



# Austin Water Drought Update

June 21, 2015

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Water Conservation Division Manager

# About Austin Water

- 100% surface water from Lower Colorado River
  - Firm water rights backed by stored water contract up to 325,000 acre-feet
  - Prepayment agreement up to 201,000 acre-feet
  - 2014 withdrawal ~ 136,000 acre-feet
- Large metropolitan utility
  - 538 sq miles
  - 200,000+ connections
  - 900,000 customers
  - Nearly 1,100 employees



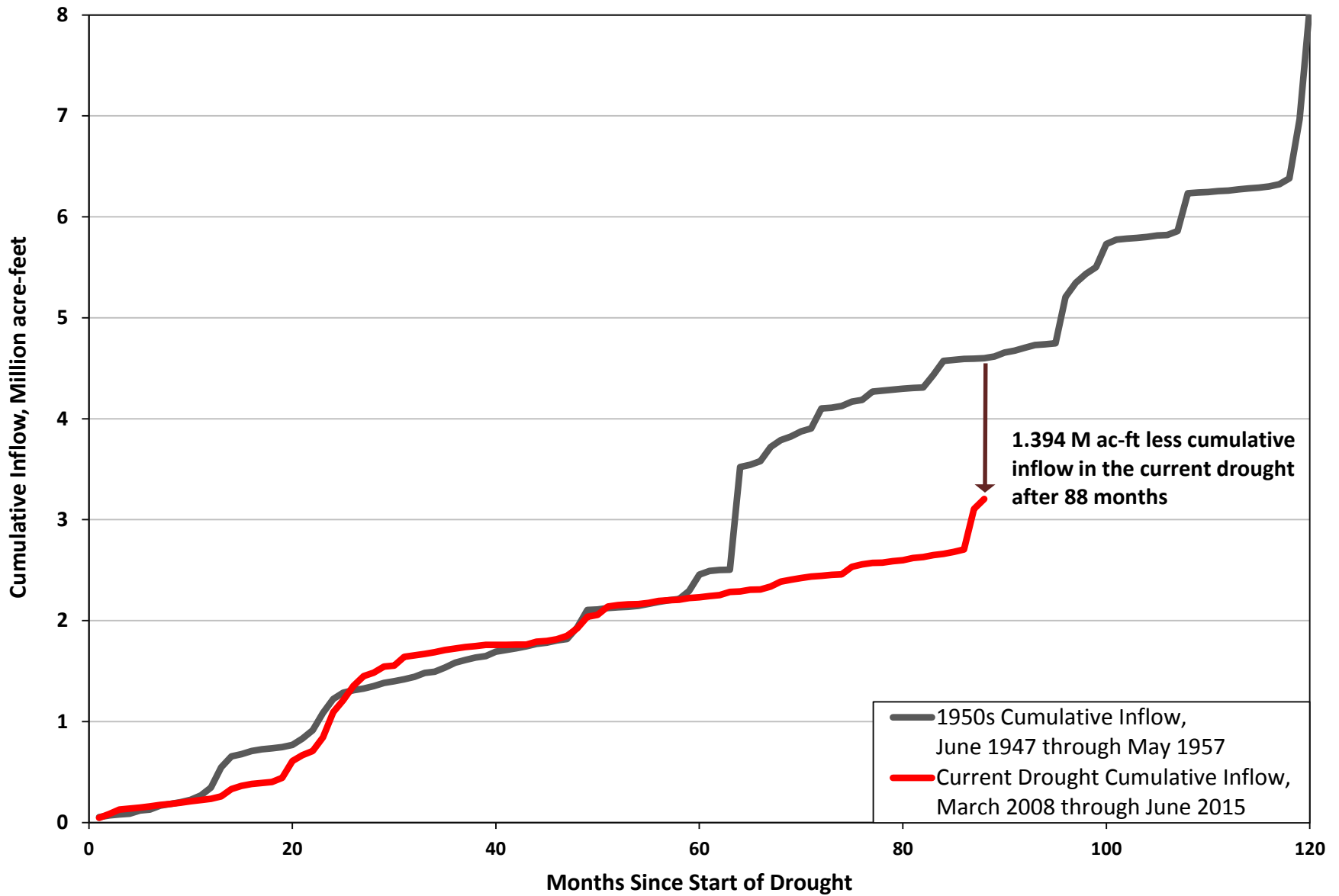




# Is The Drought Over?

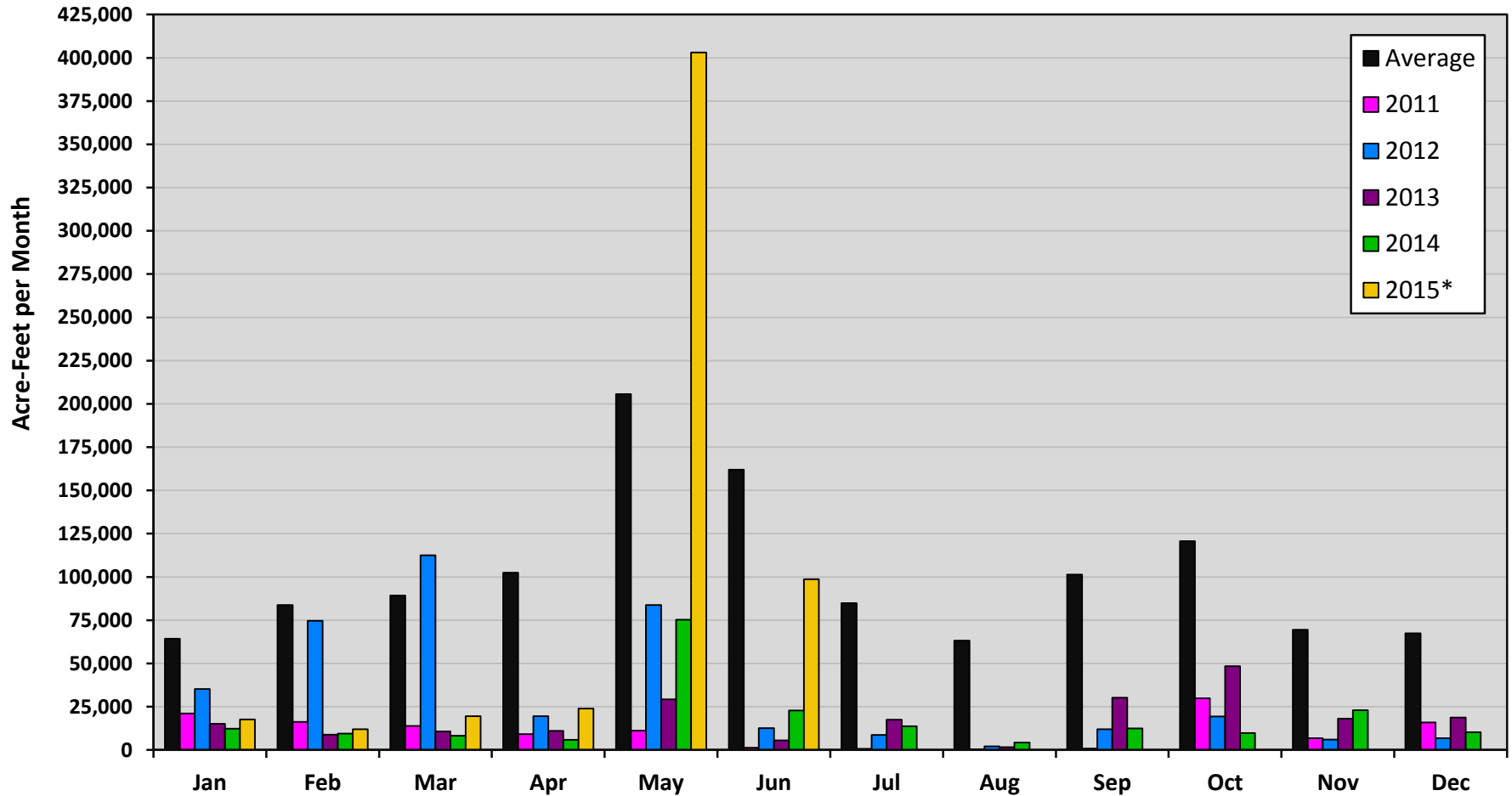
- 2015 rainfall totals for January-June
