



# Water Conservation Program Orientation

## Resource Management Commission

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Conservation Program Coordinator

# Austin's Conservation Programs

- Started in early 1980s
- Expanded in mid-90s with focus on consumer incentives & household conservation
- 2006-2007 Task Force renewed interest
  - Reduce Peak Use by 1% year over 10 years (25 MGD)
- 2009 Resolution & Citizen Task Force
  - Reduce average use to 140 GPCD by 2020
- Delay LCRA payment trigger
  - Savings of \$10-15 million annually

# Consolidated Program Goals

- 2013 review and consolidation of various goals and recommendations from city council resolutions and conservation task forces
- Collaborated with RMC on three strategic goals:
  - Reduce average consumption to 140 GPCD by 2020
  - Reduce peaking factor to 1.5 by 2035
  - Delay raw water payment trigger as long as possible
- Captures three areas of conservation benefit – pumpage & treatment, future capacity, raw water supplies

# Austin Integrated Water Resource Planning Community Task Force

- Conservation Program Benchmarking
  - Being done by independent consultant; contract managed by Office of Sustainability
  - Compares AWU against “best of the best” for each program
  - Scheduled completion September 2015
- Conservation Program Analysis (CPA)
  - Part of IRWP consultant scope of work
  - RFP process and consultant selection expected over six months

# 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





# Program selection

- Supports conservation goals
- Acts as an incentive (vs. “free ridership”)
- Provides comparable benefit to rate payers
- Cost-effective
- May also consider
  - Data needs
  - Hard to penetrate market
  - Increase public awareness
- Exceeds code requirements
- Customer behavior/response



# Rebates & Services

- Incentive Programs

- Rainwater Harvesting
- Irrigation System Upgrades
- Landscape conversions
- Pressure Reduction
- Commercial Process Rebates
- Irrigation Evaluations

- Free Equipment

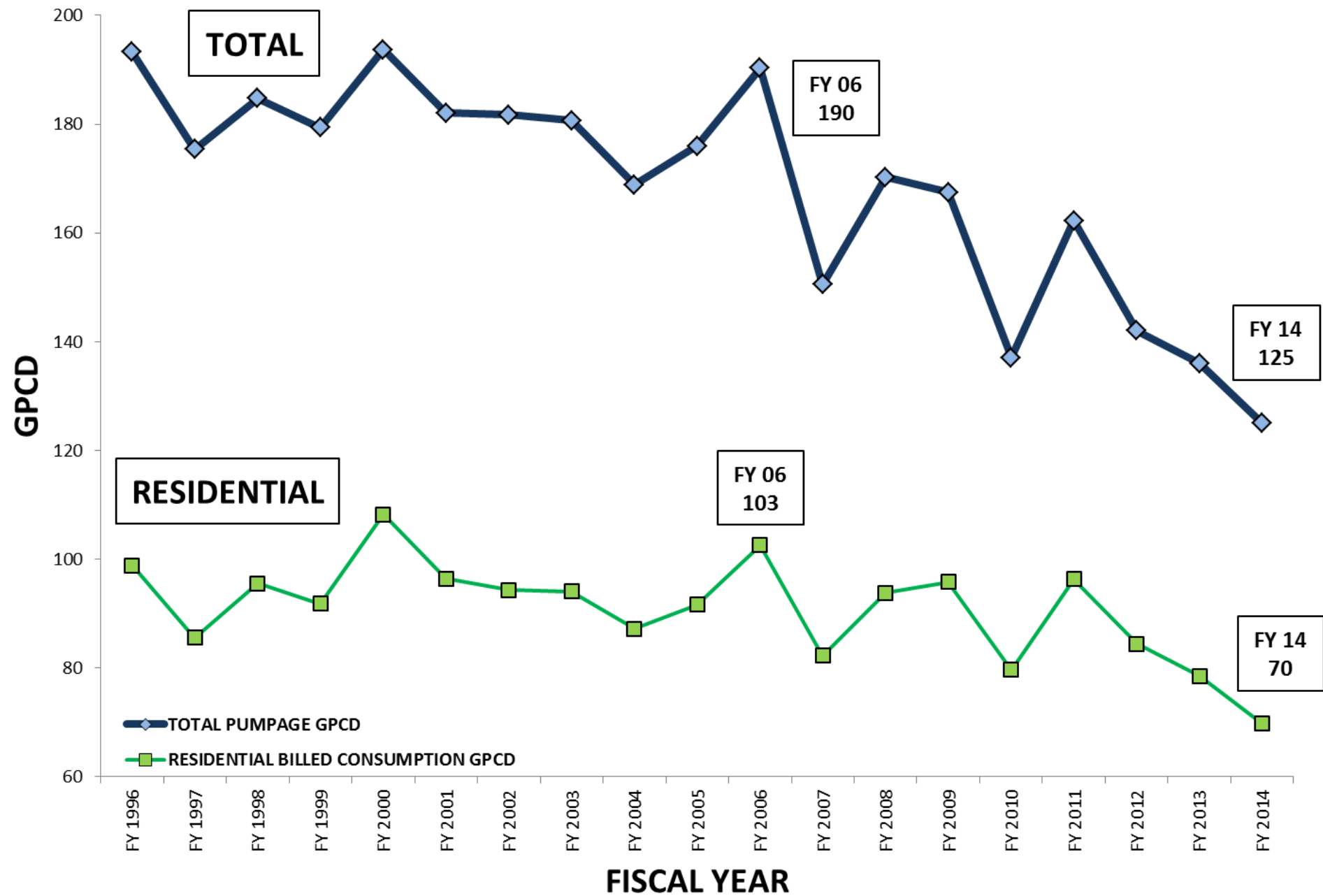
- Showerheads & Aerators, Tree Gators, Soil Moisture Meters
- Drought Toolkit

