City of Brea
Cost of Water

Rate Study
City Council Study Session

May 5, 2015

BREA
CALIFORNIA

RAFTELIS
FINANCIAL CONSULTANTS, INC.

INTRODUCTION

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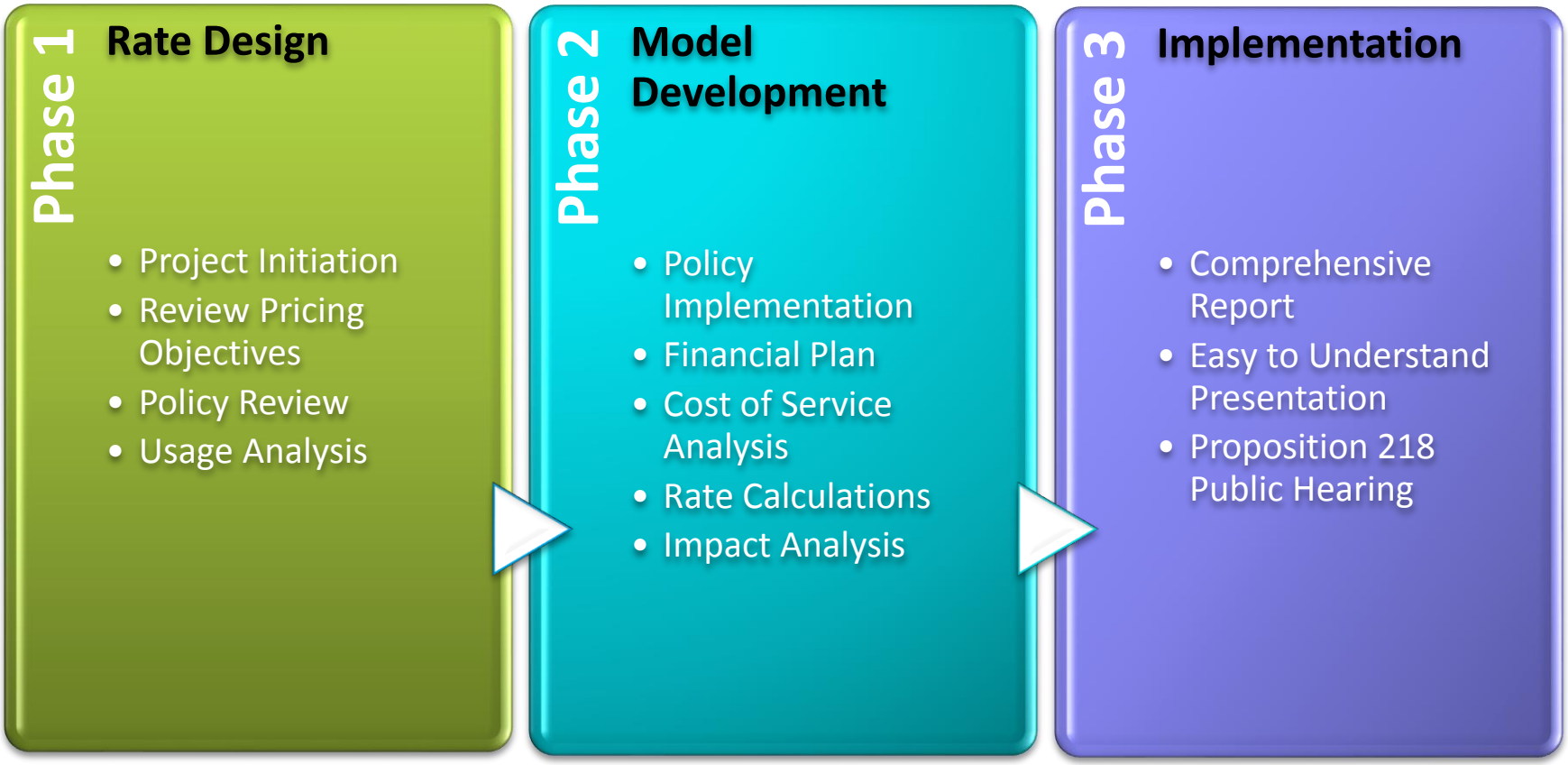
AGENDA

- Introduction
- Approach
  - Financial Plan
  - Cost of Service Methodology
  - Current Rate Structure & Rate Design
- System/Customer Characteristics
- Water Rate Structure Alternatives
- Pricing Objectives
- Next Steps
- Proposition 218
- Discussion/Q&A