  - Not highest...
  - Not even top 10...
  - 2015 ranks **33<sup>rd</sup>**
- Current drought (2008-?) has surpassed historic 1947-1957 drought in intensity
  - 6 of 10 lowest inflow years

# Cumulative Inflow to Lakes Buchanan and Travis



# Monthly Inflows to Lakes Travis and Buchanan

Data through June 30, 2015



### Calendar Year Totals, ac-ft

Average: 1,216,274  
 2011: 127,802  
 2012: 393,163  
 2013: 215,138  
 2014: 207,626

### June YTD Inflows, ac-ft

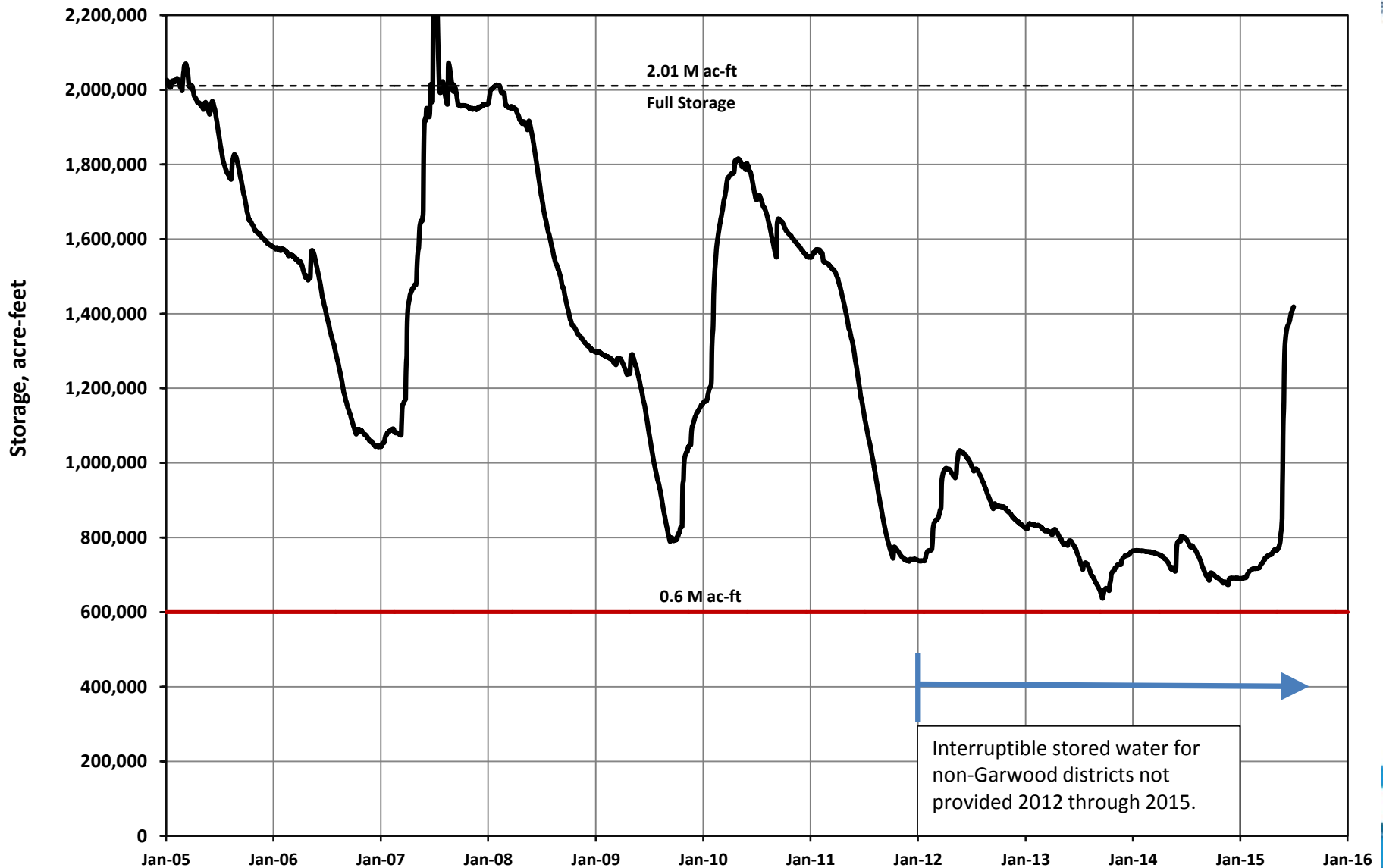
Average: 707,349  
 2011: 72,972  
 2012: 338,171  
 2013: 80,650  
 2014: 134,027  
 2015: 574,737

