



**KELOWNA'S  
WATER CONSERVATION  
EXPERIENCE**

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# Introduction

- Background
- Water Rates
- Education Initiatives
- Re-Focus
- Innovations
- The Next Steps
- Conclusion: Innovation Involves Risk

# Background

- Kelowna experiencing rapid growth, starting in the 1980s.
- Water supply (Okanagan Lake) is large and reliable, but spiraling costs of infrastructure created need for water conservation
- Initiated Universal Water Metering and Water Smart program in 1996

# Water Rates

- Implemented user pay rates in 1998
- Experienced a 20% reduction in overall consumption
- Increasing block rates introduced in 2005, revised in 2006, and under review for the future

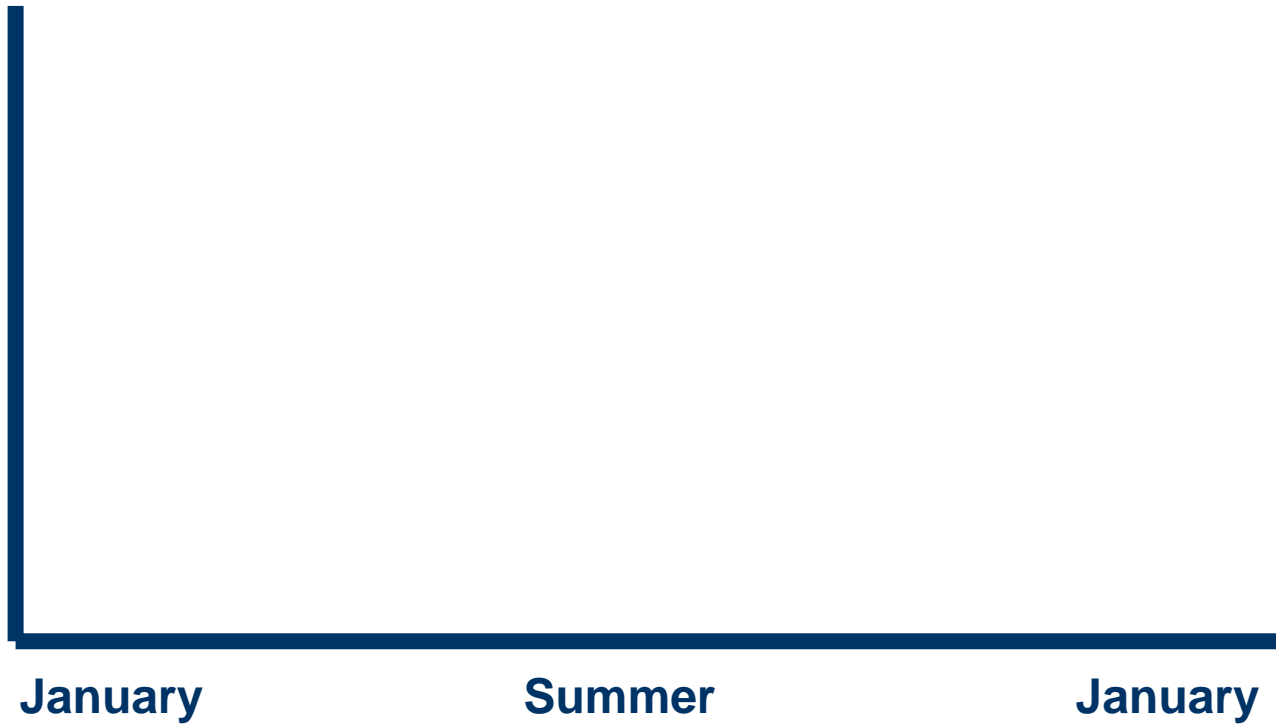
# Education

- Initiated “Typical” public education program in 1998
- Residential, School, and ICI programs
- Program included advertising, brochures, workshops, etc
- Results seemed to “flatten out” in 2000/2001

