

This presentation premiered at WaterSmart Innovations

watersmartinnovations.com





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Fernando Aranda

Conservation Measures:

“How the City of Santa Fe achieved water conservation while maintaining sounding financial performance”

City of Santa Fe, NM

Oldest Capital in the US

Population 79,627

CIP \$113M Next 10Years

Water Production 10,406 AFY

Accounts 33,440



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Why?

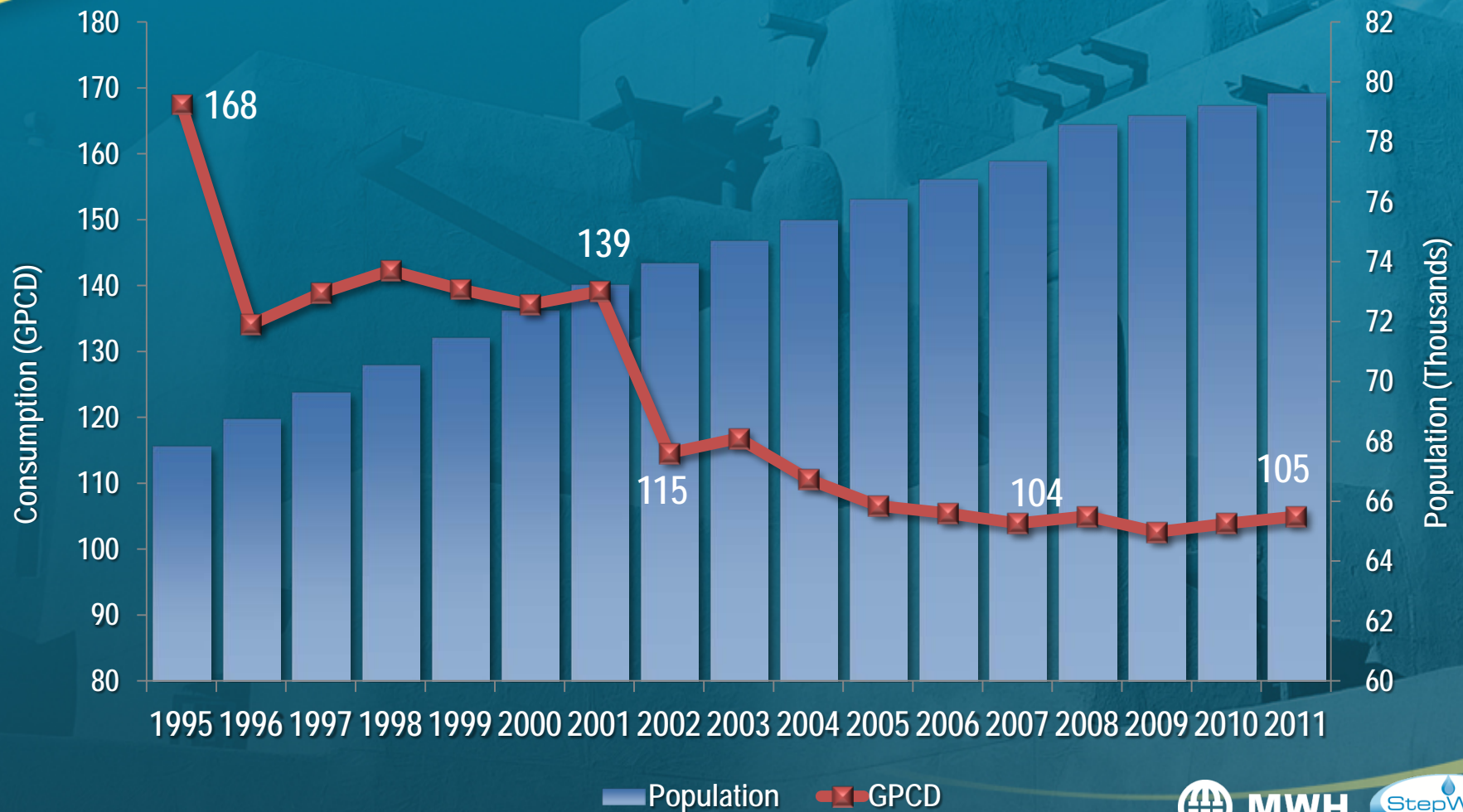
Is Santa Fe's conservation
story worth telling



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Consumption per Capita Vs. Population



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The City Conservation Efforts

Reduced GPCD Usage by 37%

Since 1995 from 168 to 105 GPCD



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How?