Monthly averages correspond to the historical period of record, 1942 through present.

\*Inflow data for 2015 are preliminary and subject to revision.

# Combined Storage of Lakes Buchanan and Travis

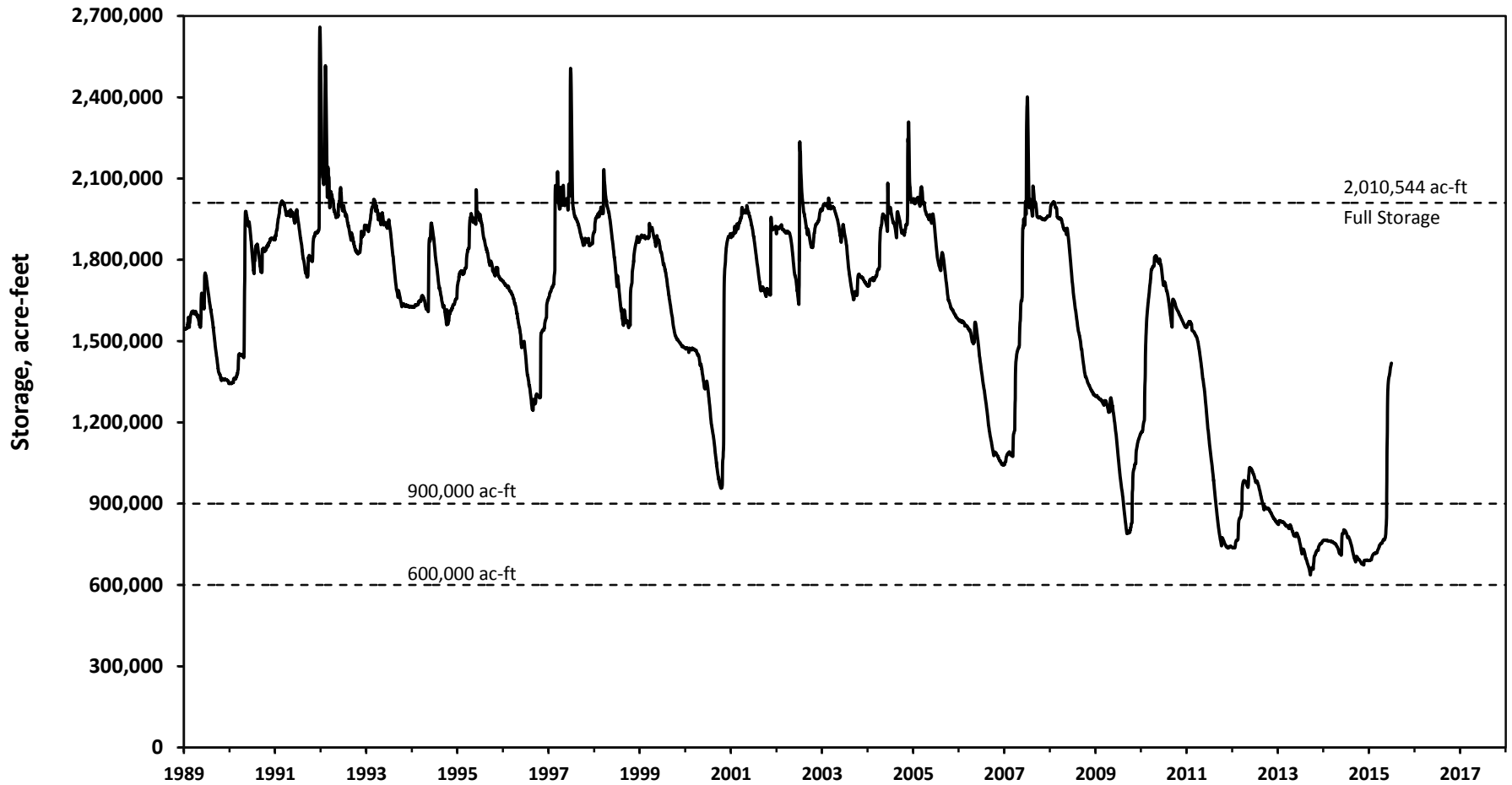
January 1, 2005 through July 1, 2015





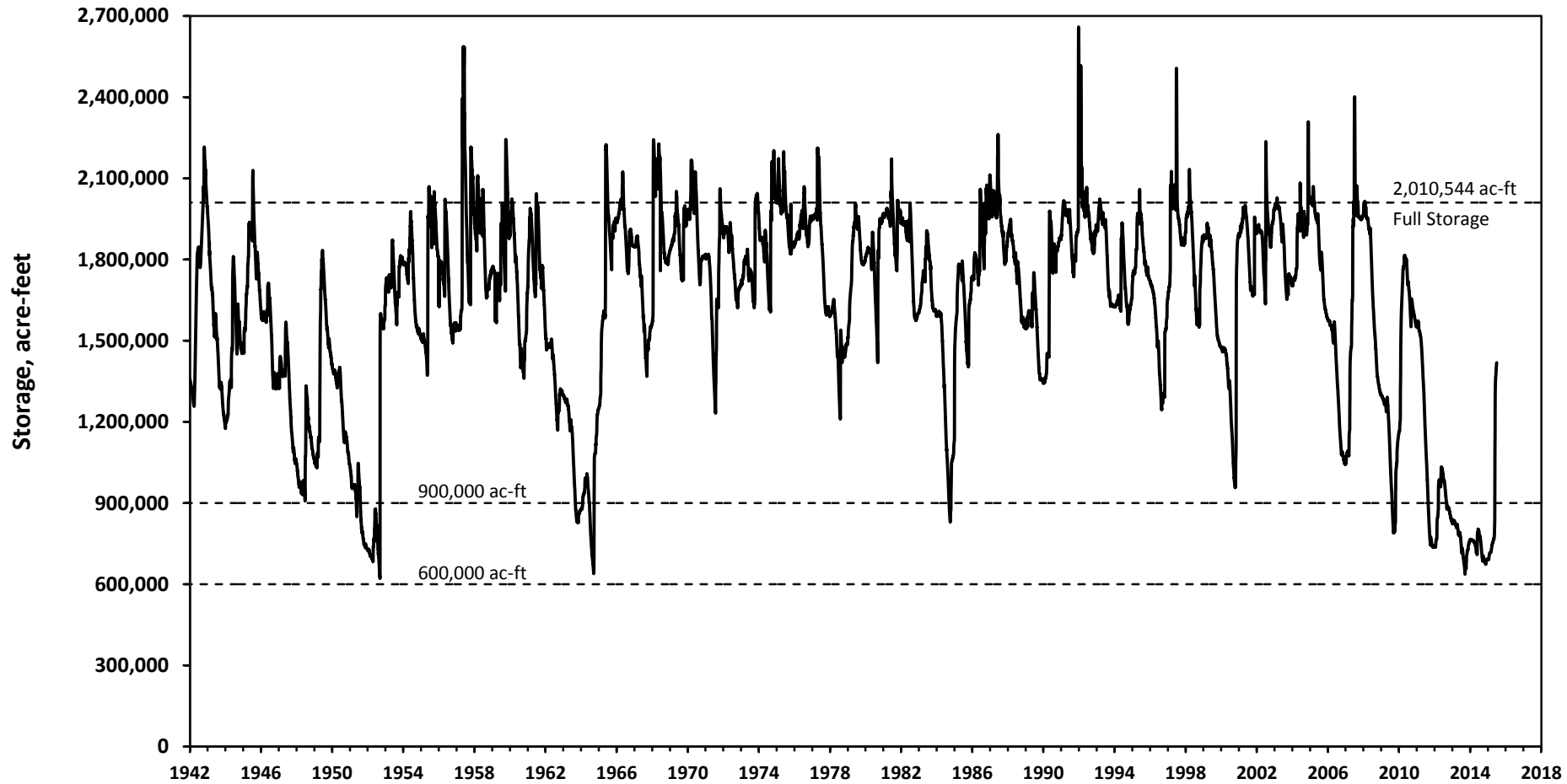
## Combined Storage of Lakes Buchanan and Travis

