



# Water Conservation Program FY15 4<sup>th</sup> Qtr Update

## Resource Management Commission

November 17, 2015

Mark Jordan

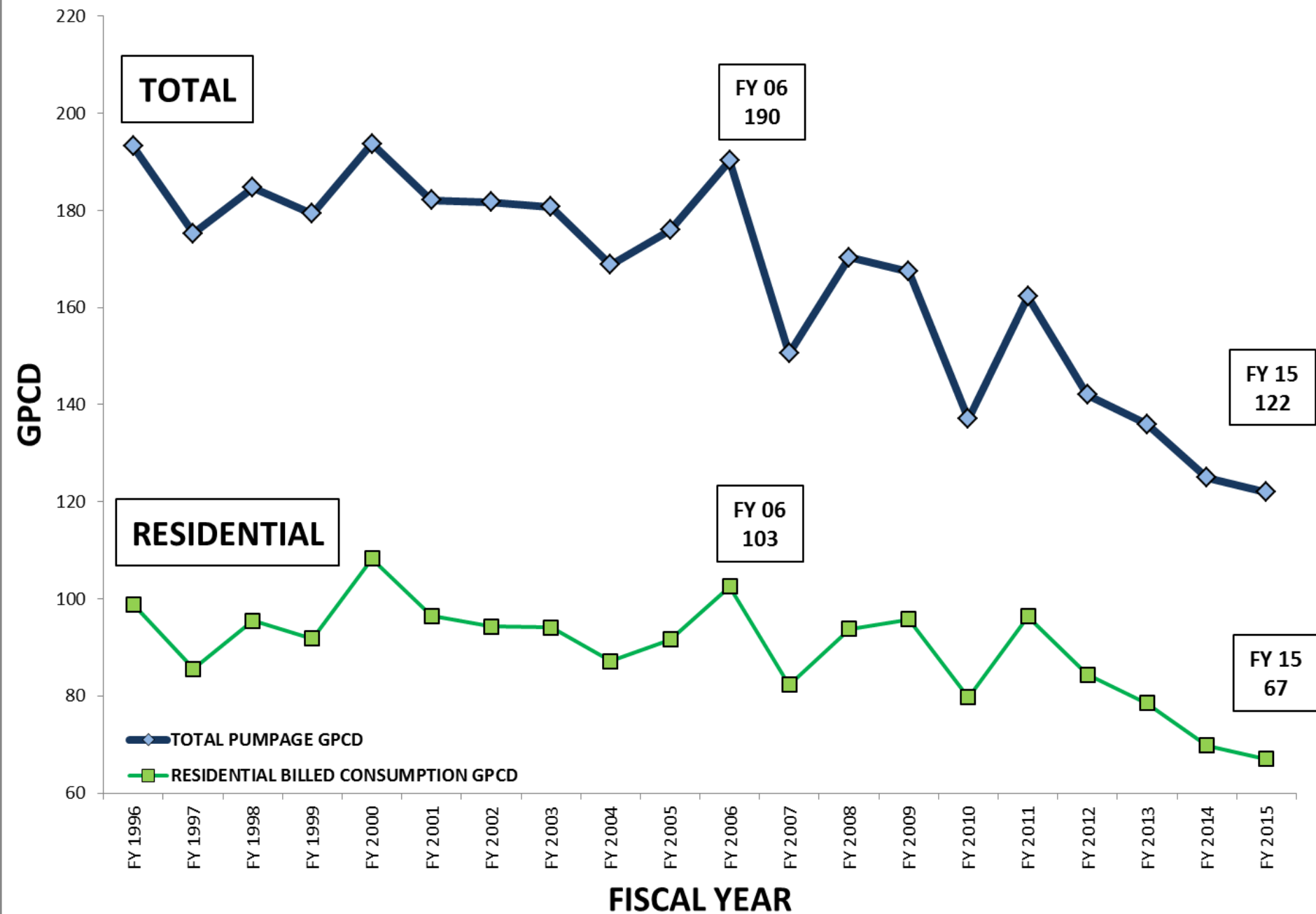
Conservation Program Coordinator

# 4th Qtr Highlights

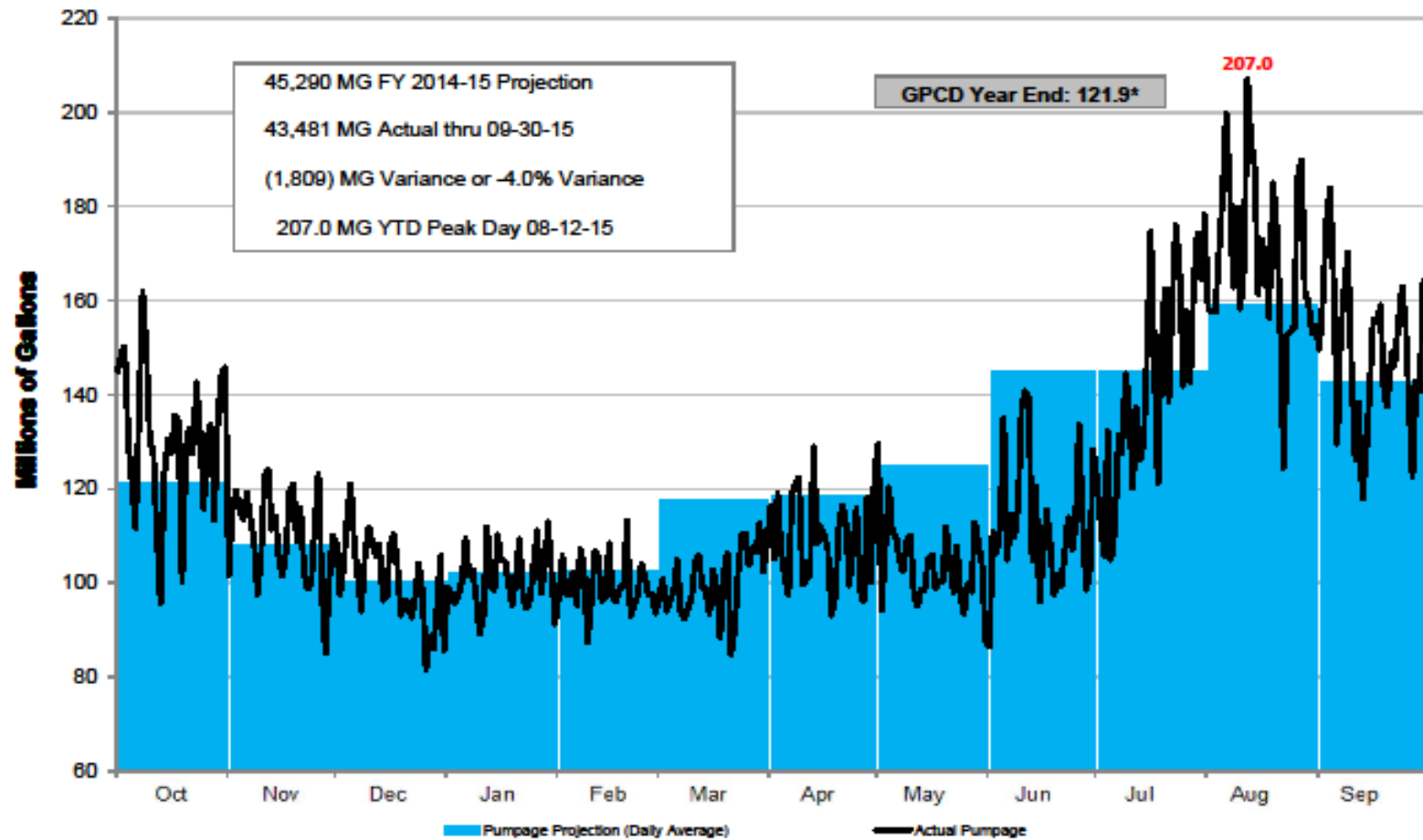
- Continued decline in per capita water use
- 8500 receiving Dropcountr reports
- Workshops with AHBA/LCRA on “Sensible Landscaping for Central Texas”
- Over 280 irrigation system audits done in response to high water bill calls
- Commercial conservation workshop
- 25 city facility audits completed



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



## FY 2014-15 Daily Pumpage Projections



\*Gallons Per Capita Per Day (GPCD) figure is based on projected retail and wholesale population data from Systems Planning, effective May 8, 2015.

