

# This presentation premiered at WaterSmart Innovations

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# Tightening the Belt: Implementing Stage 2 Water Restrictions in Austin, Texas

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# Historical Watering Restrictions

- **1983 Water Use Management Ordinance**
  - Allowed City Manager to enact watering restrictions
  - Restrictions effective during summers of 1984-1986
  - Established voluntary 5-day schedule
- **Stage 2 restrictions enacted in summer of 2000**
  - Mandatory 5-day schedule
  - Prohibited water waste during irrigation
- **2006 Water Conservation Task Force**
  - Strategies to reduce peak day use 1% per year
  - Recommended twice per week watering schedule

# Austin's New Watering Restrictions



Current schedule took effect October 2007

- **Permanent, year-round restrictions**
  - Tues/Fri commercial & multifamily customers
  - No automatic irrigation 10 am to 7 pm
  - Water waste prohibited
- **Stage 1 restrictions effective May-Sept**
  - Wed/Sat or Thurs/Sun residential customers
  - No outdoor use 10 am to 7 pm
- **Stage 2 restrictions as needed\***
  - Once per week watering, automatic systems a.m. only
  - No outdoor fountains, auto-fill valves, washing pavement
- **Stage 3 – no outdoor watering\***

*\*partial list*

# Enforcement



Early efforts prioritized education over punishment

- Investigations driven by citizen reports
- Use of 3-1-1 in 2008 increased reports 900%
- Limited staff patrolling
- Progressive process
  - Inform, Investigate, Warn, Cite
- Few actions
  - 38 warnings, 1 citation in 2008
  - 58 warnings in 2009 during Stage 1
- Day and time usage trends showed overall compliance with restrictions



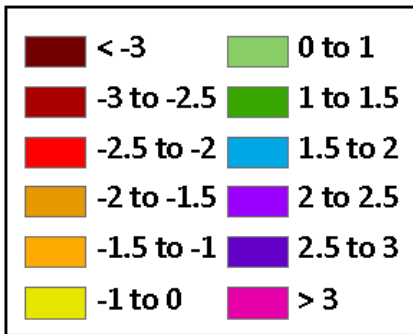
# Demand and Supply Triggers

- **Restrictions historically triggered by demand**
- **2009 Drought Contingency Plan added new supply triggers for watering restrictions**
  - Combined storage level in Highland Lakes
  - 900,000 acre-feet triggered Stage 2
  - 681,000 acre-feet triggered Stage 3
- **2009 – Exceptional Drought Conditions**
  - 40 days over 100 degrees
  - Driest 22-month period on record
  - Lowest lake inflows, approaching drought of record