January 1, 1989 through July 1, 2015



## Combined Storage of Lakes Buchanan and Travis

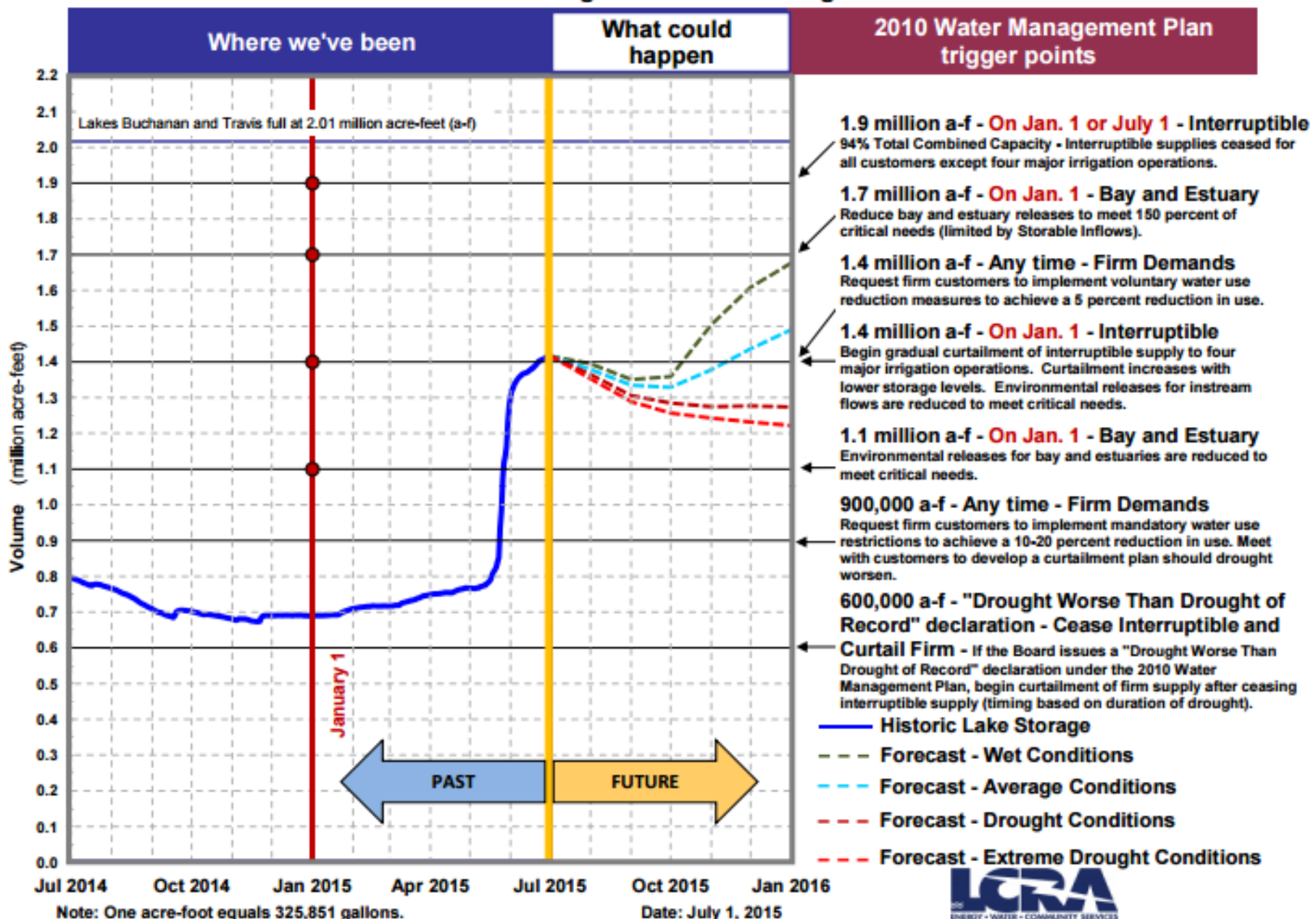
January 31, 1942 through July 1, 2015



# Proceed with Caution

- Rainfall is not translating into inflows
- Revised LCRA Water Management Plan still pending – 4 years of emergency relief
- Typical pattern, or changing climate?
- LCRA reduced firm yield by 100,000 AF

# Highland Lakes Storage \*



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

Date: July 1, 2015



\* Projections assume Texas Commission on Environmental Quality (TCEQ) will approve emergency orders in 2015 that are similar to the emergency orders approved by TCEQ in 2014, which suspended releases of interruptible stored water for customers in the Gulf Coast, Lakeside and Pierce Ranch irrigation divisions through the 2014 irrigation season and reduced instream flow requirements during the 2014 blue sucker spawning season.

# Managing through Drought

- Reservoirs between 30-36% for last 5 years
- Reclaimed water – drought-proof supply
- Consumer interest in rainwater, graywater
- Willingness to sacrifice lawns for trees
- Move to administrative enforcement
- Estimated 76,000 AF saved since 2011
  - Already achieving 104,000 AF through ongoing conservation & leak reduction



# Key Program Elements

- **Incentives**
  - Gradually decreasing focus
- **Education**
  - Capitalizing on drought awareness
- **Regulation**
  - Increasing importance over time
- **Pricing**
  - Effective, but with consequences
- **Reuse**
  - 1.5 BG/yr growing to 5.5 BG/yr
- **Operations**
  - Loss & leakage controls



# Landscape Conversion Rebate

## Designs

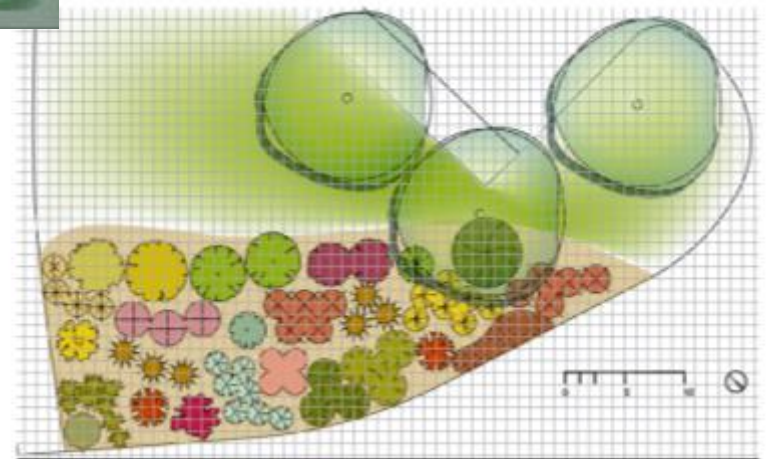
- Child Friendly
- Classic
- Contemporary
- Deer Resistant
- Drainage Solutions
- Low Maintenance Shade
- Pool Friendly
- Sun and Color
- Wildlife Habitat
- Creekside



Low water use alternative landscapes.