APPROACH


Phase 1
Rate Design
• Project Initiation
• Review Pricing Objectives
• Policy Review
• Usage Analysis
Phase 2
Model Development
• Policy Implementation
• Financial Plan
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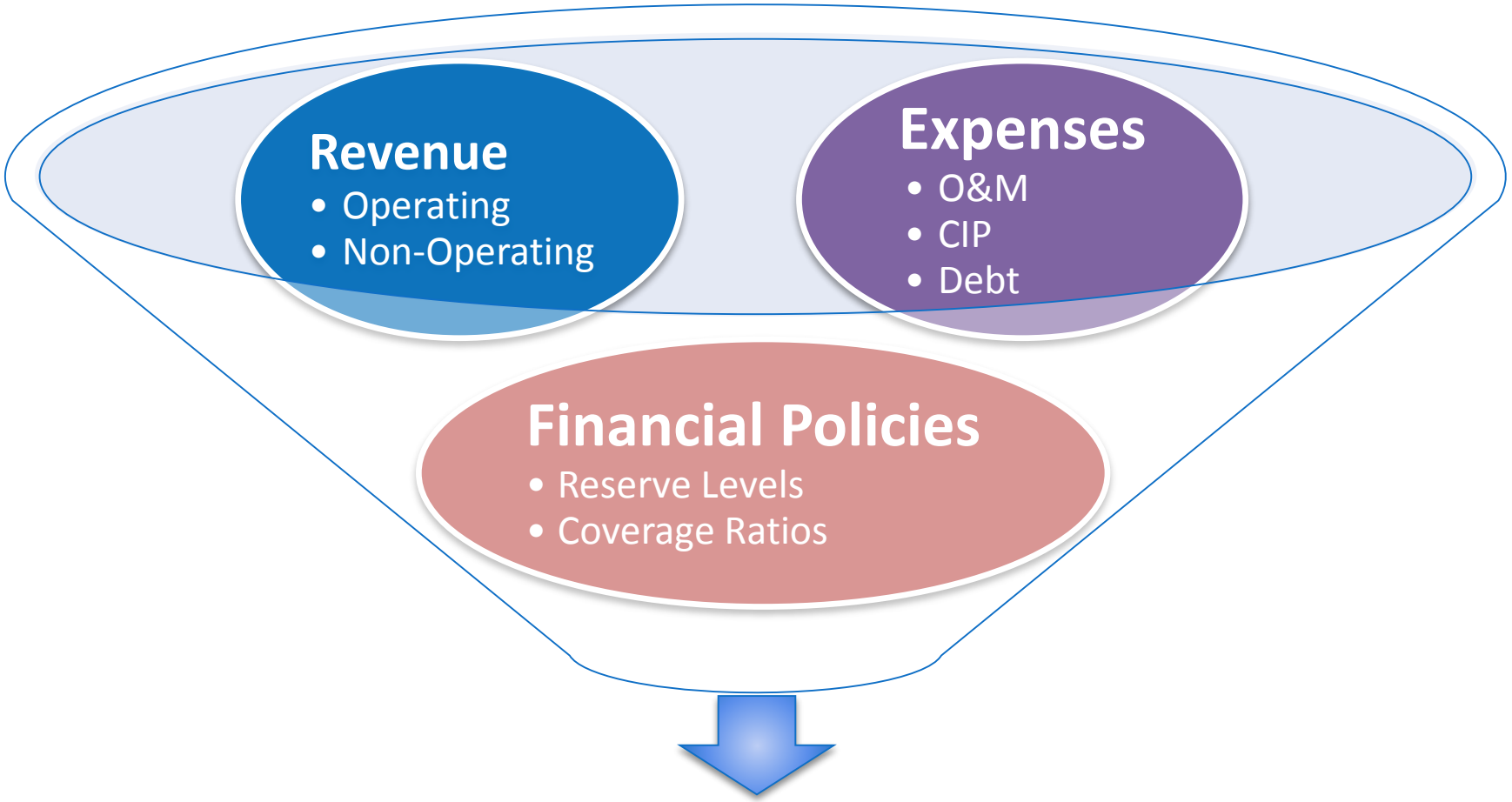
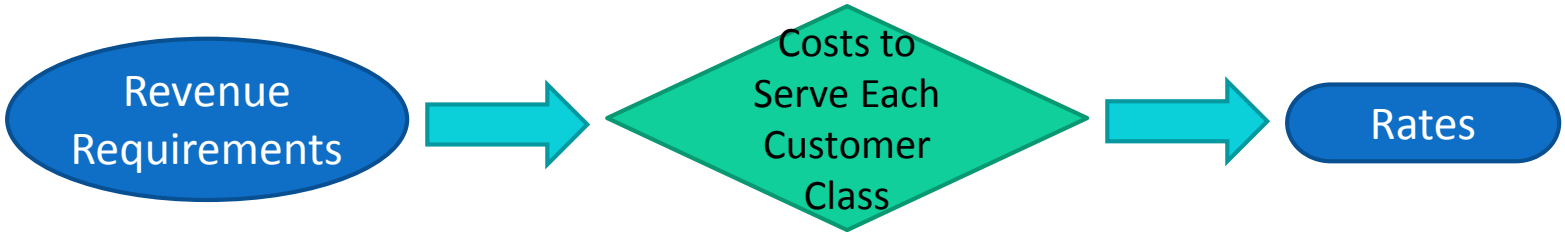
• Rate Calculations
• Impact Analysis
Phase 3
Implementation
• Comprehensive Report
• Easy to Understand Presentation
• Proposition 218 Public Hearing

Financial Plan



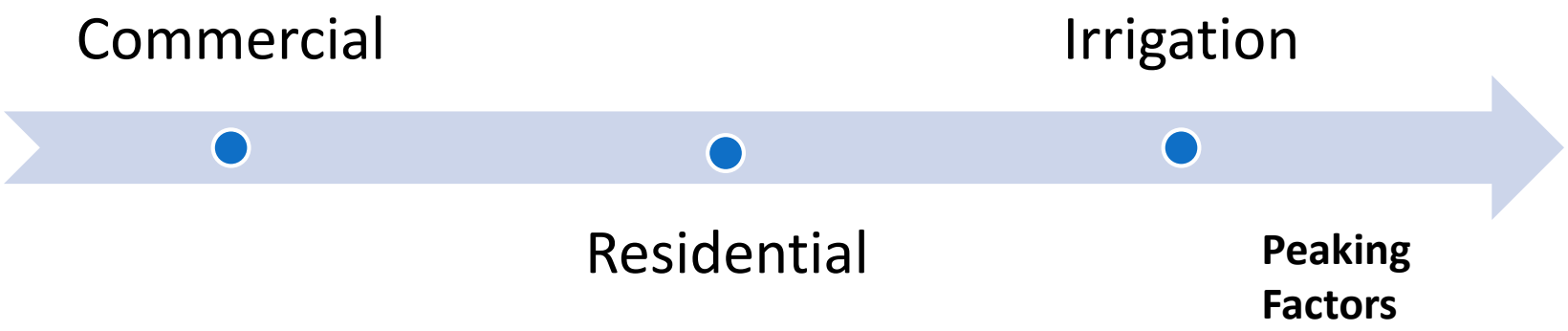
COST OF SERVICE



- The process of recovering costs from users in proportion to their use of the system, recognizing the impact of each class on system facilities and operations
  - A cost-based process of converting revenue requirements into unit costs and rates
  - Allocation of cost of service to customer classes is based on customer usage characteristics
- Cost of Service is the fundamental benchmark used for establishing utility rates in the United States