# Central Texas Drought

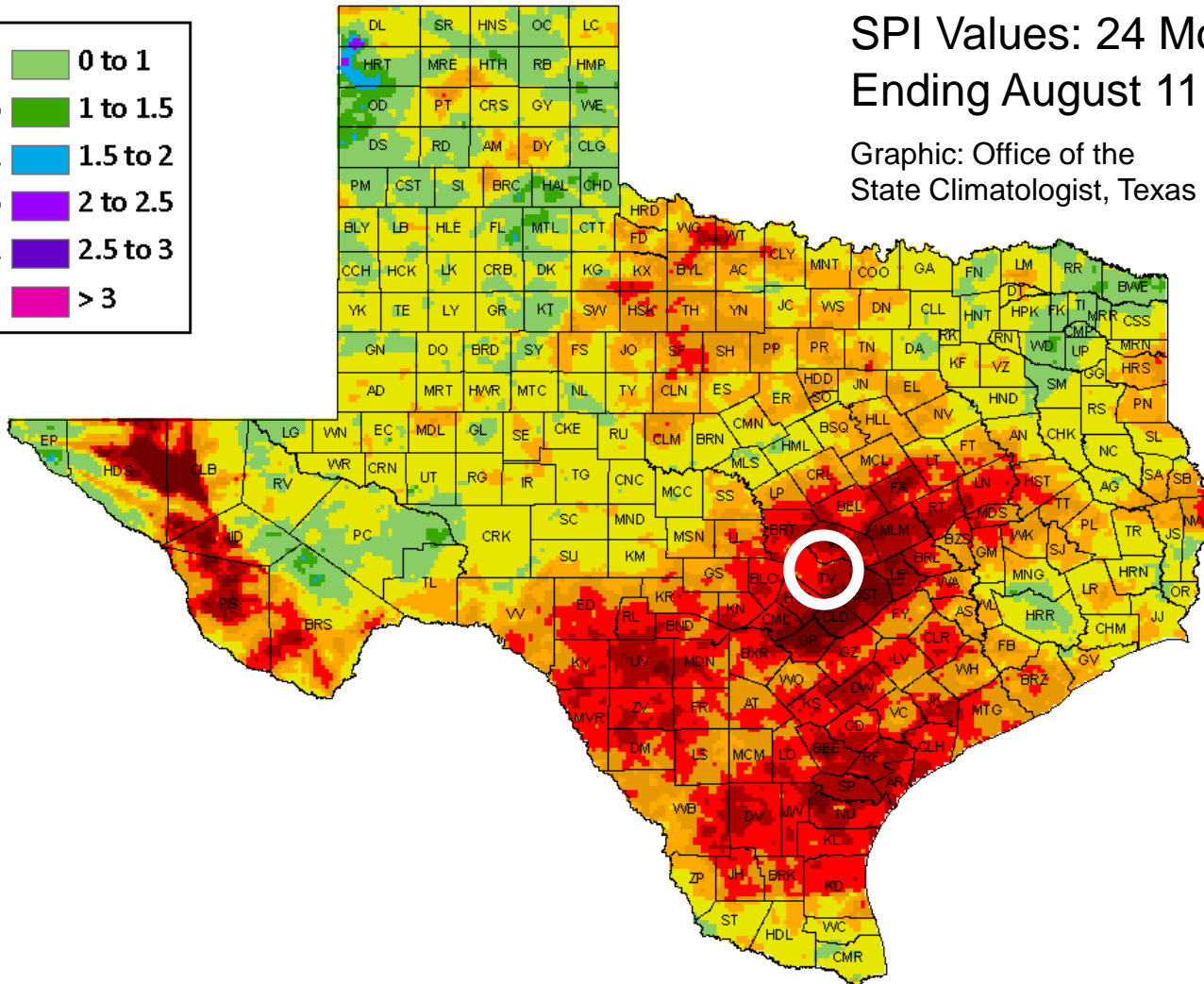


## Two years of record low inflows to Highland Lakes

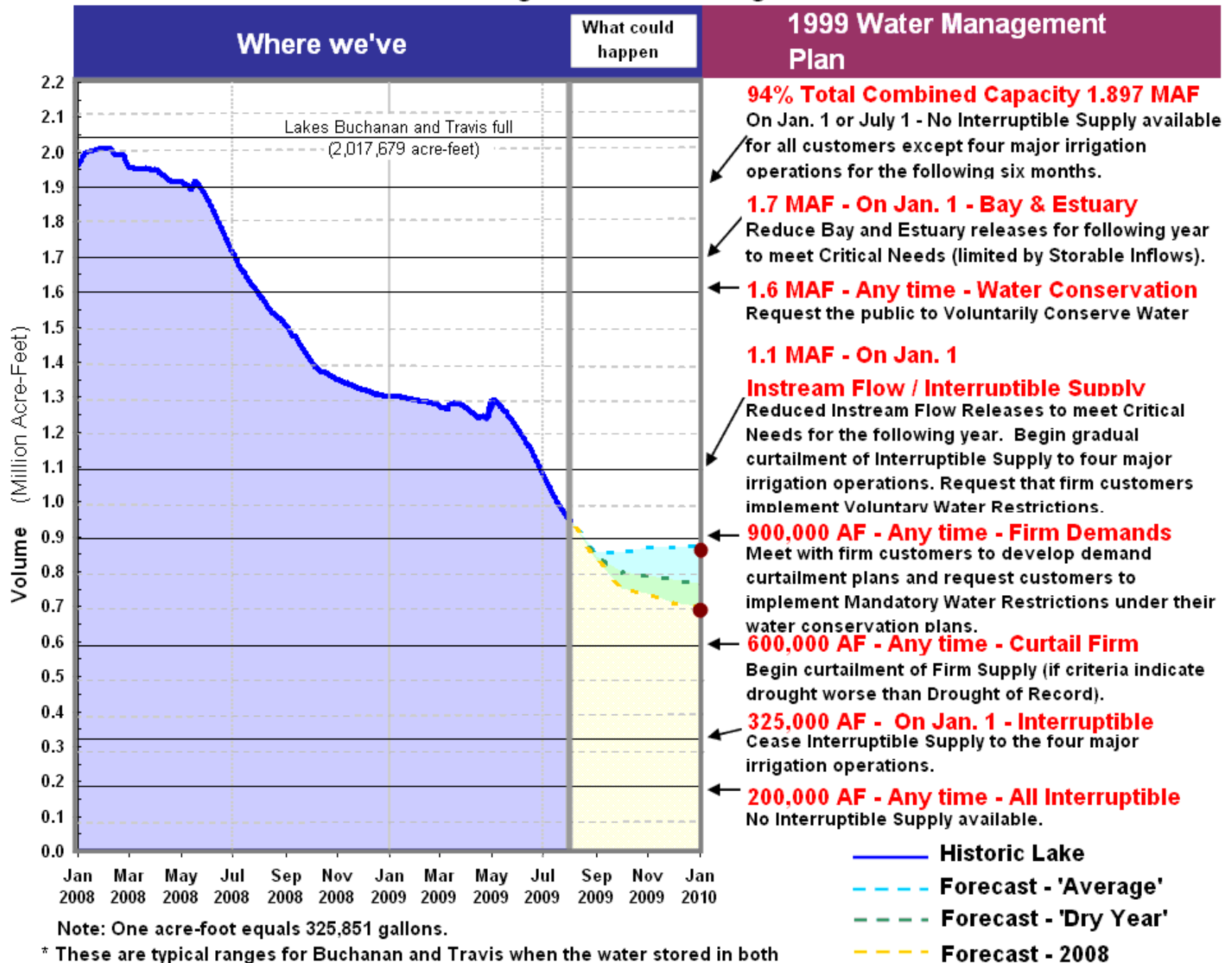


SPI Values: 24 Months  
Ending August 11, 2009

Graphic: Office of the  
State Climatologist, Texas



# Highland Lakes Storage



Note: One acre-foot equals 325,851 gallons.

\* These are typical ranges for Buchanan and Travis when the water stored in both lakes is at this amount. Levels could vary depending on rainfall patterns.