Included tips for plant selection and layout

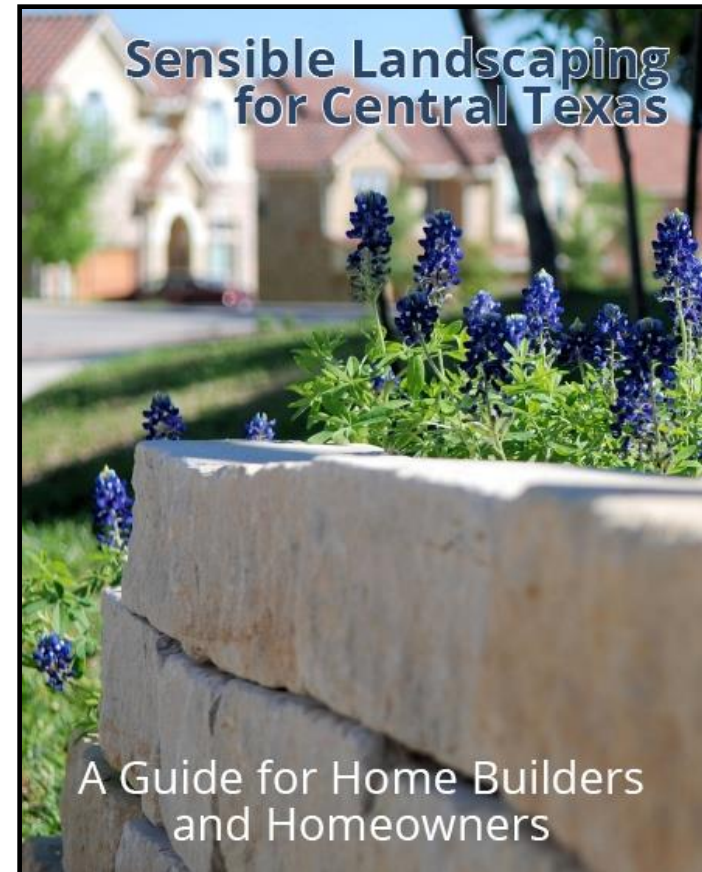
Demonstrated at City of Austin facilities



plant key		perennials		DEER RESISTANT	
tree	evergreen shrub	land's end	skunkcabbage	bean before	pink skullcap
live oak	american bushberry	woolly yucca	yellow bell	wooly thistle	adonis sage
	deer barbs	low gold tarantula	meadow lark	black and blue sage	edging spire
	cherry	cupressus	white rockrose	deer ready blue sage	yellow columbine
	prostrate rosemary	cupressus			
					lucerne tree
					rose of sharon

# New Development Regulations

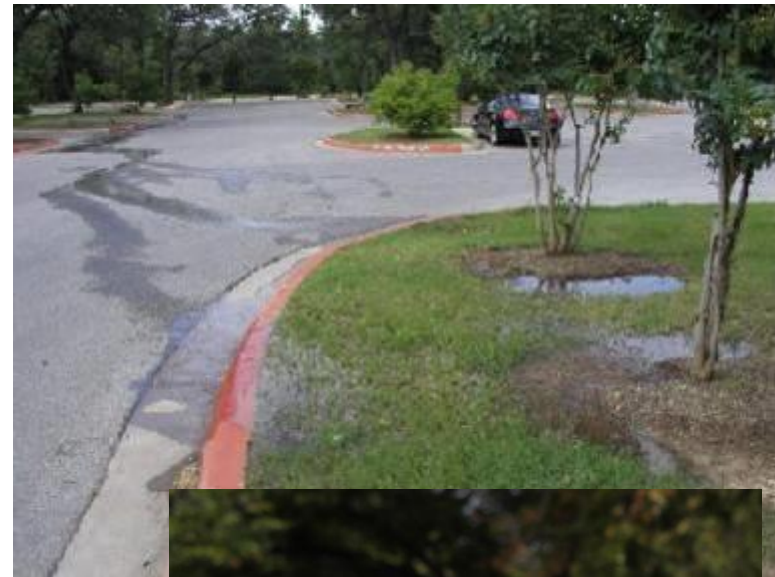
- Plumbing code requires efficient household and commercial equipment and irrigation systems
- Working with City departments to refine landscaping requirements and implement low-impact design
- Commercial development near reclaimed water mains must connect for non-potable uses
- Mandatory A/C condensate recapture (in progress)



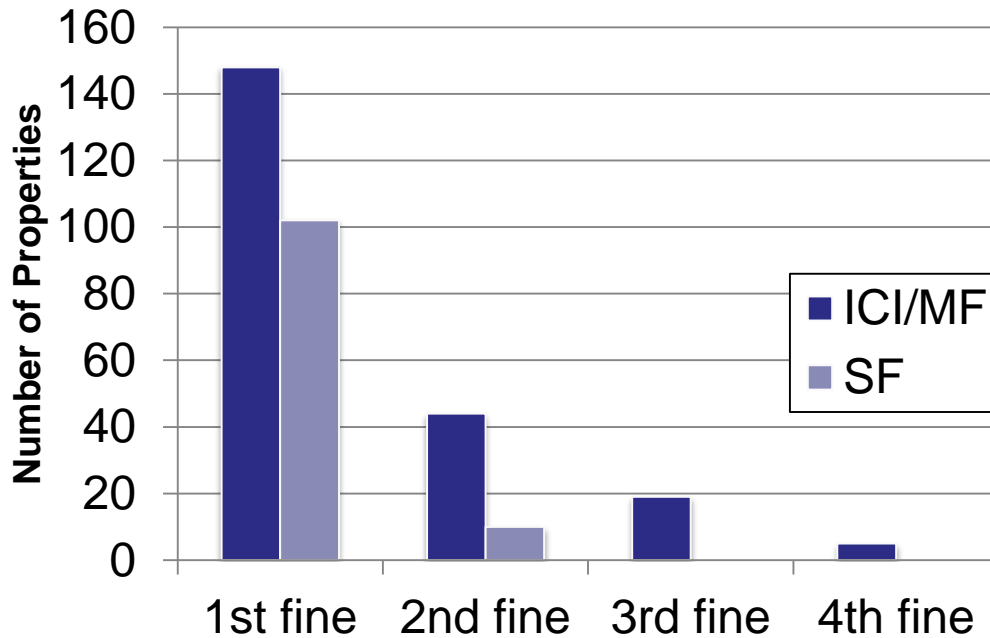


# Water Use Restrictions

- Mandatory, year-round watering restrictions (2x/week)
- Water waste prohibited
- Additional restrictions triggered by supply or demand conditions
  - 1x week since 2011 due to drought
  - No home car washing, fountains
- Biennial irrigation inspections for properties over 1 acre
- Car wash certification required
- Fines from \$50-\$500 per violation