- Discontinued

- Toilets, clothes washers, hot water on demand, rain gauges, ICI/MF irrigation repairs

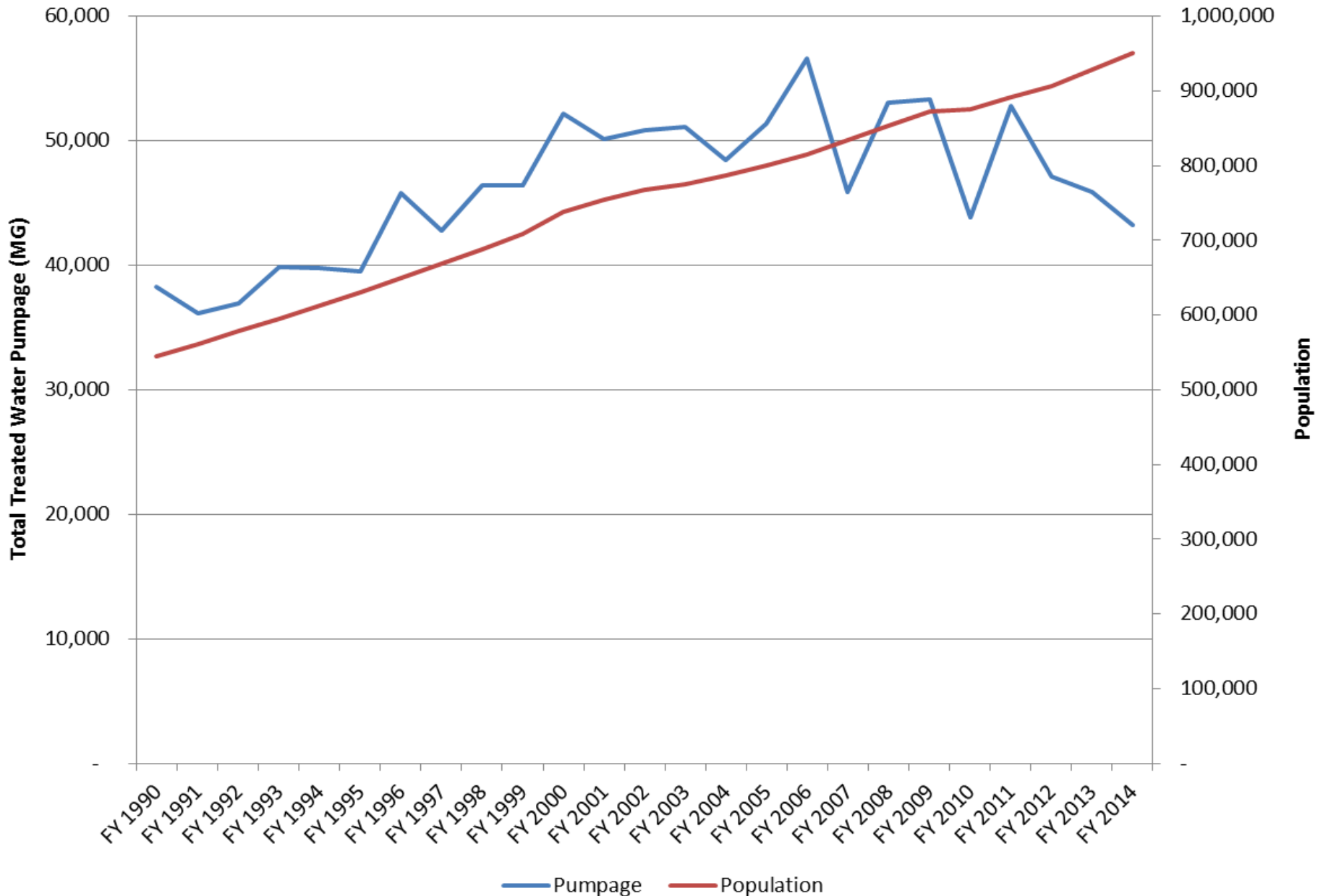


# WATER USE - GALLONS PER CAPITA PER DAY (GPCD)





# Austin's Water Demand and Population



# Public Education & Outreach

- Dropcountr home water use report
- Events/booths
- School presentations and mobile classrooms
- Technical workshops and e-newsletters
- Regional Networking
  - CTWEN, TAWWA, Region K, LCRA Firm Customers, LCRA Partnership Agreement, WCAC



# Water Loss Control: the “ILI”

- Infrastructure Loss Index - ratio of the annual real losses to unavoidable losses
  - Does not include “apparent” losses to meter malfunction or theft
- “Unavoidable” real losses
  - Lowest technically achievable real losses for an ideal system based on size and number of connections
- ILI of 3.0 and lower considered outstanding



# Reclaimed Master Plan

- 5.5 billion gallons per year
- 30-year \$200 million project
- 168 miles of pipelines;  
9-12 fill stations
- Price at 40% of treated water  
by 2018
- Mandatory hookup for new  
commercial development





# Enforcement

- Mandatory, year-round watering restrictions
- Water waste prohibited
- Additional restrictions triggered by supply or demand conditions
  - 1x week since 2012 due to drought
  - No home car washing, fountains
- Biennial irrigation system inspections for commercial/MF properties over 1 acre
- Car wash certification required
- Fines from \$50-\$500 per violation depending on Stage, repeat offenses





# FY2016 Proposed Budget

- \$4,332,589 total budget; 20 FTEs
  - \$360,000 Residential Programs
  - \$570,000 Commercial Programs
  - \$65,000 Multi-Family Programs
  - \$50,000 Municipal Programs