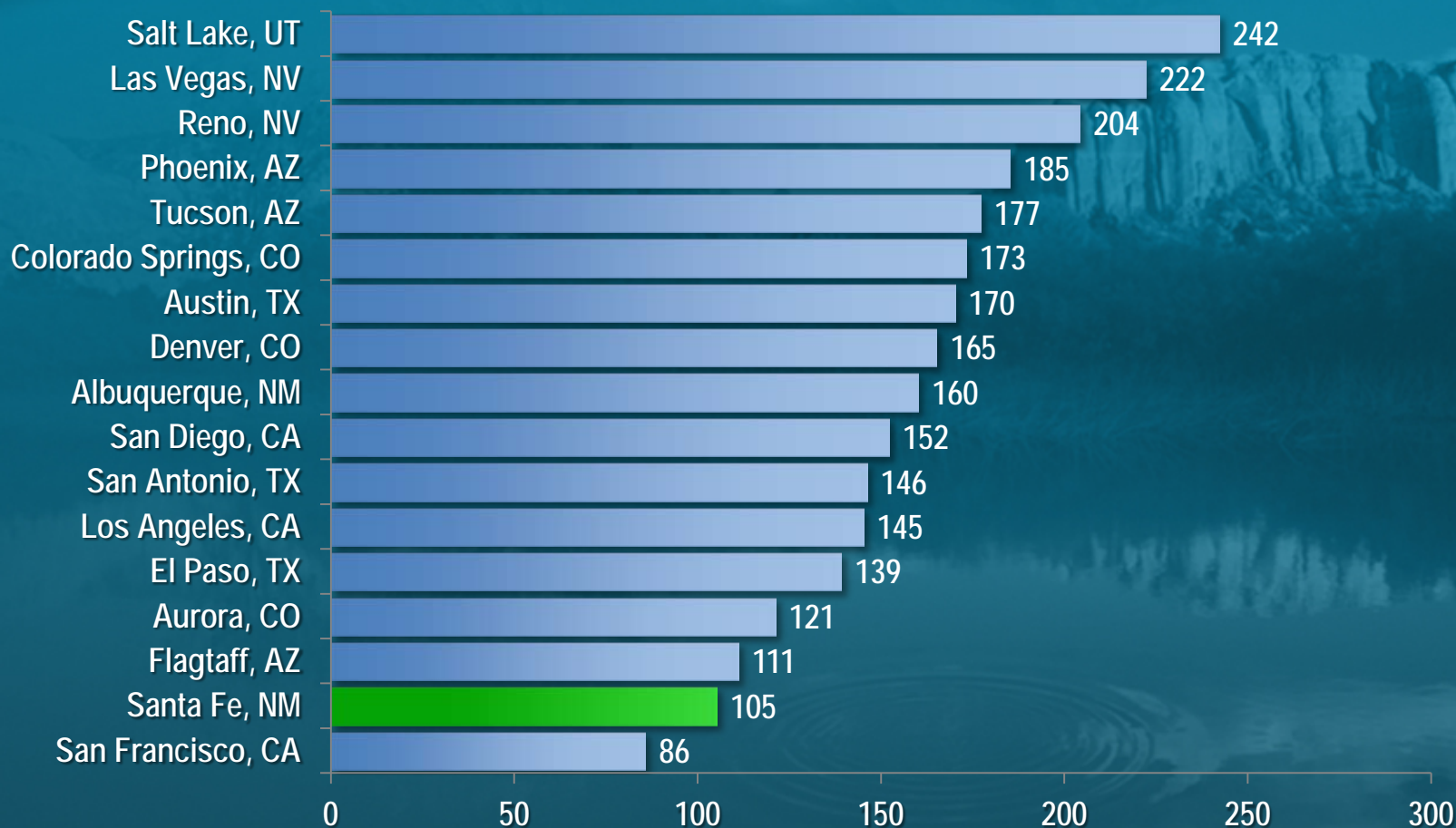
Does this Compare with Other
Western Cities.



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GPCD Comparison Western Cities



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The Average per-capita usage in the US is:

575 Gallons*

Santa Fe is 18% of the US Average Usage

*per United Nations Development Program –
Human Development Report 2006



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How?

Was this conservation achieved.



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Conservation Policies Financial Incentives System Improvements

Multiple Strategies....

It's How



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Conservation

Is a multifaceted
Strategy

Some of the specific policies and Programs
the City implemented are:



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Conservation Policies & Programs



Public Education

- Conservation Website
- Landscaping Classes
- Radio Show
- Children conservation programs



Fixtures

- Over 8,000 high flush toilets were replaced for Ultra-low flush toilets
- Automated Meter Reading Program



Water Restriction

- May 1 – October 31 No outdoor irrigation from 10 am to 6 pm



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System Improvements



Water
Losses

- Distribution System Leak Repair & Detection



Renewable
Water

- Buckman Diversion Project
- Storage of San Juan Chama Water

Financial Incentives



Water
Restriction
Fee

- 1st Violation \$20
- 2nd Violation \$50
- 3rd Violation \$100
- 4th and each additional Violation \$200