# Education

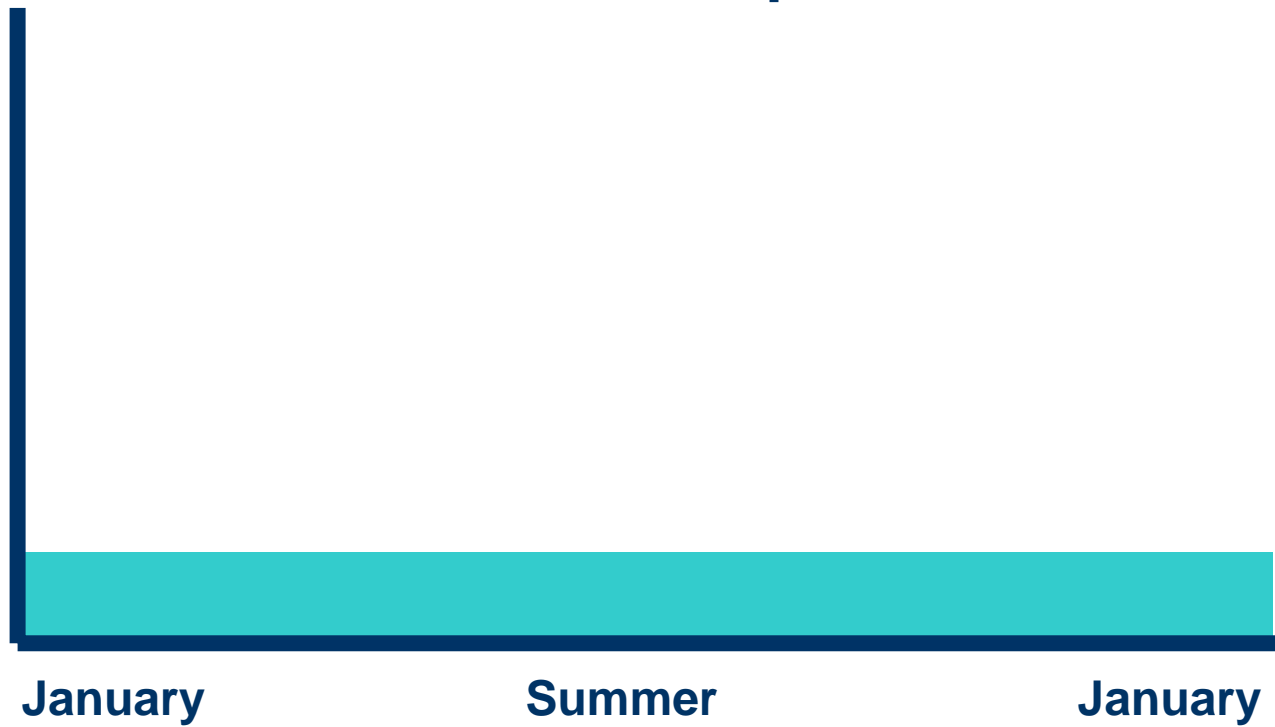
- Less “education” and more “social marketing
- Started targeting high water users
- Conducted focus groups, interviews, and surveys with customers
- Used research results to develop innovative approaches

# Re-Focus



# Re-Focus

## Indoor Water Consumption





# Re-Focus

## Indoor Water Consumption

- Tends to be “Essential” water use (toilet flushing, showering, clothes washing, etc)
- Tends to remain the same throughout the year

January

Summer

January

# Re-Focus

## Indoor Water Consumption

- Reducing essential consumption tends to involve technology: low flow toilets, showerheads, etc
- Behavior change has relatively small impact