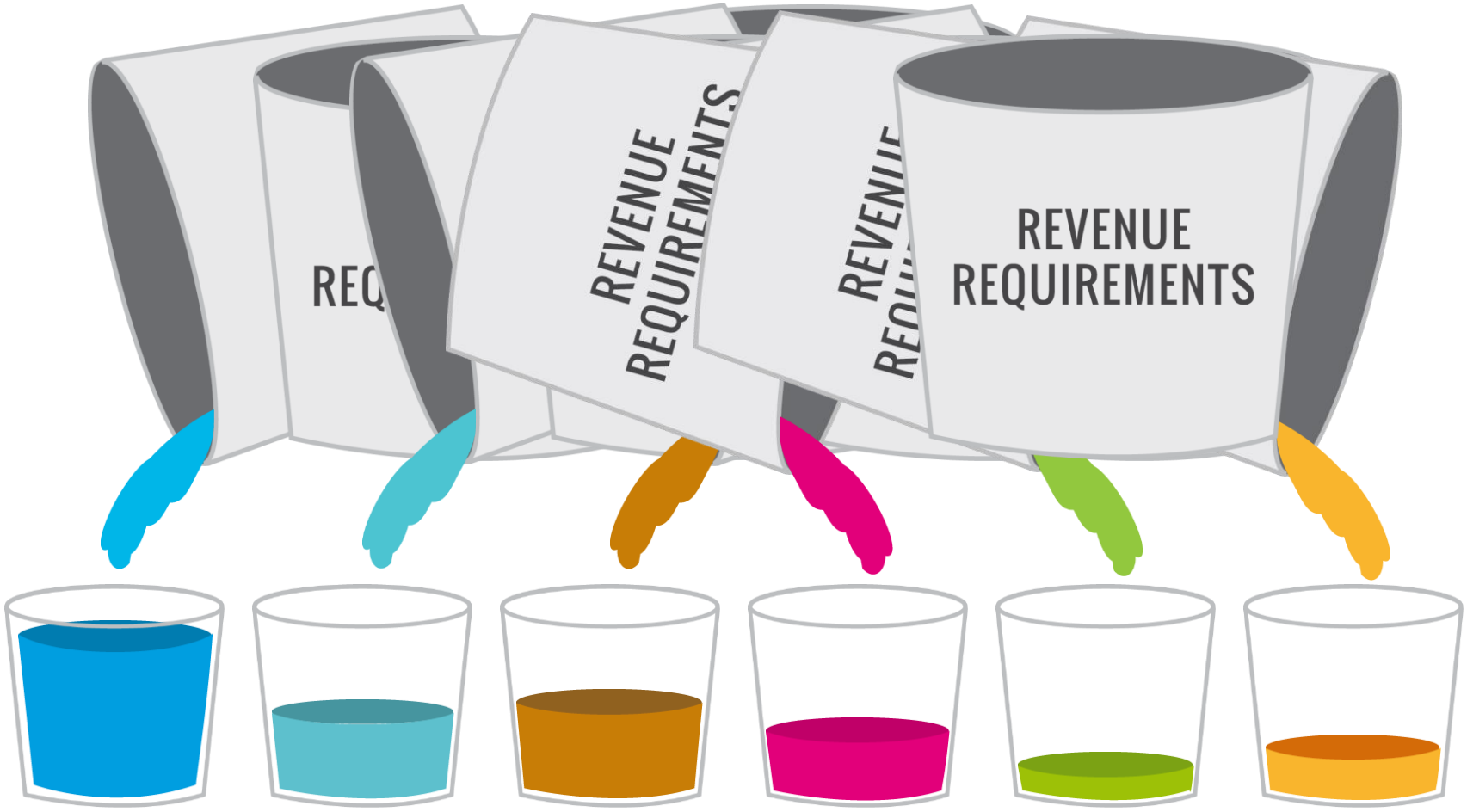
Peaking Costs

- Peaking factors:
  - Indoor use: low peaking factor
  - Outdoor/Irrigation use: high peaking factors
  - Commercial / Industrial: low peaking factor
- Peaking factors by customer classes



STEP 1:

ALLOCATION OF FUNCTIONAL COSTS TO COST COMPONENTS



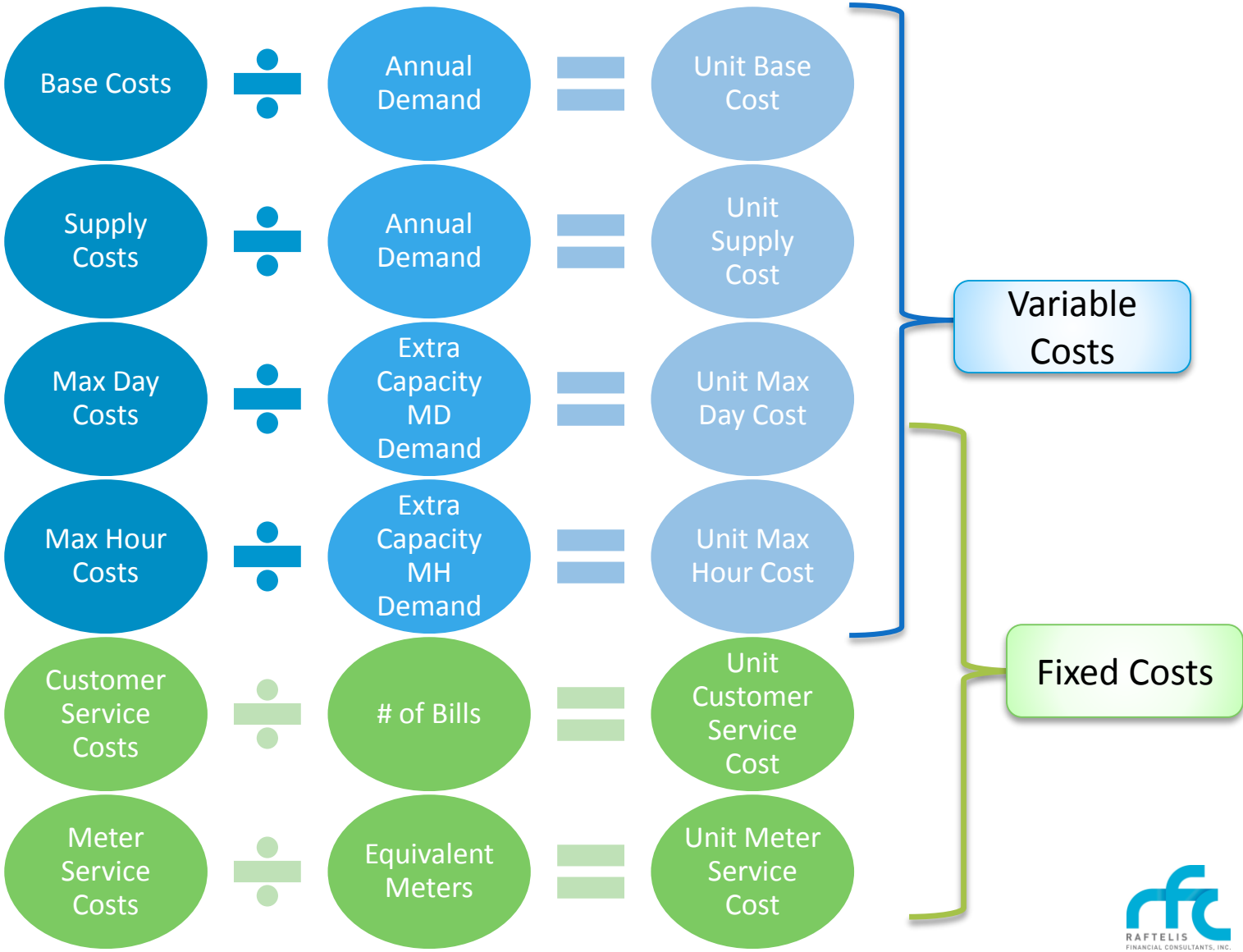
STEP 2:

DEVELOPMENT OF UNITS OF SERVICE BY CUSTOMER CLASS FOR EACH COST COMPONENT

- For each customer class:
  - Annual usage or base units
  - Maximum day units
  - Maximum hour units
  - Customer units
    - Number of bills
    - Equivalent meters

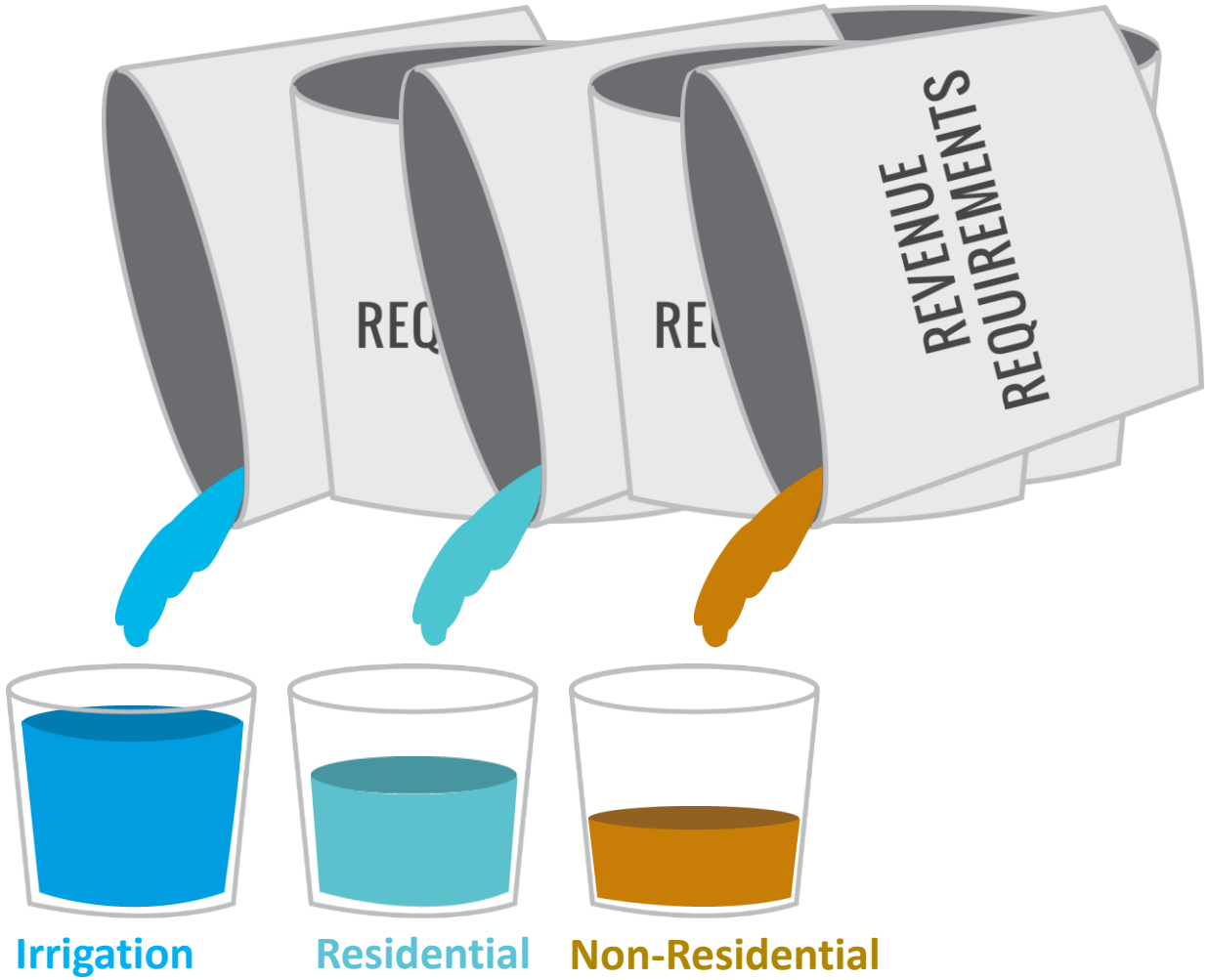
STEP 3:

DEVELOPMENT OF UNIT COSTS OF SERVICE FOR EACH COST COMPONENT



STEP 4:

ALLOCATION OF THE COST COMPONENTS TO CUSTOMER CLASS



BREA'S CURRENT RATE DESIGN

In the beginning….

- The foundation for our current water rates were determined by Council in 2006 and the following top pricing objectives were identified:
  - Financial sufficiency
  - Equitable contributions from new customers
  - Conservation
  - Minimization of customer impacts
  - Simple to understand and update
  - Revenue stability

WHAT WE HAVE….