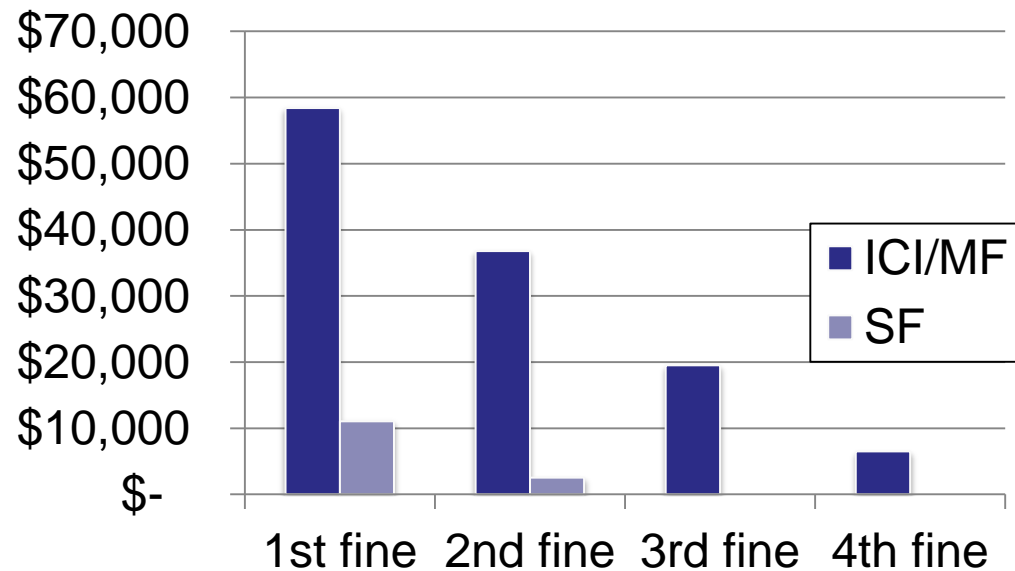
### Assessed Violations: 1/1/14 – 4/1/15



- Violations assessed only after a warning is issued
- Citizen reports generate a postcard alert
- Fines on water bills