# Reaching the Trigger



Two years of record low inflows to Highland Lakes

- **Highland Lakes dropped below 900,000 acre-feet on August 12, 2009**
- **City Manager announced August 13<sup>th</sup> that Stage 2 restrictions would take effect August 24<sup>th</sup>**
- **All customers limited to 1x/week watering**
- **Mayor & City Manager announced 24-hour enforcement with no warnings**

# Stage 2 Enforcement Issues

What do we have vs. What do we need?

- **Action plan for media outreach**
  - Existing placements focused on 2x/week schedule
- **Limited enforcement staff**
  - 2 FTEs, one part-time temporary
- **No scheduled weekend & evening patrols**
  - Residential customers limited to weekend watering
- **Had never issued a Stage 2 citation**

# Communications



How to tell 700,000 people that the rules have changed?

- Immediate press release
- Media requests
  - Ride-alongs, stand-ups
    - 20 outlets, 88 stories
- Paid advertising
  - Converted existing scheduled placements, added more
  - 1137 radio reads, 471 TV spots
  - 22 bus wraps
- Emails, newsletters & bill inserts
- Reverse 9-1-1 call

**Stage 2 Outdoor Watering Schedule**  
MANDATORY WATER USE RESTRICTIONS:

RESIDENTIAL ODD ADDRESS	RESIDENTIAL EVEN ADDRESS	COMMERCIAL, MULTIFAMILY ODD ADDRESS	COMMERCIAL, MULTIFAMILY EVEN ADDRESS
AUTOMATIC IRRIGATION SYSTEMS: BEFORE 10 A.M. HOSE-END SPRINKLERS, SOAKERS: BEFORE 10 A.M. or AFTER 7 P.M.			
Saturday	Sunday	Tuesday	Friday

The graphic is a dark blue rectangular box with white and light blue text. It features a grid of watering restrictions. The top row lists four categories: Residential Odd Address, Residential Even Address, Commercial/Multifamily Odd Address, and Commercial/Multifamily Even Address. The second row contains a note about automatic irrigation systems and hose-end sprinklers/soakers. The bottom row lists the days of the week: Saturday, Sunday, Tuesday, and Friday. The City of Austin logo is in the top right corner.

# Staffing Issues

Beg, borrow & hire



- **Retask utility employees, add overtime**
  - AWU water protection staff had vehicles, understood regulations and citation process
- **Seek assistance from other City departments**
  - Code Compliance staff had vehicles, enforcement experience
  - Opted not to use police force
- **Hire temporary employees for shift work**
  - Conservation vehicles not currently used at night
  - Posted job and interview applicants for 10 positions (Interviewed 17, offered 6, 4 accepted, 3 stayed)

# Staffing Issues



New personnel require training and materials

- **Purchase equipment & materials**
  - Laptops, wireless cards, digital cameras, flashlights, etc.
  - Stage 2 door hangers & citation forms
- **Weeklong condensed training**
  - Basic City & utility training
  - What are the restrictions? How to document violations?
  - Billing database, tax records and report intake system
- **IT services**
  - Mobile equipment & user accounts
- **Safety & supervision**

# Enforcement



Ensuring a firm, fair, consistent approach

- **Overwhelming number of citizen reports**
  - Unable to offer real-time follow up
  - Patrols proved more effective in finding violations
- **Consistency in enforcement**
  - Communication eliminated “interpretive” enforcement
  - Prioritized day & time violations
    - Warning given to violations requiring system repair
- **Policies on violator interaction**
  - Initially, allowed daytime contact to issue citations
  - Later moved to filing citations by affidavit only

# Enforcement



Transitioning from education to prosecution

- **Alert court, relearn processes**
  - New court & conservation staff since last prosecution
  - Sudden influx of rarely-used citations
- **Establish policies & procedures**
  - Affidavit vs. direct issuance
    - When and how does the violator know about the fine?
  - Transferring & dismissing citations
  - Deferral agreements
- **Paperwork**
  - Access & understand court database

# Policy Considerations

Defining, standardizing and prioritizing



- **Think like your customer(s)**
  - **What rules apply to me?**
    - Property address issues for townhomes & HOAs
    - Multiple types of irrigation, fountains
  - **Do I have to follow them?**
    - Variances for property conditions & uses
    - Variances for day-of-week conflicts
  - **Can you catch me if I don't?**
    - Filling pools, serving water, washing pavement & cars
    - Access to fenced or gated areas
    - Is post-watering evidence enough?