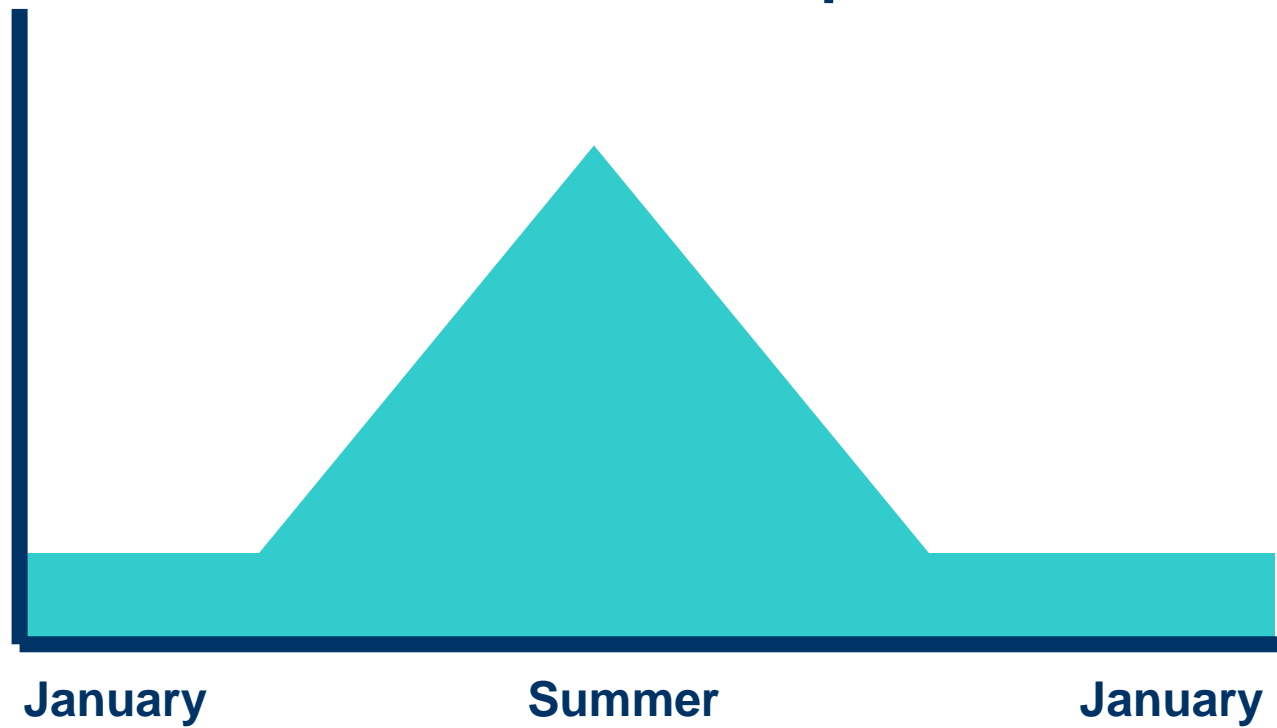
January

Summer

January

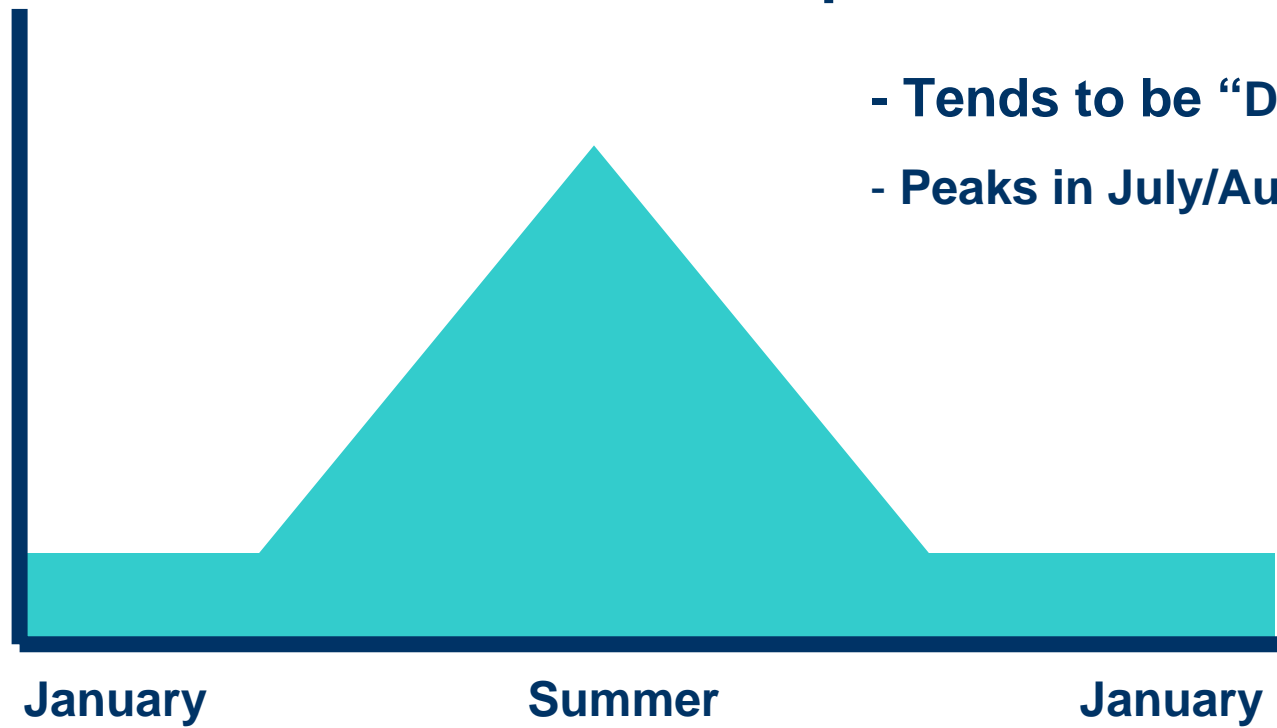
# Re-Focus

## Outdoor Water Consumption