- Base meter charge
- Residential - Inclining water rate structure
  - Most common rate structure of water agencies
    - Promotes Water Conservation
    - Affordable for low water users
    - Easily Administered
    - Easy to understand by customers
    - Penalizes large water users
- Uniform rate for all other major water classes

CURRENT METER CHARGES - 07/01/14

Meter Size	Monthly Meter Charge	
	Potable	Private Fire Line
5/8", 3/4" & 1"	$9.38	$5.23
1 ½"	$41.74	$5.23
2"	$71.38	$5.23
3"	$156.09	$7.47
4"	$274.06	$11.31
6"	$613.41	$25.11
8"	$1,087.68	$48.90
10"	$1,697.46	$84.68
12"	$2,374.98	$134.30

CURRENT RATE STRUCTURE – 07/01/14

Customer Class	Water Rate ($/hcf)
Residential Rates**	
Tier 1 – 1-10 hcf	$2.71
Tier 2 – 11-20 hcf	$3.81
Tier 3 – 21-30 hcf	$4.84
Tier 4 – Over 30 hcf	$6.17
Non-Residential	$3.41
Golf Course (Brea Creek Well)	$1.83
Outside Brea	$4.26
Fire Line Use	$4.39
Temporary Construction	$5.12

Rate Changes

- In 2012 the Council approved 3% increases to the monthly meter charge and water rates effective July 1, 2014 and July 1, 2015.

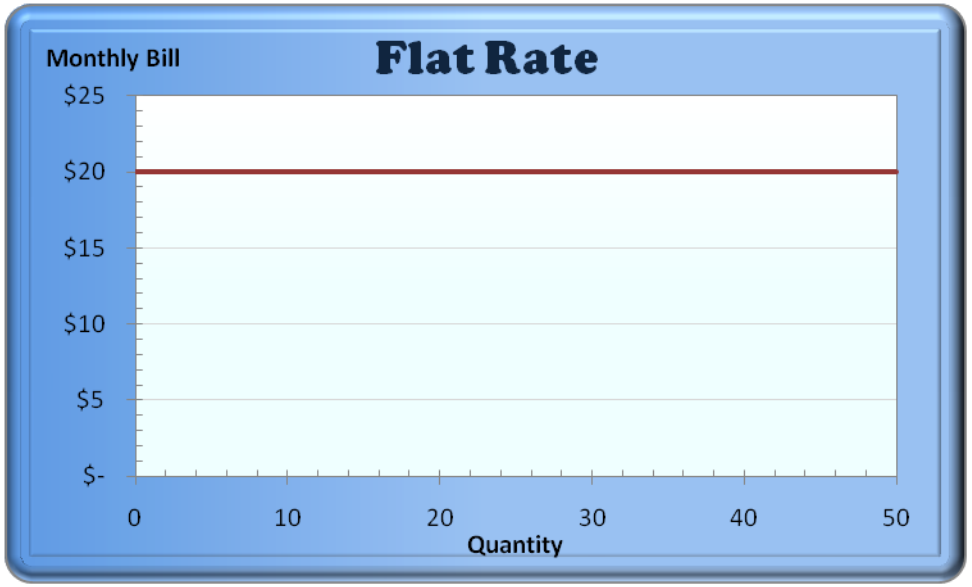
- State Law allows water agencies for a period of five years to pass through the wholesale increases in our cost to purchase water. Brea has done this successfully; however, we must renew this action at a public hearing.

Rate Design Options

Water Rate Structure Evolution

Revenue Mechanism

Flat Rate



Flat Rate: $xx / month regardless of usage

Pros: Revenue stability, easy to understand

Cons: Inequitable, no conservation signal, not affordable for essential use customers