# Did it Work?

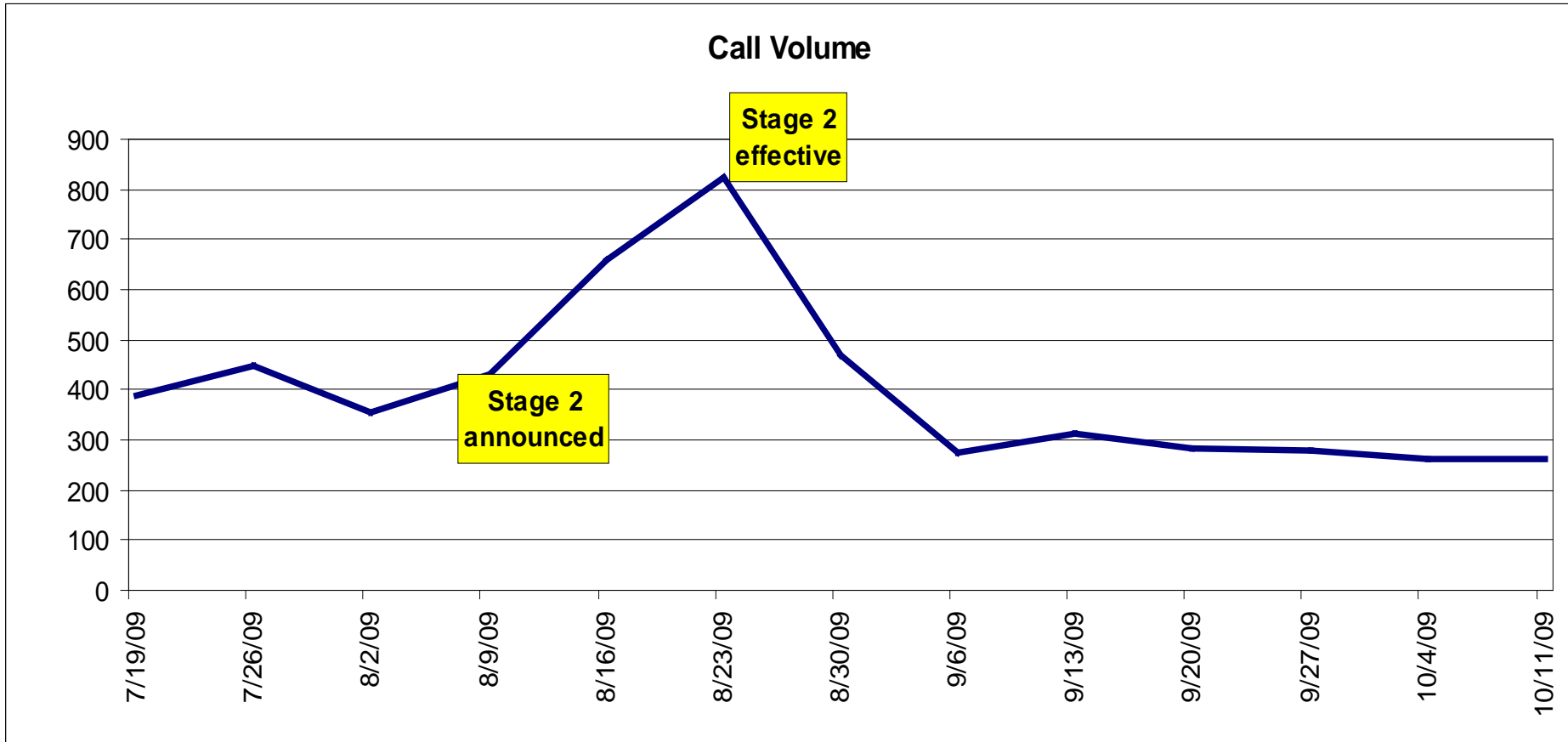
Measuring the impact of restrictions

- **Water use dropped 17% from August average in first week of implementation, 23% week 2**
- **After rain & cooler temperatures, reached lowest per capita use in 15 years**
- **428 citations, most have been paid or deferred with reduced fine and irrigation audit**
- **Highest-use customers responded**