# Re-Focus

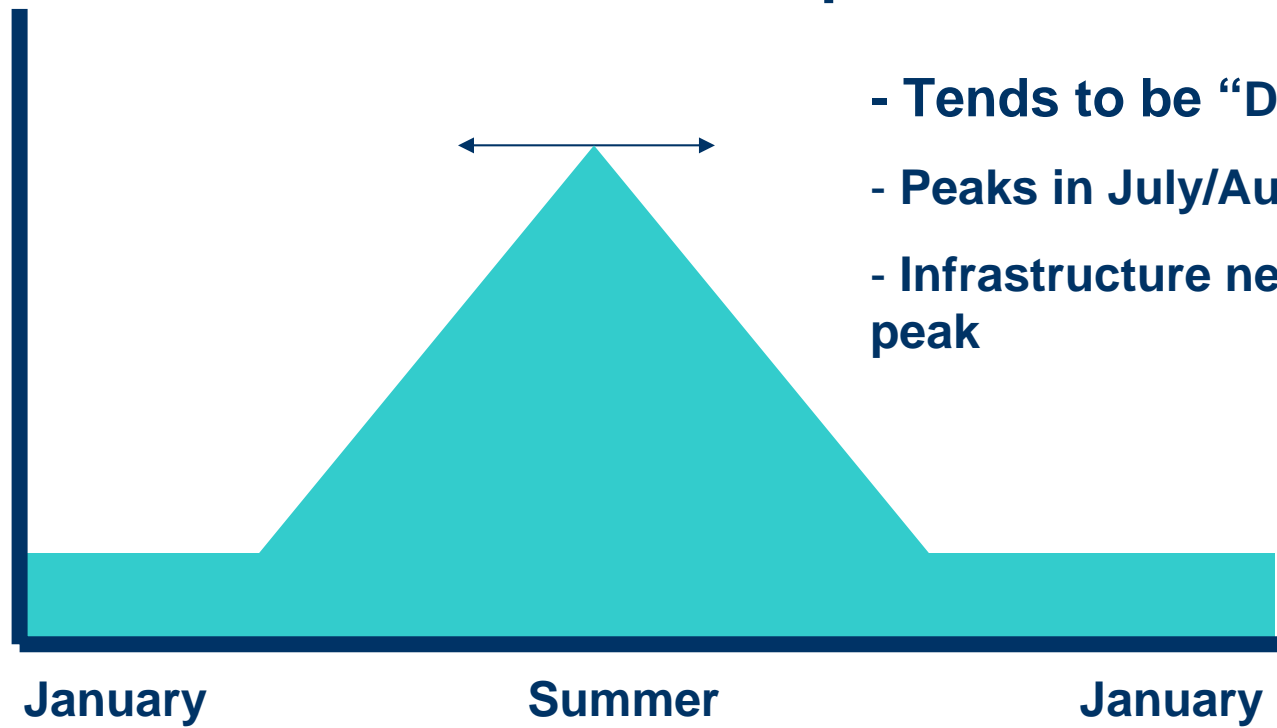
## Outdoor Water Consumption



- Tends to be “Discretionary”
- Peaks in July/August