- 2036 warnings
- 328 properties fined
- 89 appeals filed
- 0 appeals overturned

### Fines Collected



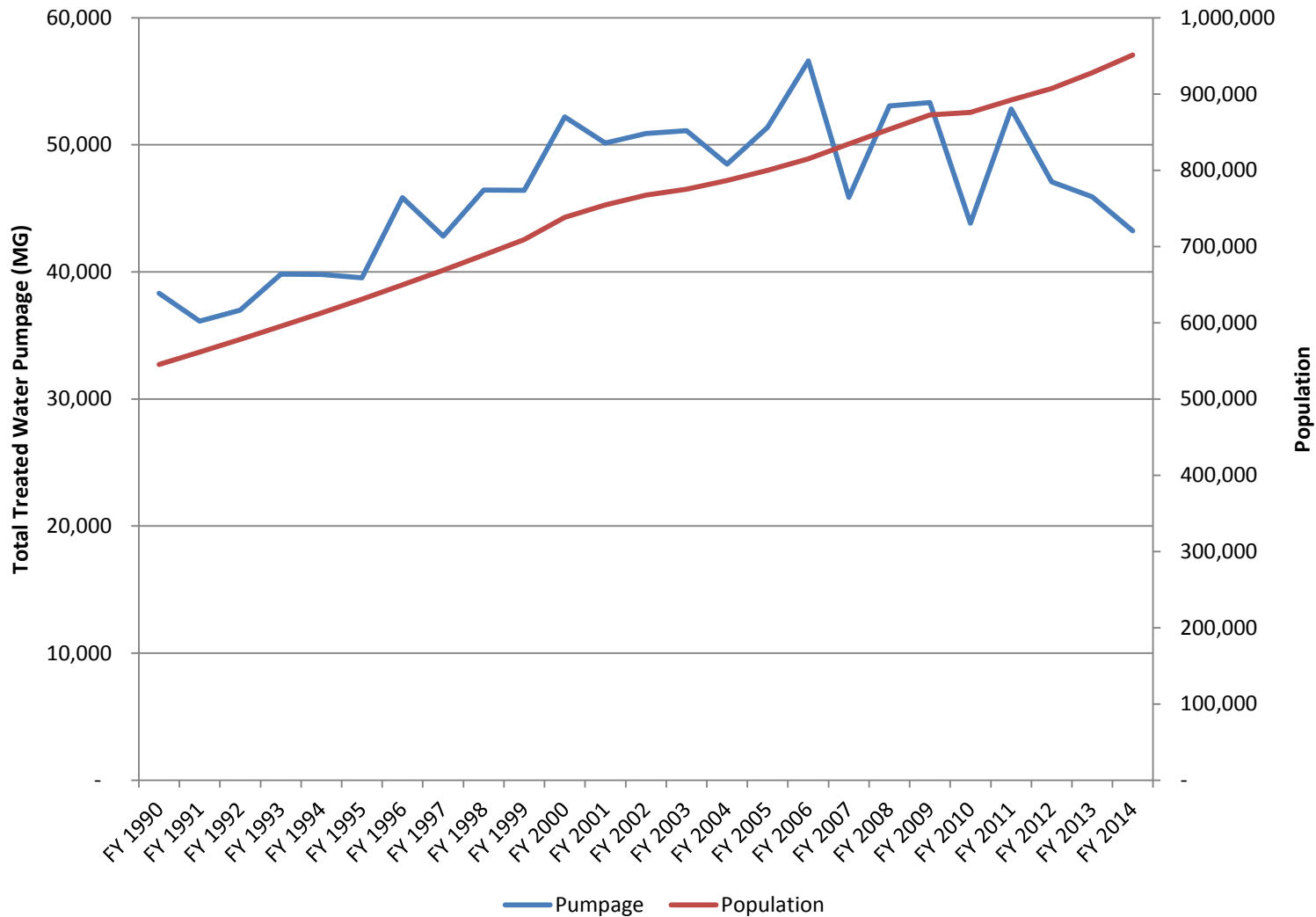
# Next Steps

- Austin will remain in Stage 2 restrictions through summer
- Considering whether once-per-week watering should be a permanent condition
- Anticipated for September agenda of Public Utilities Committee
- PUC feedback will determine timeline for additional public involvement process (similar to 2011-12 rewrite)
- Integrated Water Resource Plan in progress, scope includes climate studies

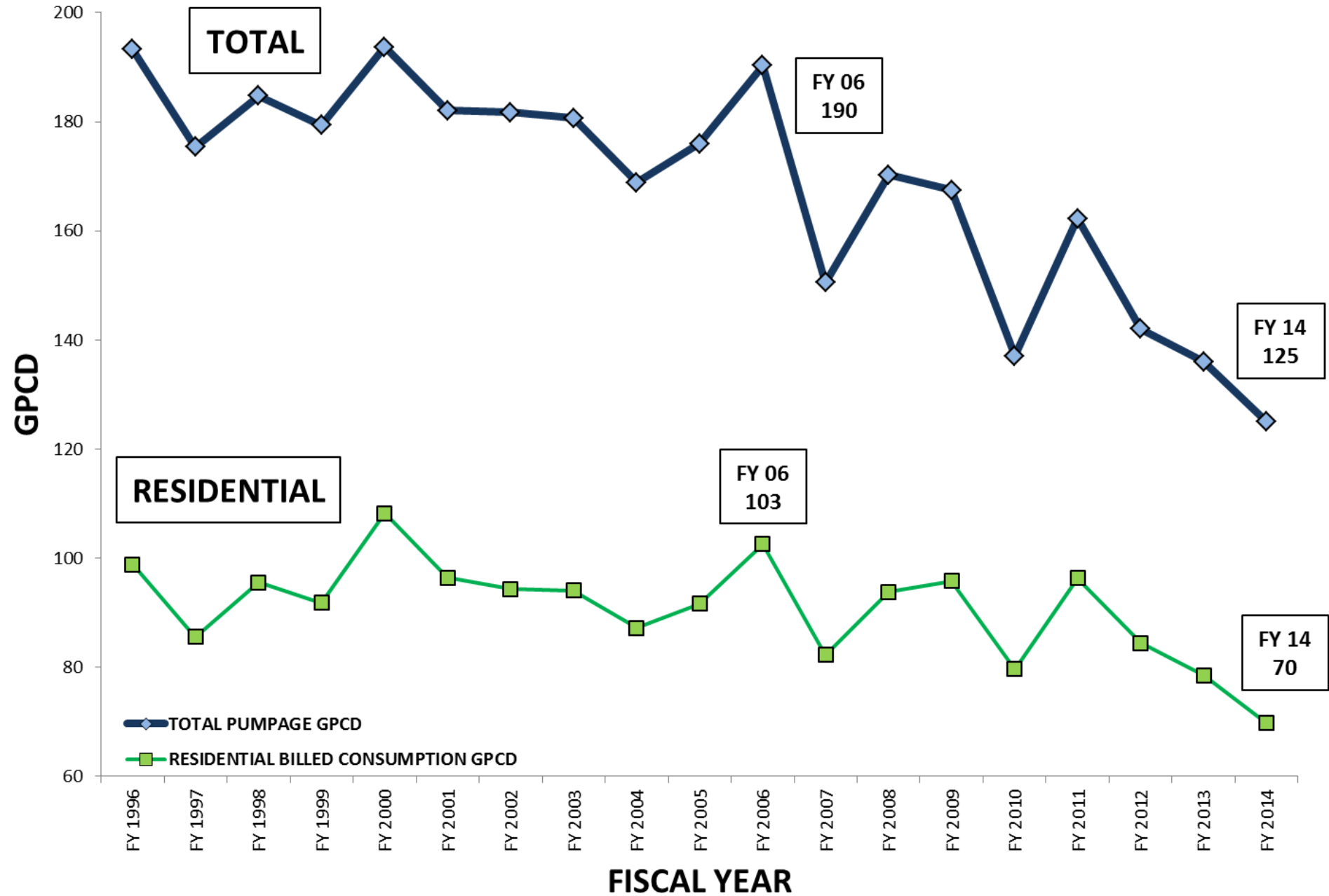
# Water Rates

- Austin has one of the most steeply tiered inverted block rates in the nation for residential customers
- Commercial customers have seasonal rates
- City Council policies have focused on rate increases by percentage, resulting in steeper tiers and low-use subsidies
- Conservation has reduced high use
- ~ 67% of customer usage is below cost-of service
- Drought rates added in 2015 for Stages 3 and 4

## Austin's Water Demand and Population



# WATER USE - GALLONS PER CAPITA PER DAY (GPCD)



# Questions?

How many bottles of water could you replace with just \$1.00 worth of Austin's drinking water?

*Answer: About 2,000!*

## **Drema Gross**

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