# Did it Work?



Call patterns show effective communications

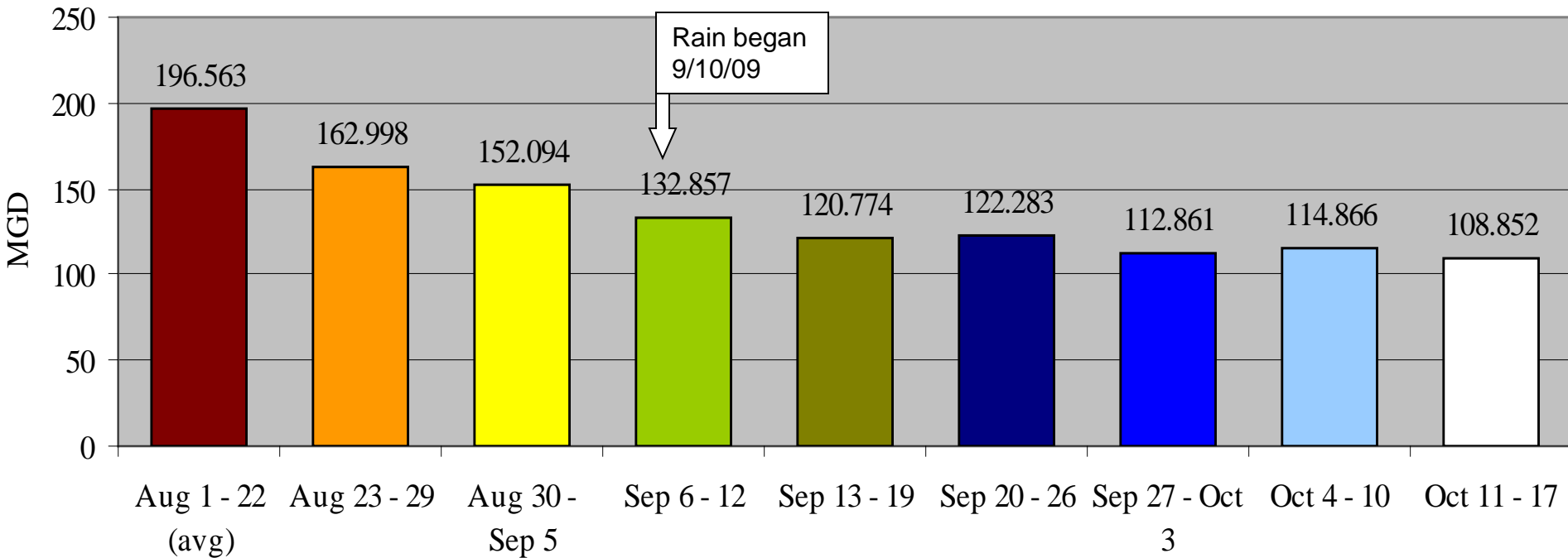


# Did it Work?



Water use dropped immediately and dramatically