# Re-Focus

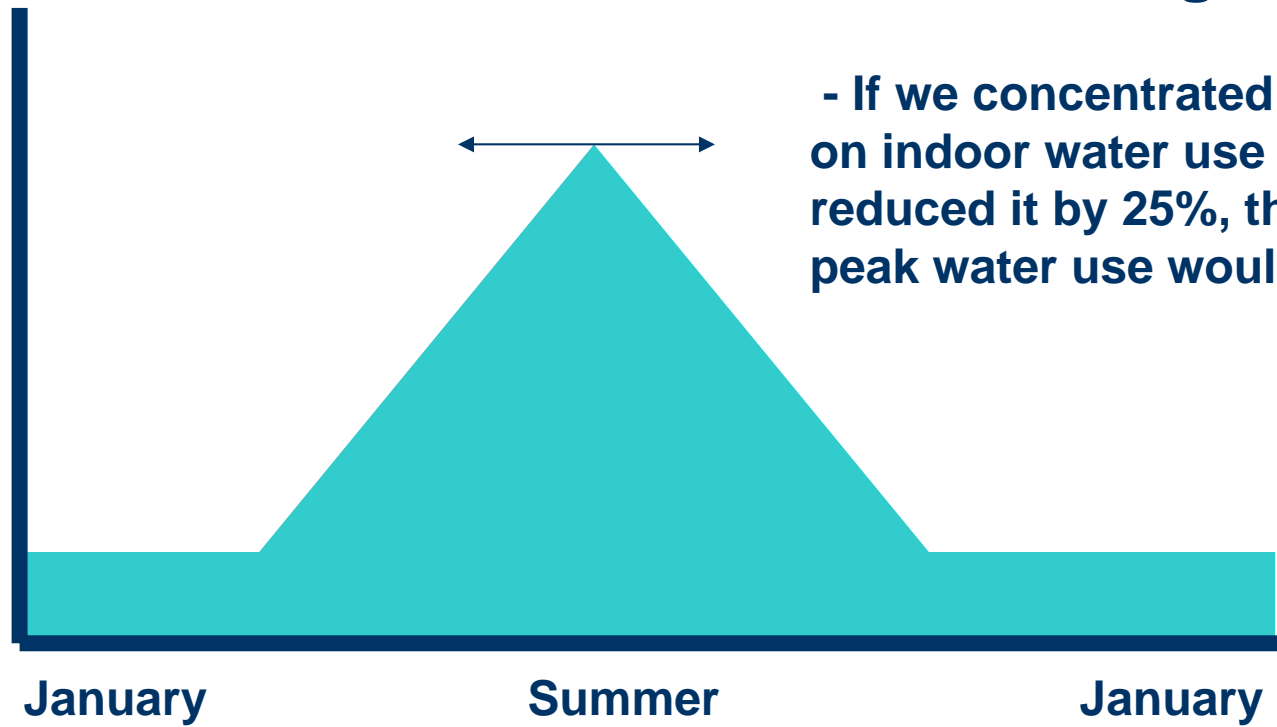
## Outdoor Water Consumption



- Tends to be “Discretionary”
- Peaks in July/August
- Infrastructure needs driven by peak