Rebates

- High-efficiency washing machine (\$150 - \$350)
- High-efficiency toilet (\$125 - \$500)
- Water free urinals (\$500)
- Water Harvesting (\$12 - \$50)



Rate
Structure

- Inclining block rate structure

Conservation can not be achieved without

Financial Stability

Which Hasn't been easy

The City had to implement several rate adjustments to meet their revenue requirements



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Financial History

1993

- Sangre De Cristo Water System purchased from PNM

1995

- Issuance of 1995 Series Bonds

2000

- Revenues fail to meet rate requirements in bond covenants

2001

- Service charges are adjusted by 76% to restore bond covenant compliance
 - Recommended steps for further study
 - Started work on first 10-year financial plan



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Financial History

2003

- Revenues meet rate requirements and bond covenants

2007-09

- Construction starts on Buckman Diversion project
- City approves a 7-year 8.2% annual rate increases

2010-12

- City Issues \$60M in bonds
- Fitch Rate the City's Outstanding Debt at AAA
- City Finished Construction of Buckman Diversion Project 01/2011
- City meets all bond and fund balance requirement



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The City of Santa Fe Water Division financial 2011 highlights include:

2.72X DSC
\$66M Cash

The City have a reserve policies of:

90-days of O&M

Capital and Rate Stabilization Reserve



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But...

How can the City maintain financial stability and promote conservation?



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Conservation Rate Structure

Meter Size		Monthly Service Charges	
5/8" or 3/4"		\$17.02	
Volume Charge		Volume Charge (per 1,000 gallons)	
Sep–Apr	First 7,000 Gallons	Over 7,000 Gallons	
	\$5.60	\$20.07	
May-Aug	First 10,000 Gallons	Over 10,000 Gallons	
	\$6.60	\$20.07	



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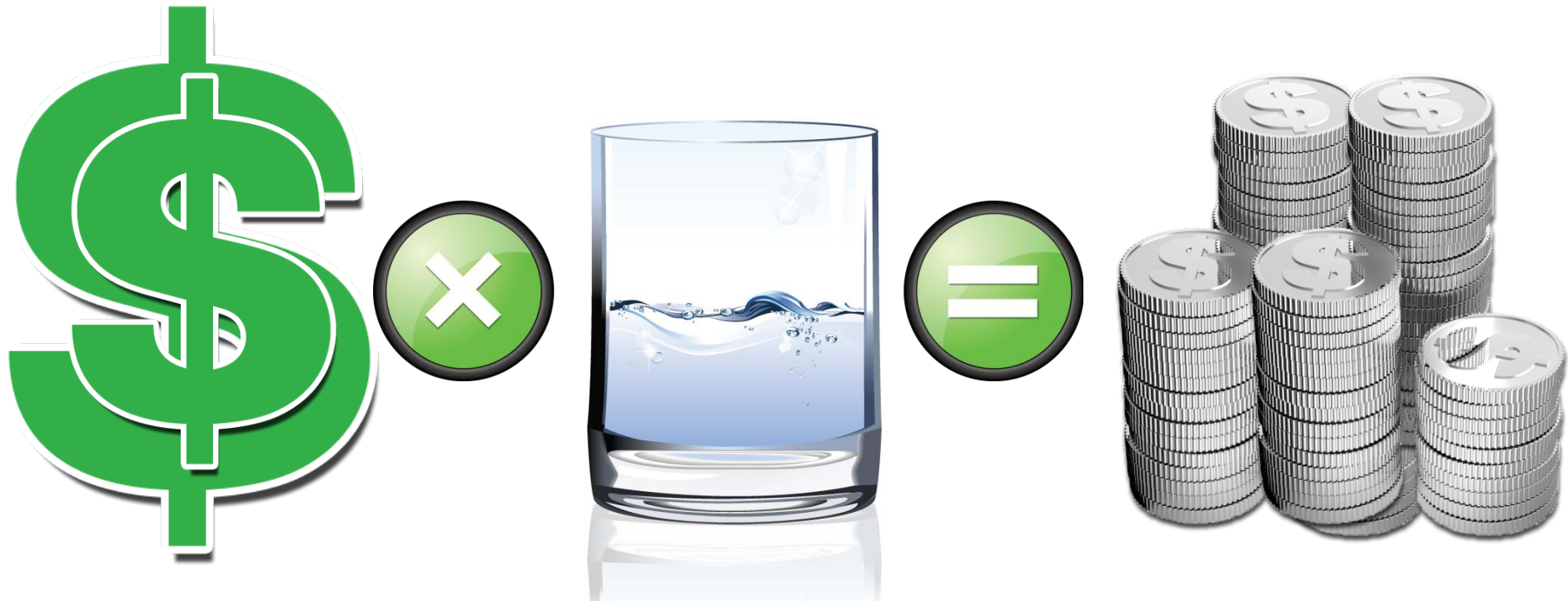
The Unmentioned Side of Conservation



