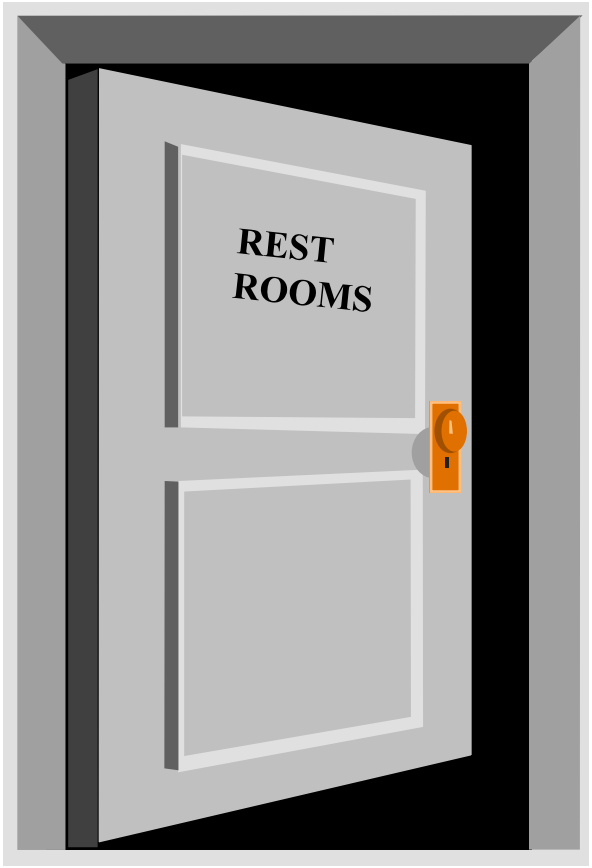
Minimize the administrative burdens associated with implementing and sustaining the use of a rate structure.

Pricing Objectives Evaluation Matrix

	Evaluation Criteria	Weight (1-5)*											Total	Average	Ranking
1	Administrative Ease														
2	Cost-of-Service Equity														
3	Customer Acceptance														
4	Customer Impact														
5	Fixed Income/Affordability														
6	Growth Pays for Itself														
7	Large Volume Customers														
8	Peak Usage Reduction														
9	Revenue Stability														
10	Water Conservation														

*** Weight 1 = Not Important 5 = Very Important**

O.K. Everybody, let's take 5 . . . .



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4	Customer Impact														
5	Fixed Income/Affordability														
6	Growth Pays for Itself														
7	Large Volume Customers														
8	Peak Usage Reduction														
9	Revenue Stability														
10	Water Conservation														

*** Weight 1 = Not Important 5 = Very Important**

Tap Fees Overview – Fee Design

Technical Requirements

A ÷ B = Fee

(if only it were this easy)

Methodologies

Equity Buy-In

Incremental (Marginal) Cost

Hybrid

Equity Buy-In

Considerations

- Based on existing facilities and costs
- New customers assessed charge at same equity position as existing customers
- Appropriate when there is excess capacity
- ‘Backward looking’
- Technological issues

Current Assets

- Available capacity of existing plant
- What is the replacement cost of the total plant in today’s dollars?
- How much growth will be served?

Incremental (Marginal) Cost

Considerations

- Fast growing communities
- Designed to limit impact on existing customers
- “Forward looking”
- Master plan accuracy

Capital Improvement Plan

- Expansion-related capital projects
- Additional growth to be served

Hybrid Approach

Considerations

- Recovers costs of existing facilities and projected growth-related improvements
- Includes portion for new customer to pay for equitable share of existing facilities
- Attempts to recover full costs of serving growth

Current Assets & Capital Plan

- What is the available capacity of the existing plant?
- What is the replacement cost of the existing plant in today's dollars?
- What is the value of the expansion related capital cost to serve new growth?
- What is the capacity of the expansion?
- How much growth will be served?

Fee Sample Calculations

$$\frac{d}{dt}[A^-] = k_{Ar}[A^+] - k_{Ao}[O_2][A^-] - k_{Pr}^+[A^-][P_4^+] + k_{Pr}^-[A^+][P_4^-] - 2\left(\frac{k_c^+}{LI^2}[A^-]^2[P_4^-] - k_c^-[AP_2]^2\right)$$

$$\frac{d}{dt}[P_4^-] = k_{Pr}^+[A^-][P_4^+] - k_{Pr}^-[A^+][P_4^-] - k_{Po}[O_2][P_4^-] - \left(\frac{k_c^+}{LI^2}[A^-]^2[P_4^-] - k_c^-[AP_2]^2\right)$$

$$\frac{d}{dt}[AP_2] = 2\left(\frac{k_c^+}{LI^2}[A^-]^2[P_4^-] - k_c^-[AP_2]^2\right)$$

Equity Buy-In Example (1)

Value of Existing Facility	$200,000,000
Capacity of Facility (SFREs)	32,600
Unit Value ($ per SFRE) *	$6,135

* Fee increases for larger meter sizes

(1) For illustrative purposes only, does not reflect City of Louisville facility, capacity or costs

Incremental (Marginal) Cost Example (1)

Value of Future Facilities	$50,000,000
Capacity of Facilities (SFREs)	13,500
Unit Value ($ per SFRE) *	$3,704

* Fee increases for larger meter sizes

(1) For illustrative purposes only, does not reflect City of Louisville capital plans, capacity or costs

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Hybrid Example (1)

Value of Existing and Future Facilities	$250,000,000
Capacity of Facilities (SFREs)	46,100
Unit Value ($ per SFRE) *	$5,423

* Fee increases for larger meter sizes

(1) For illustrative purposes only, does not reflect City of Louisville facility, capital plans, capacity or costs

Agenda Meeting No. 3

- Meeting No. 2 Summary
- Financial plan results
- Rate design alternatives
- Proposed tap fees

Closing Comments

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