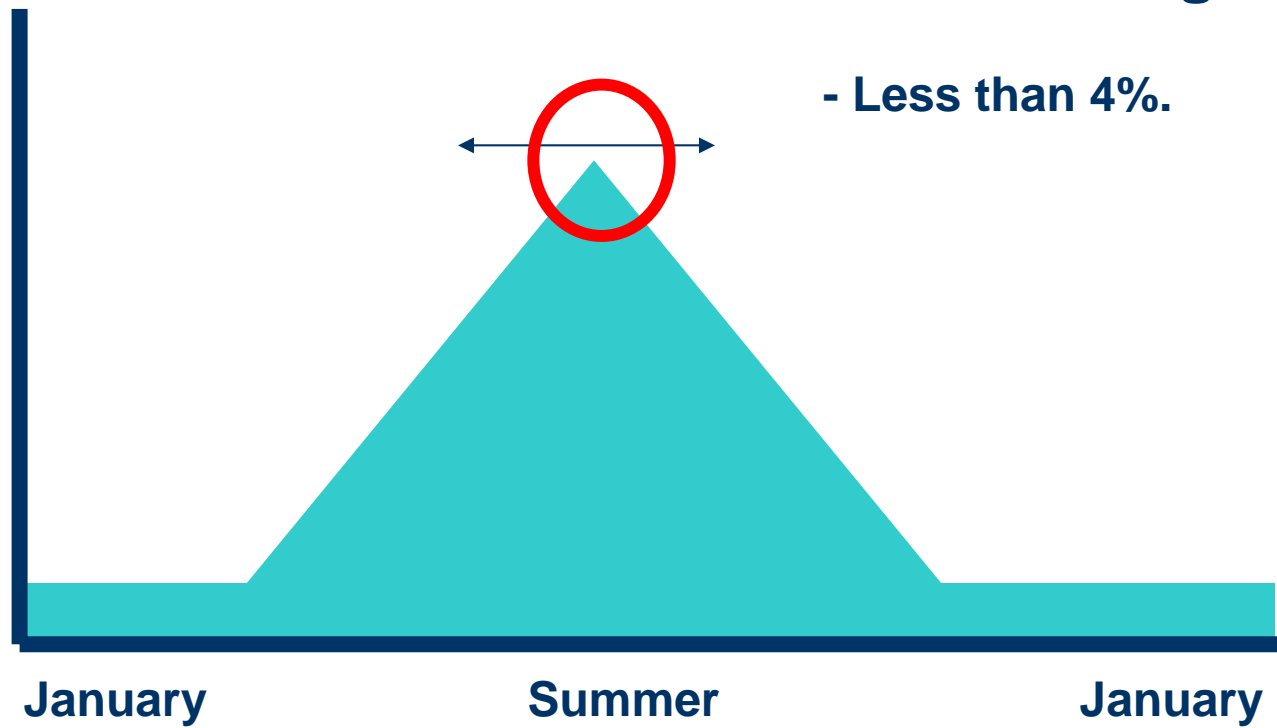
# Re-Focus

## Water Conservation Efforts – Average Home



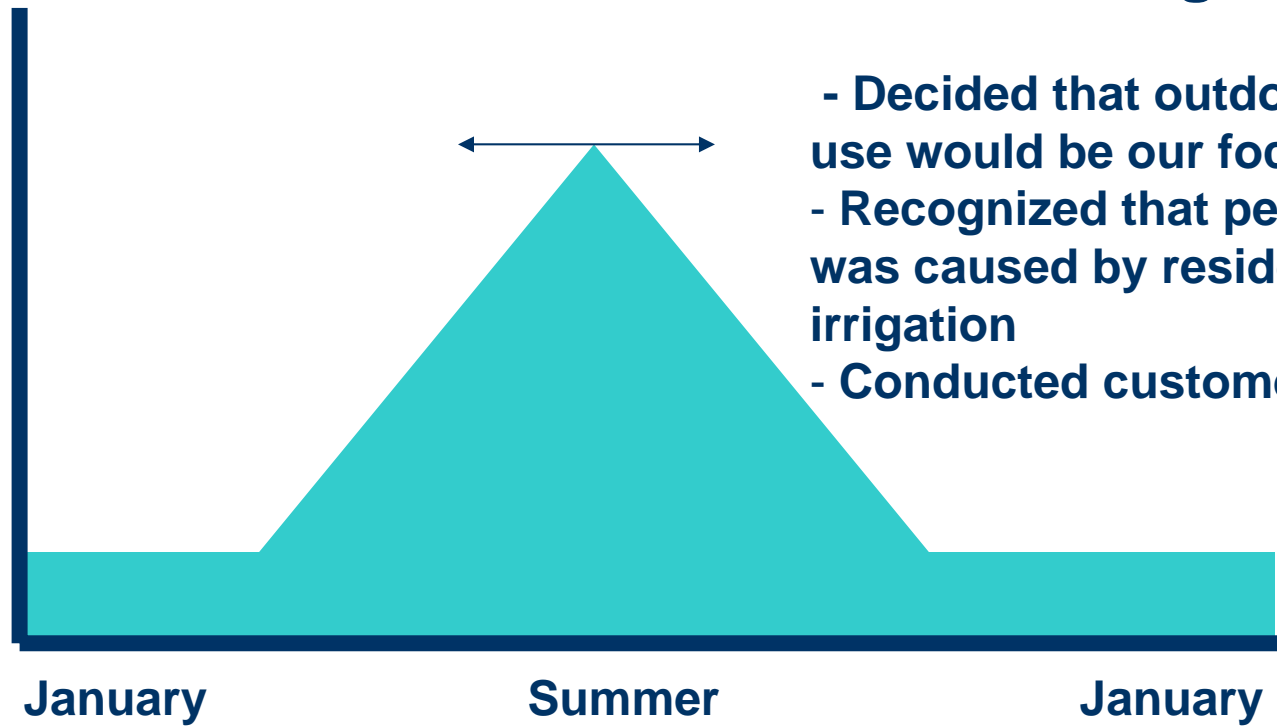
# Re-Focus

## Water Conservation Efforts – Average Home



# Re-Focus

## Water Conservation Efforts – Average Home



- Decided that outdoor water use would be our focus
- Recognized that peak demand was caused by residential irrigation
- Conducted customer research