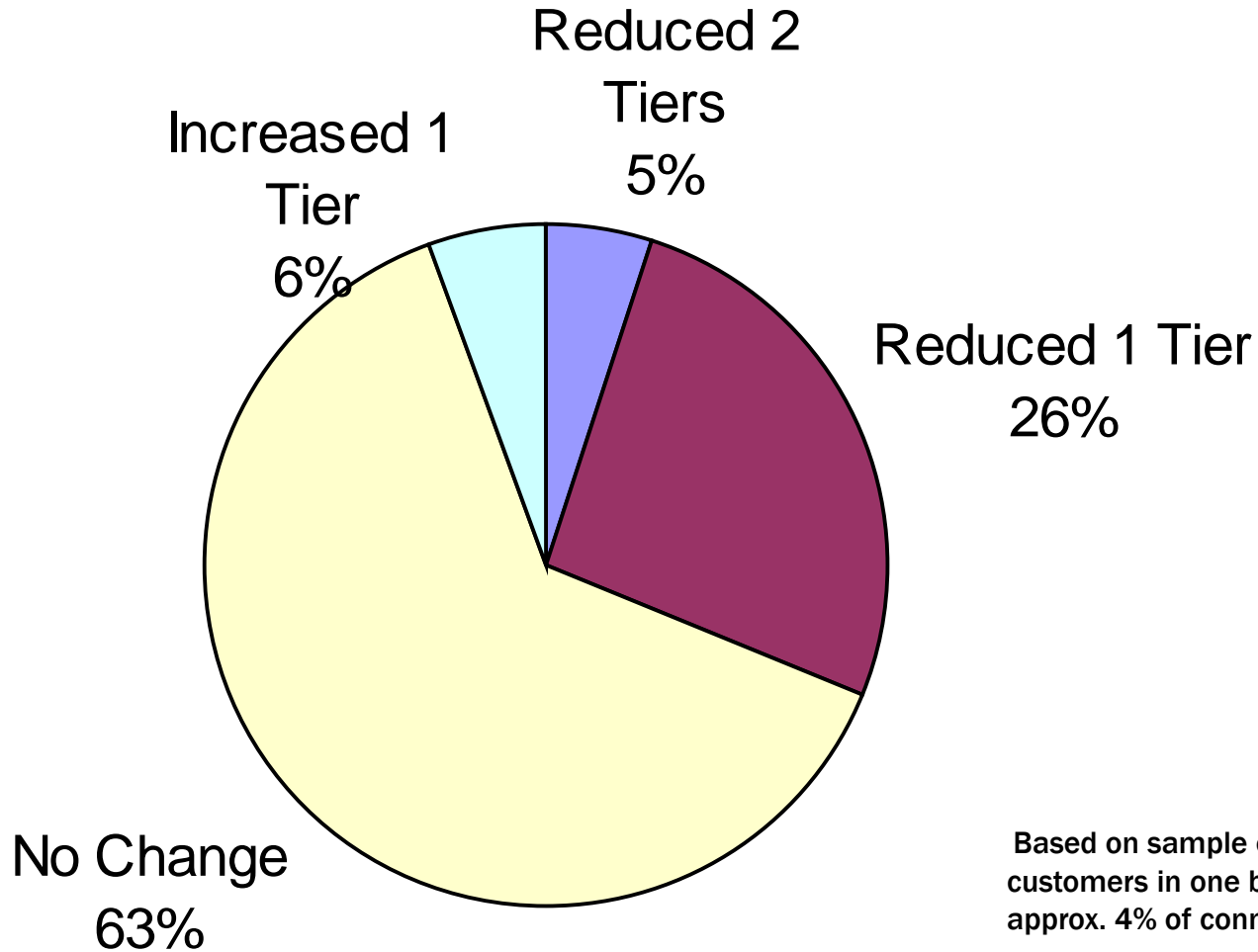
## Weekly Water Pumpage



# Did it Work?



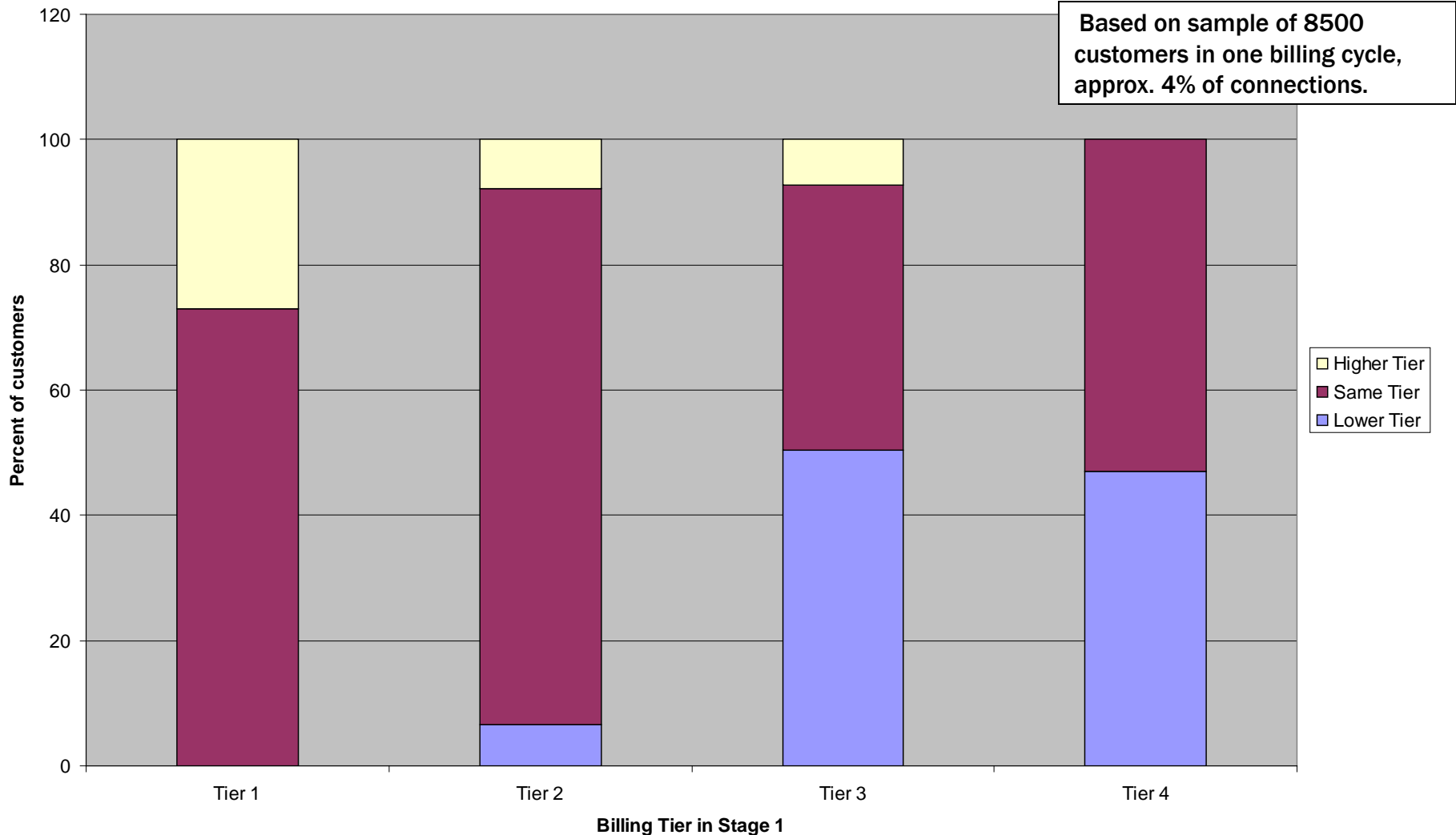
**31% of customers dropped into a lower billing tier**