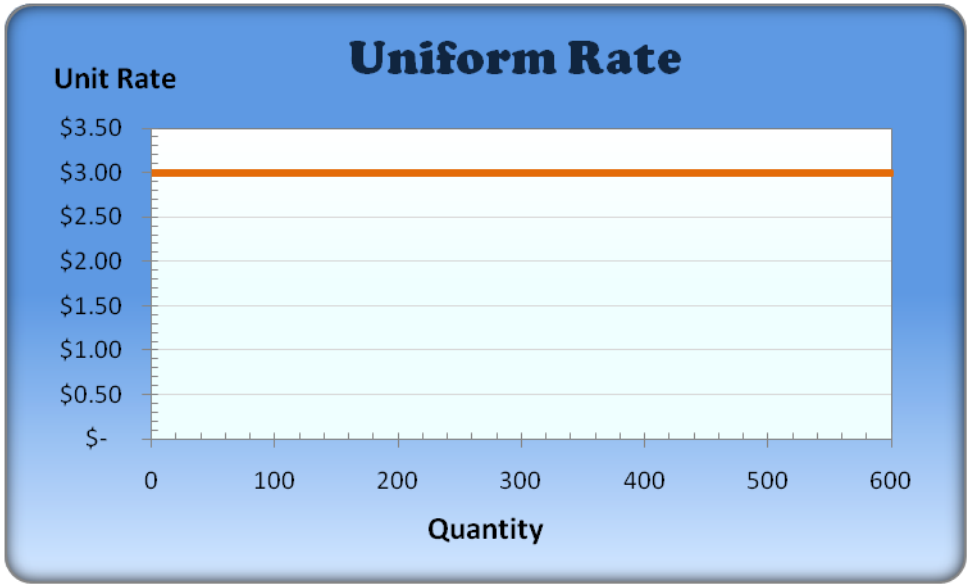
Water Rate Structure Evolution

Revenue Mechanism

Price Information

Flat Rate

Uniform Rate



Uniform Rate: $xx / hcf

Pros: Revenue stability, administrative ease, easy to understand

Cons: Weak conservation, not affordable for essential use customers

Water Rate Structure Evolution

Revenue Mechanism

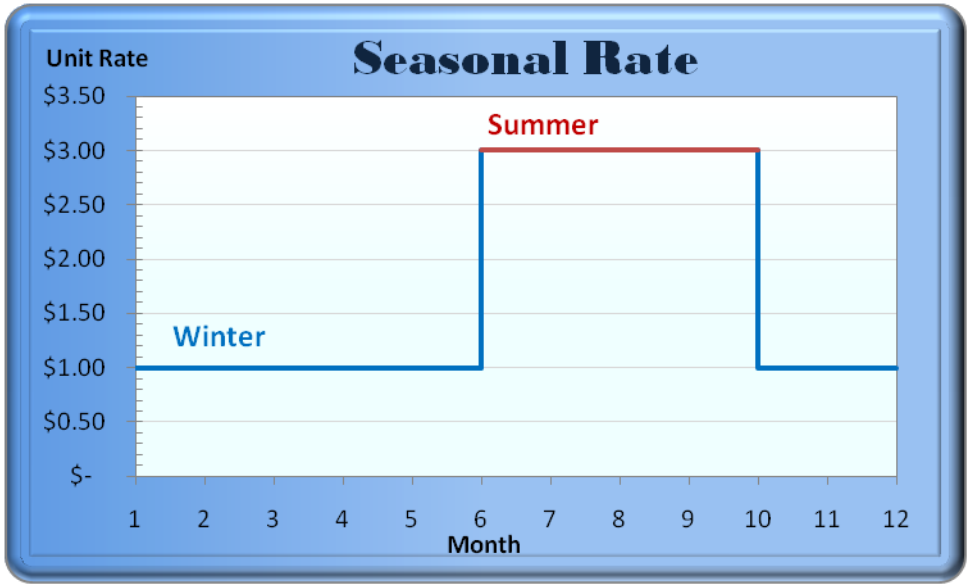
Price Information

Behavior Change

Flat Rate

Uniform Rate

Seasonal Rate

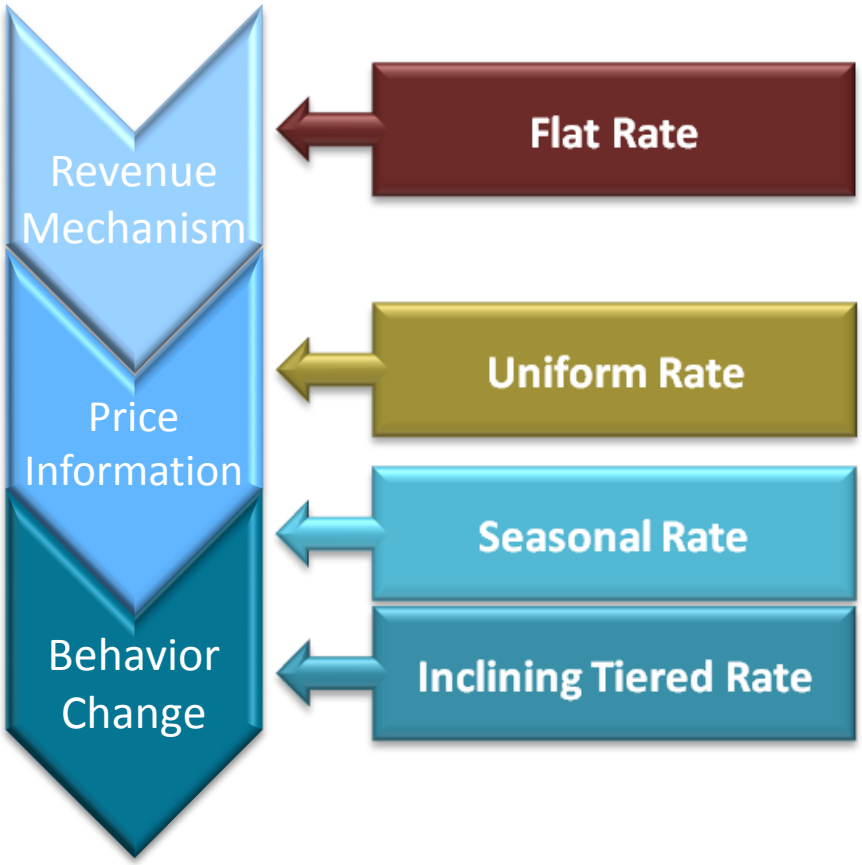


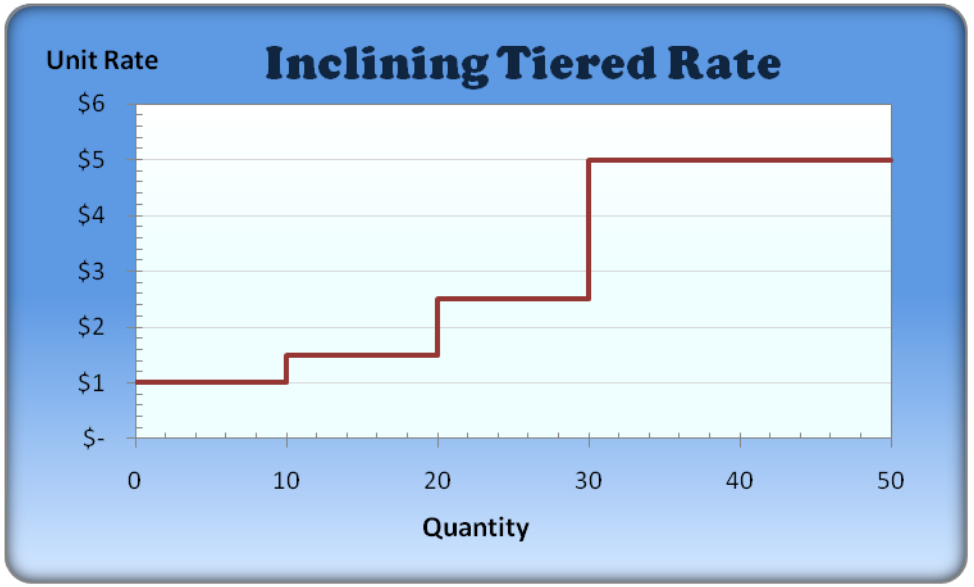
Seasonal Rate: $ xxx / hcf in Summer,
$ x/hcf in Winter

Pros: Promotes water conservation in the summer, easy to administer

Cons: Revenue instability, not affordable for essential use customers

Water Rate Structure Evolution





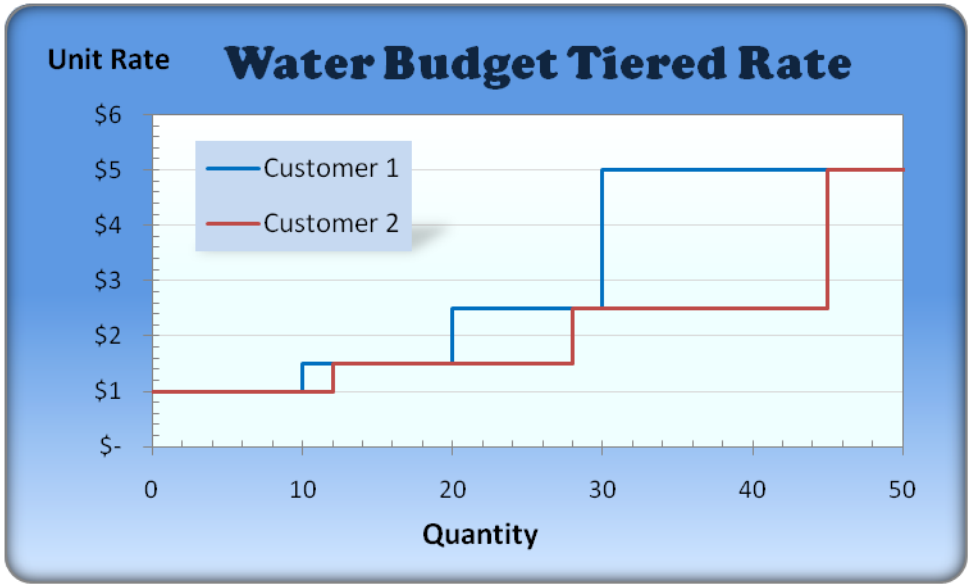
Inclining Tiered Rate:

Pros: Promotes conservation, affordable for essential use customers, easy to administer, easy to understand

Cons: Penalizes large users

Water Rate Structure Evolution

- **Flat Rate**
- **Uniform Rate**
- **Seasonal Rate**
- **Inclining Tiered Rate**
- **Water Budget Rate**



Water Budget Tiered Rate:

Pros: Promotes water efficiency, equitable, affordable for essential use, drought allocation tool, revenue stability

Cons: High administrative cost, harder to understand

Alternative Rate Structures

- Flat Rate
- Uniform
- Seasonal
- Tiered (Brea's Current Rates)
- Water Budgets

PRICING OBJECTIVES

Pricing Objectives Overview

- Equitability (cost of service based)
- Minimization of customer impacts
- Rate stability
- Affordability
- Simple to understand and explain
- Administrative ease/Ease of implementation
- Revenue stability
- Conservation

Pricing Objectives Description

- **Equitability (Cost of Service Based Allocations)**
  - Ensure that each customer class is contributing equitably towards revenue requirements based upon the costs of providing service to each customer class.
- **Minimization of Customer Impacts**
  - Adverse rate impacts on each customer class are minimized.
- **Rate Stability**
  - Minimize dramatic rate increases or decreases over the planning period.
- **Affordability**
  - The rate structure should not overly burden low volume customers.

PRICING OBJECTIVES DESCRIPTION (CONT.)

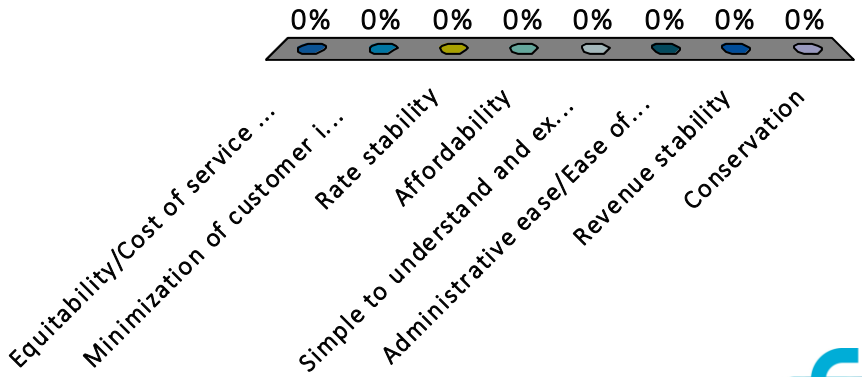
- **Simple to Understand and Explain (Customer Understanding)**
  - The rate structure should be easy for City customers to understand, utilizing a moderate level of educational tools. In addition, the rate structure should be able to be effectively maintained by City staff in future years.
- **Administrative Ease/Ease of Implementation**
  - The rate structure should be compatible with City's billing system. In addition, the rate structure should allow for the continuation of existing management and system reports.
- **Revenue Stability**
  - The rate structure should provide for a steady and predictable stream of revenues to the utility such that the utility is capable of meeting its current financial requirements.
- **Conservation**
  - The rate structure should encourage conservation.

Pricing Objectives Exercise

- Rank up to 2 objectives as **Most Important**
- Rank up to 2 objectives as **Very Important**
- Rank as many objectives as desired as **Important** or **Least Important**

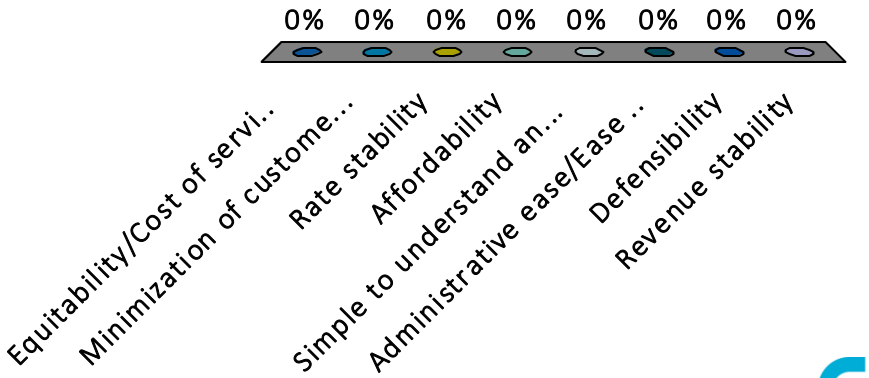
Most Important Objectives

1. Equitability/Cost of service based allocations
2. Minimization of customer impacts
3. Rate stability
4. Affordability
5. Simple to understand and explain
6. Administrative ease/Ease of implementation
7. Revenue stability
8. Conservation



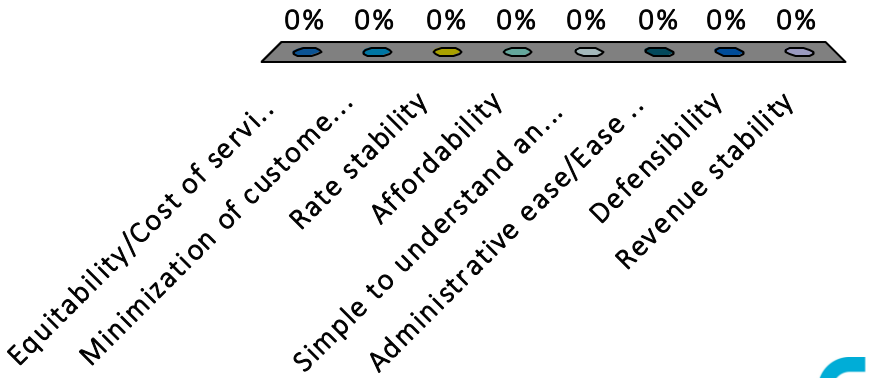
Very Important Objectives

1. Equitability/Cost of service based allocations
2. Minimization of customer impacts
3. Rate stability
4. Affordability
5. Simple to understand and explain
6. Administrative ease/Ease of implementation
7. Revenue stability
8. Conservation