The Unmentioned Side of Conservation



The Unmentioned Side of Conservation



It's Not Rocket Science

How can you design rates that will incentive conservation
and will maintain financial stability



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Elasticity

Measures the responsiveness of the demand to changes in prices

Allows predicts the reduction in consumption for any increase in price



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Water is Inelastic

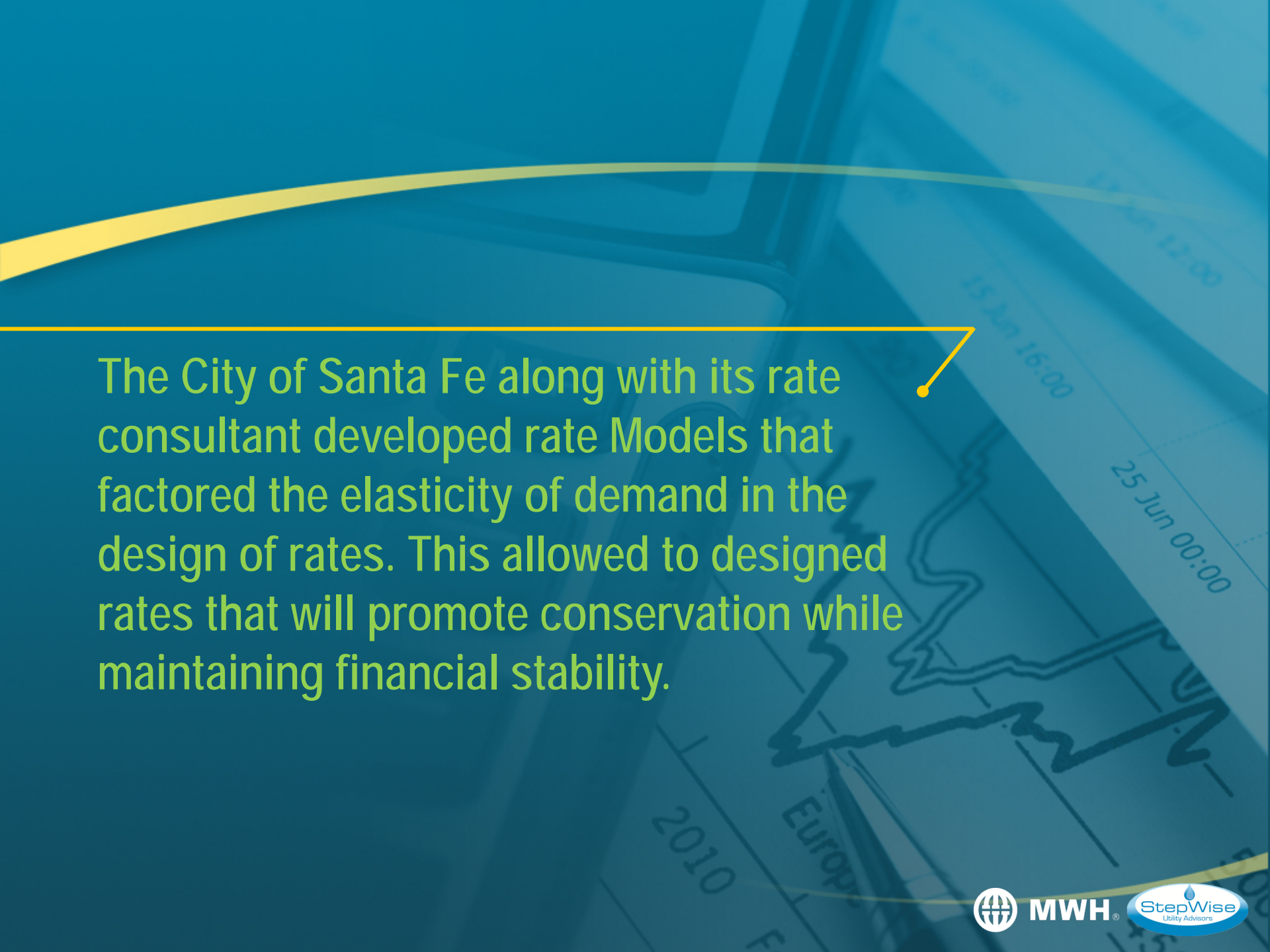
0.1 to 0.5

Increases in price produce lower
decreases in usage



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The City of Santa Fe along with its rate consultant developed rate Models that factored the elasticity of demand in the design of rates. This allowed to designed rates that will promote conservation while maintaining financial stability.



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Questions



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