# Did it Work?

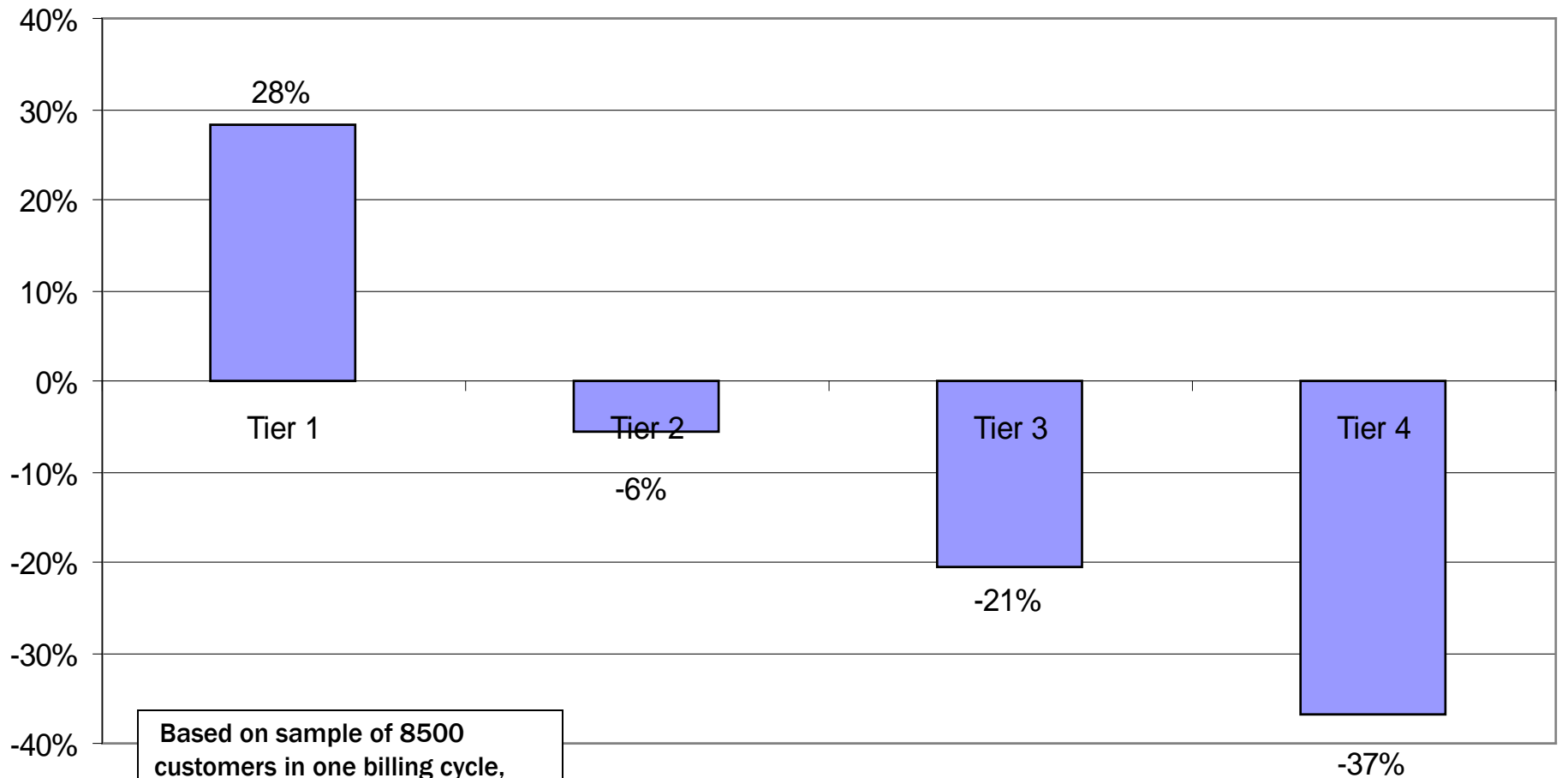


Nearly 50% of users in highest tiers reduced consumption



# Did it Work?

## Water use within tiers decreased

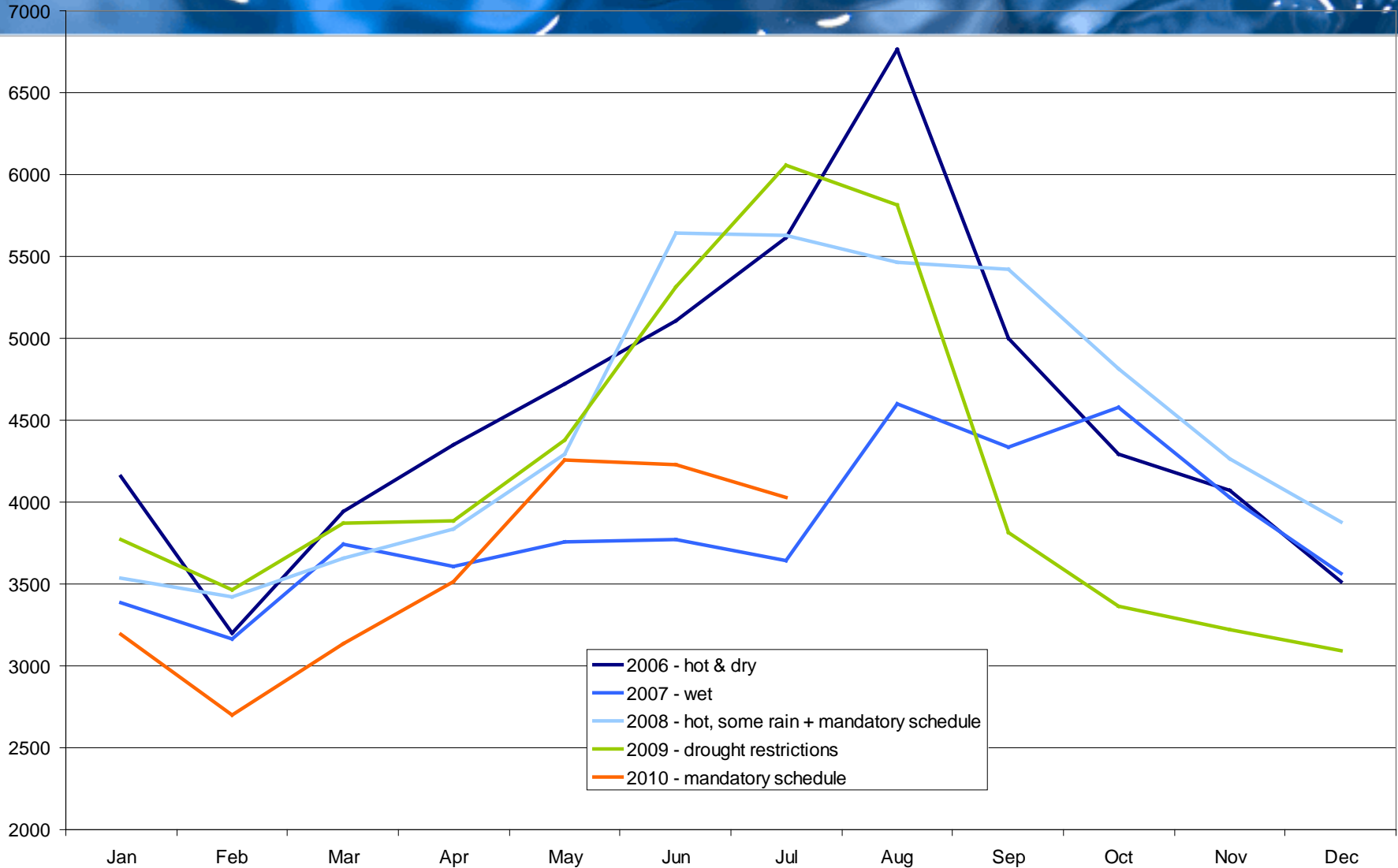


Based on sample of 8500 customers in one billing cycle, approx. 4% of connections.