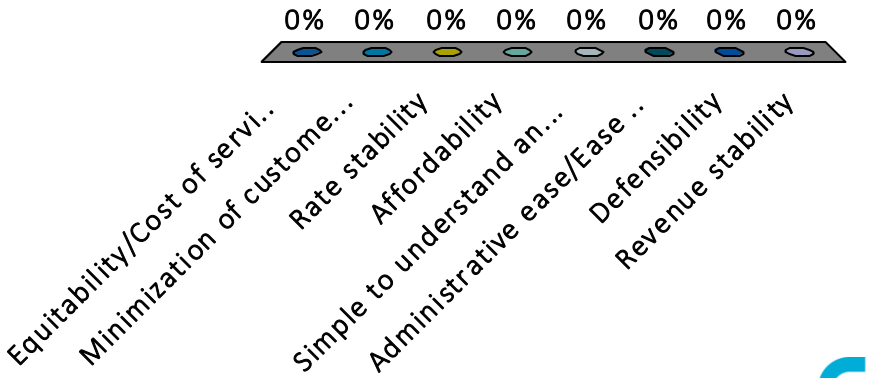
Important Objectives

1. Equitability/Cost of service based allocations
2. Minimization of customer impacts
3. Rate stability
4. Affordability
5. Simple to understand and explain
6. Administrative ease/Ease of implementation
7. Revenue stability
8. Conservation



Least Important Objectives

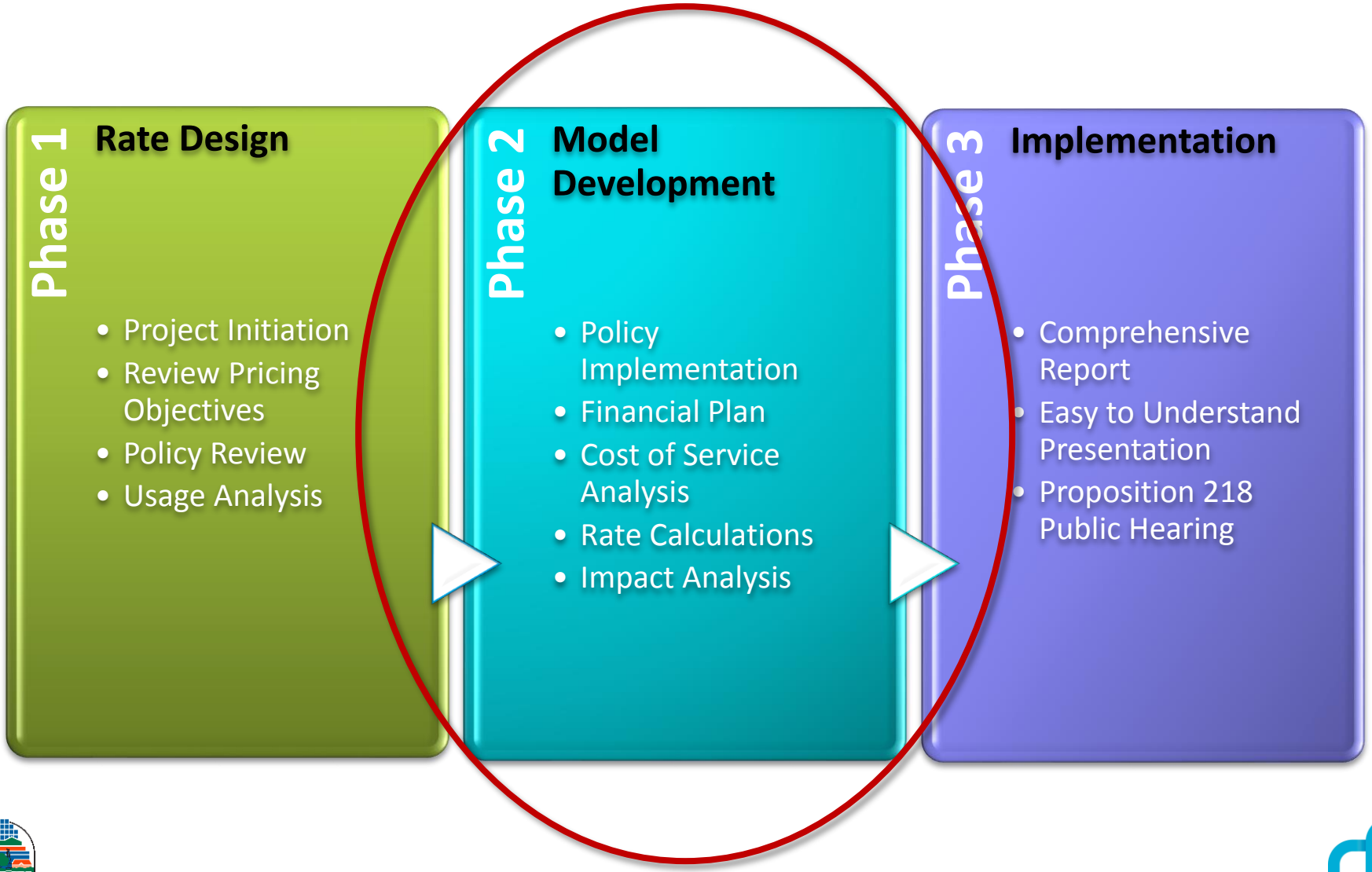
1. Equitability/Cost of service based allocations
2. Minimization of customer impacts
3. Rate stability
4. Affordability
5. Simple to understand and explain
6. Administrative ease/Ease of implementation
7. Revenue stability
8. Conservation



Next Steps

- Rate Design Options
  - Residential
    - Uniform or Tiered
  - Non-Residential
    - Uniform
  - Other
- Review fixed meter charges to provide greater revenue stability
- Bring to Council authorization to continue pass through wholesale water supply increases

Next Steps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Proposition 218 – Rate Issues

DISCUSSION/Q&A