  - \$3,287,589 staffing and administration

# Rebate program history

Fiscal Year	Budgeted	% Spent
2016 (proposed)	\$1.045 M	N/A
2015	\$1.05 M	25.07 (to date)
2014	\$1.48 M	26.82
2013	\$2.19 M	17.35



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# Reclaimed Water Use



- **FY15 Thru April: 195.65 MG (72 customers)**
- **FY14: 1.09 BG (63 customers)**
- **FY13: 1.47 BG (59 customers)**
- **FY12: 1.52 BG (43 customers)**
- **FY11: 1.45 BG (40 customers)**
- **FY10: 1.09 BG (36 customers)**



# Reclaimed Projects To-date

- 51 miles of mains completed
- 3 of 12 bulk water stations operational
- Pumped 1.1 billion gallons in 2014
- Major customers include:
  - University of Texas at Austin,
  - BAE systems,
  - Austin Bergstrom International Airport and
  - PARD and several golf courses
- Capitol Complex transmission main near completion





# Austin is in Drought Response Stage 2

**STAGE**  
WATER  
CONSERVATION

**STAGE 1**  
WATER  
RESTRICTIONS

**STAGE 2**  
WATER  
RESTRICTIONS

**STAGE 3**  
WATER  
RESTRICTIONS

**STAGE 4**  
EMERGENCY  
RESPONSE


**NOW**

One Day Per Week

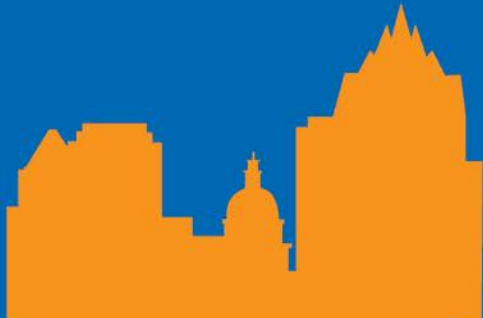
**Find your watering day at [WaterWiseAustin.org](http://WaterWiseAustin.org)**




# Stage 2



RESIDENTIAL	
Hose-End Sprinklers BEFORE 10 AM or AFTER 7 PM	Automatic Irrigation BEFORE 5 AM or AFTER 7 PM
Even Address Sunday	Even Address Thursday
Odd Address Saturday	Odd Address Wednesday



COMMERCIAL	
Hose-End Sprinklers BEFORE 10 AM or AFTER 7 PM	Automatic Irrigation BEFORE 5 AM or AFTER 7 PM
Even Address Tuesday	
Odd Address Friday	



PUBLIC SCHOOLS	
Hose-End Sprinklers BEFORE 10 AM or AFTER 7 PM	Automatic Irrigation BEFORE 5 AM or AFTER 7 PM
Monday	