# Did it Work?



## Lasting use reductions: weather or awareness?

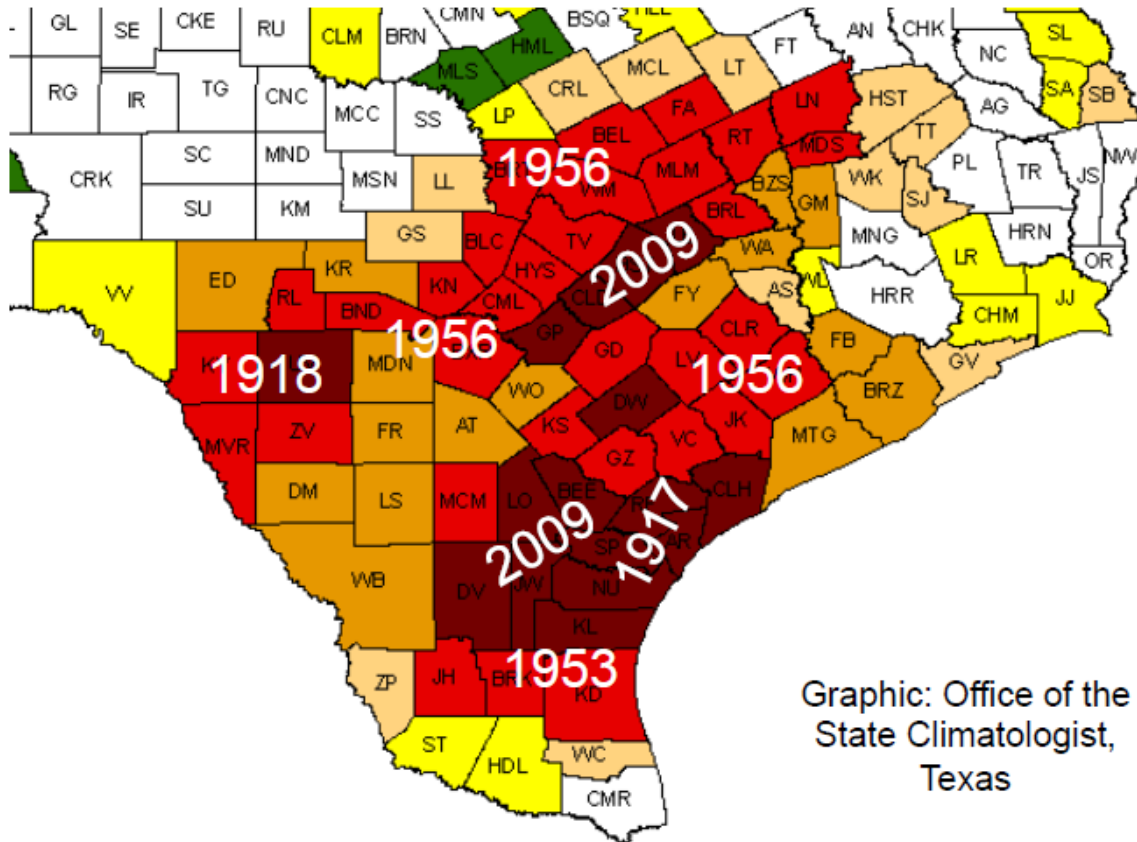


# Central Texas Drought



Two years of record low inflows to Highland Lakes

Most severe summertime drought years as of 2009



Graphic: Office of the State Climatologist, Texas



# Lessons Learned

Establishing a plan for the next time



- **Temporary Employees**
  - More preparation would have let us hire faster
  - Should have screened for computer experience
  - Standardized assignment length? Rotating pool?
  - Limit assignments to limit liability
- **Training**
  - Need for improved safety training
  - Ongoing training for other City staff

# Lessons Learned

Establishing a plan for the next time



- **Communications**

- Ongoing media training for some employees
- Develop standard policy for ride-alongs
- Develop “living” FAQ from emails & calls

- **Enforcement**

- Minimize & standardize contact with violators
- Find better ways to identify responsible parties

# Lessons Learned

Establishing a plan for the next time



- **Prosecution**
  - **Learn what will hold up in court**
    - Who is the responsible party? What evidence is needed?
    - Who will need to testify?
  - **Know how to dismiss and transfer citations**
    - Can irrigation companies accept responsibility, how?
    - What can you do to “get out” of a ticket?
    - What if it’s a staff mistake?
  - **Prepare your general case from the start**
    - Document outreach efforts, warnings
    - Demonstrate need for the restrictions

# Lessons Learned

Establishing a plan for the next time



- **Policy**

- **Write (mostly) enforceable restrictions**

- **May not write tickets for restaurants serving water, but it helps increase awareness**
    - **Does it matter if the customer is aware of restrictions?**

- **Decide what information to share**

- **Jurisdiction limits? Size of your “army”?**

- **Consider effect on City policies & practices**

- **Consider impacts on businesses**

# Lessons Learned



- **Set the processes when you set the rules**
- **Make (and revisit) a roll-out plan**
  - **Staffing & Communications**
- **Build on what other cities have learned**
- **Get everyone on the same page**
  - **Regional schedules, City operations**
- **Plan for success**
  - **Media interest, citizen reports, financial impacts**

# For More Information

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