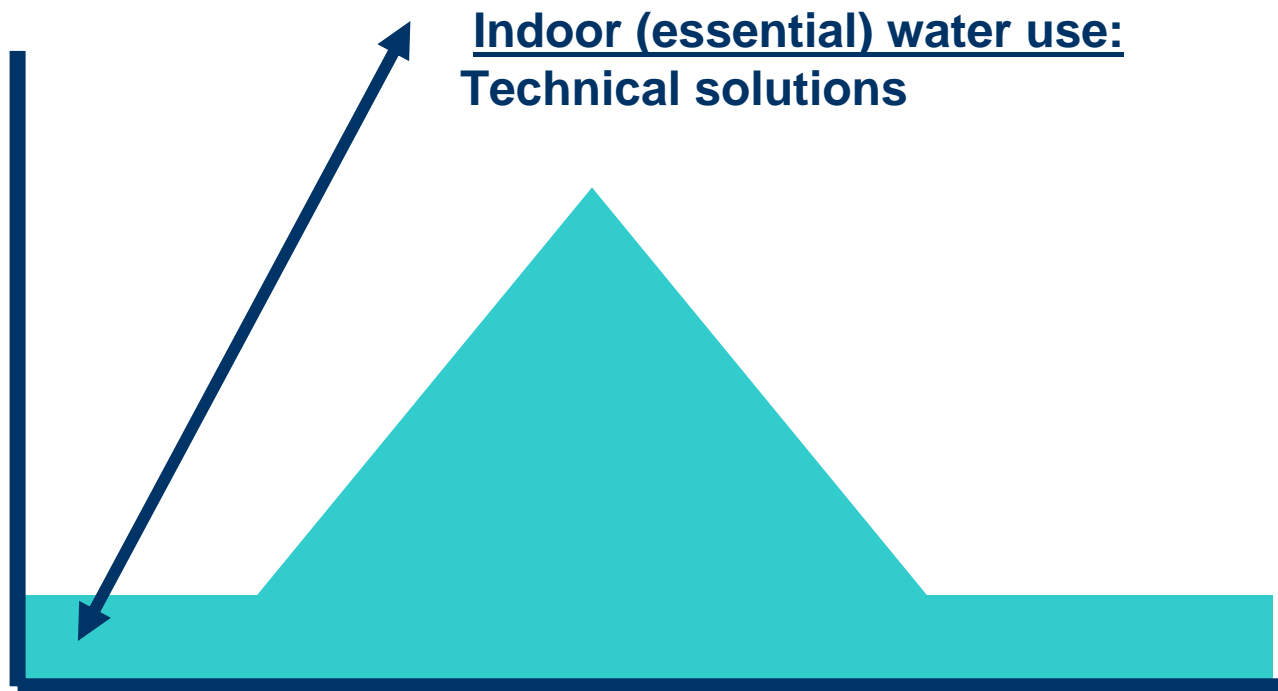


# Innovations

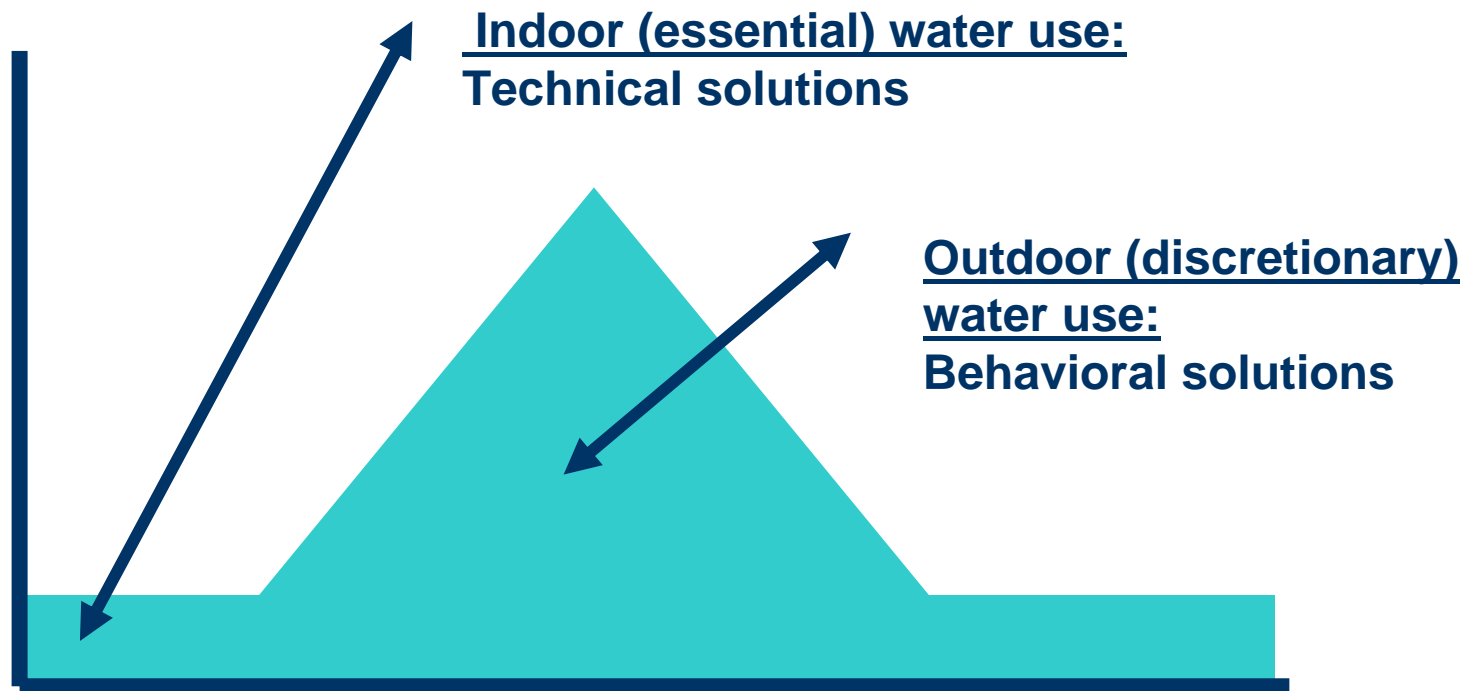
**Customer Research – High water use caused by...**

- 1) Poor soil conditions**
- 2) Inefficient irrigation systems**
- 3) Questionable lawn care practices**
- 4) Inappropriate landscaping**

# Innovations



# Innovations



# Innovations



## **QUESTION:**

**What if we found technical solutions to outdoor water consumption problems created by behavior?**

# Innovations



## SOIL AMENDMENT

- Top dress lawns with compost
- Improves soil's capacity to hold water
- Can reduced water use from 25 – 35%

# Innovations



## IRRIGATION SYSTEM ASSESSMENTS

- Provide customers with free irrigation system assessments
- Can reduce water consumption from 5 to 45%

# Innovations



## COMPOST TEA

- Alternative to nitrogen fertilizers
- Creates microbes that turn thatch into humus
- Improves soil quality and moisture retention

# Innovations



## GRASS

- Experimenting with alternatives to Kentucky Bluegrass
- Eco-Lawn is drought tolerant, and requires no fertilizer/pesticide
- Customers delighted with lawn quality





# The Next Steps



**ACHIEVE AN ADDITIONAL  
15% REDUCTION IN PEAK  
DEMAND BY 2012**

# The Next Steps

## **1) Continue to work with existing customers**

- Retrofit, repair, and remove lawns
- Review and revise water rates

## **2) Develop new landscaping standards**

- Proper soil and appropriate landscaping
- Approved plant list
- Irrigation system standards

# Conclusion

## Innovation Involves Risk



### ZOYSIA GRASS

- Replaced 20,000 square feet of turf at high profile location
- Program did not go as well as planned
- Ultimately, these innovations will pay off

# Questions



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