# STAGE 2 WATER RESTRICTIONS

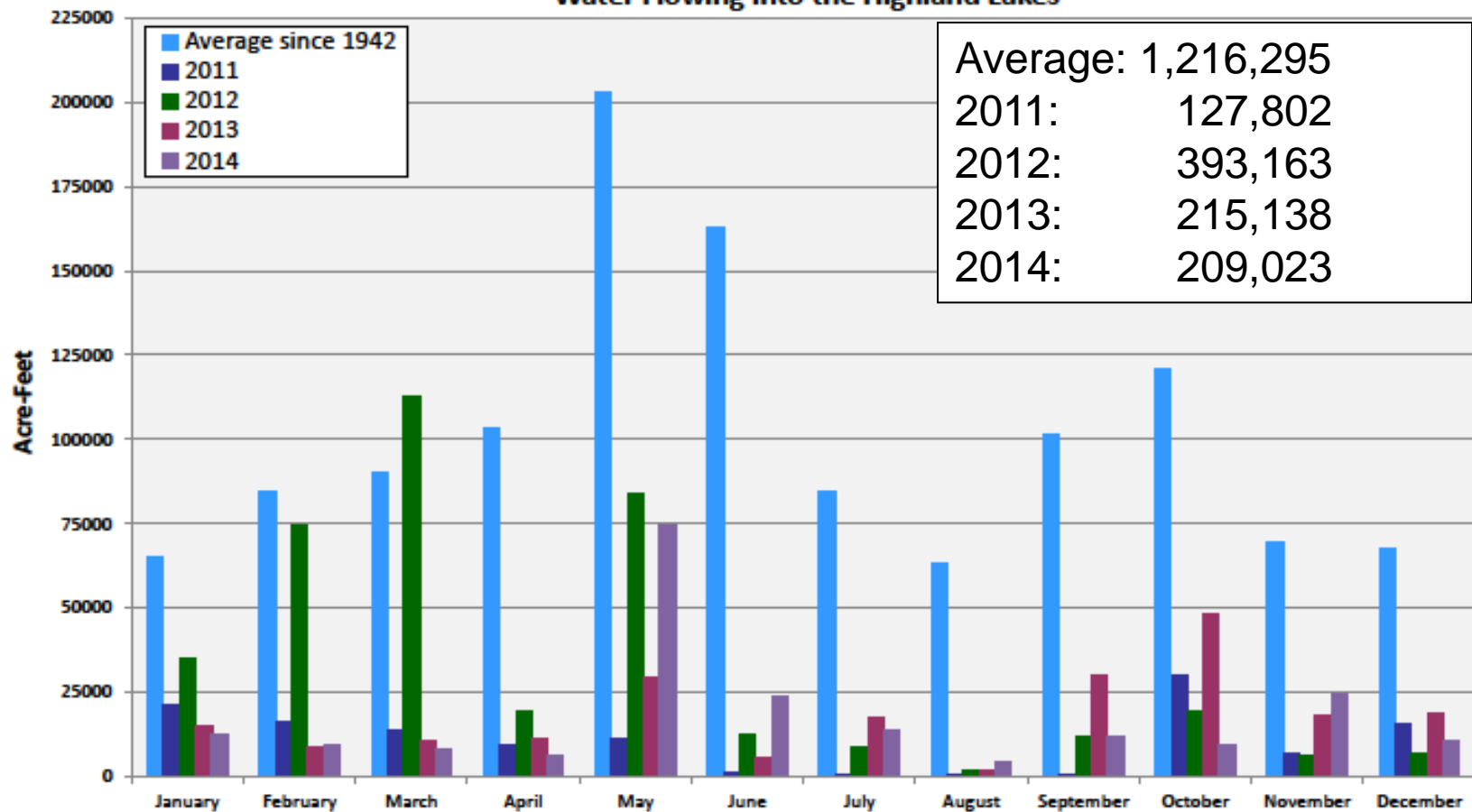
# Stage 2 remains in place



- Stage 2 in effect since 2011-2012
- City Manager's discretion to lift, on advice from Utility Director
- Factors:
  - Will we continue to see increased inflows?
  - TCEQ approval of LCRA's WMP
  - PUC September meeting



### Water Flowing into the Highland Lakes



Average: 1,216,295

2011: 127,802

2012: 393,163

2013: 215,138

2014: 209,023

\* Inflows: the estimated amount of water flowing into the Highland Lakes from rivers and streams. Data for 2014 is preliminary and subject to change.

Period totals: Jan-Dec  
(in acre-feet)

Jan-Dec Average:	1,216,295
Jan-Dec 2011:	127,802
Jan-Dec 2012:	393,163
Jan-Dec 2013:	215,138
Jan-Dec 2014:	209,023

## Cumulative Inflow to Lakes Buchanan and Travis