# FY15 Incentive Program Activity

Program	Activity Level
Aerators/showerheads	Higher than projected
Rainwater harvesting	Higher than projected
PRV	On track
Commercial process	Lower than projected
Irrigation rebates	Lower than projected
Irrigation Audits	Lower than projected
Drought survival tools	Lower than projected
WaterWise Landscape	Lower than projected (MF)
Commercial audit	Lower than projected





# FY15 Conservation Outreach

(estimated persons reached)



- Events/Booths: 5,612
- Public Presentations: 3,372
- School Presentations: 17,043 students
- Regional Networking
  - CTWEN, TAWWA, Region K, LCRA Firm Customers, LCRA Partnership Agreement, WCAC

# Reclaimed Water Use



- **FY15: 1.23 BG (2.86%)(76 customers)**
- **FY14: 1.09 BG (2.92%)(63 customers)**
- **FY13: 1.47 BG (4.17%)(59 customers)**
- **FY12: 1.52 BG (3.96%)(43 customers)**
- **FY11: 1.45 BG (4.33%)(40 customers)**
- **FY10: 1.09 BG (2.8%)(36 customers)**

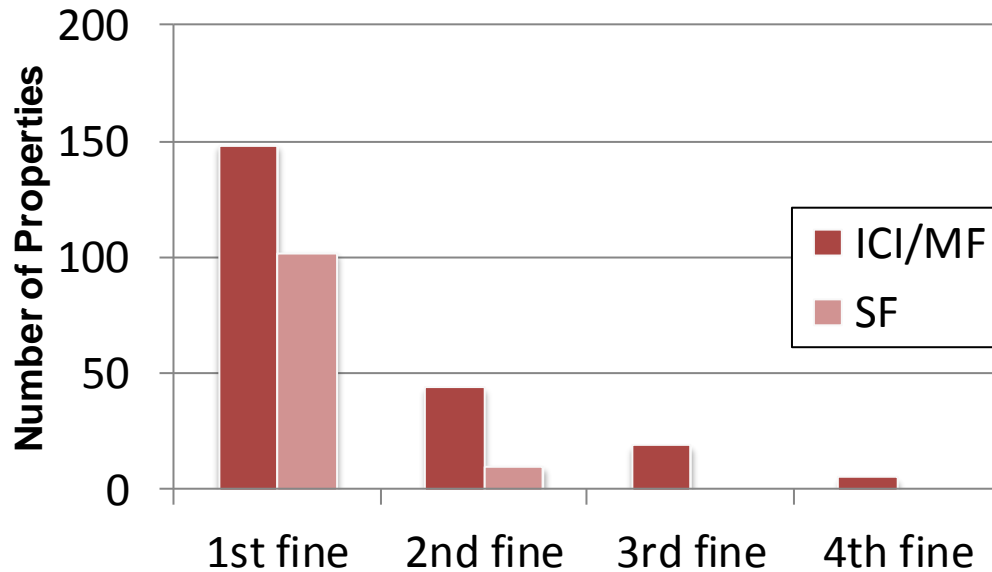
# FY15 Reclaimed Projects

- 51.2 miles of mains completed
- 3 bulk water stations operational
- Mandatory hookup implemented
- \$1.1M in revenues; \$4.3M costs
- FY15 charge: \$1.99/1,000 gal
- FY16 charges:
  - \$2.19/1,000 gal for non-mandatory connections
  - \$4.07/1,000 gal for mandatory connections





## FY13-14 Assessed Violations 10/1/13 – 9/30/14

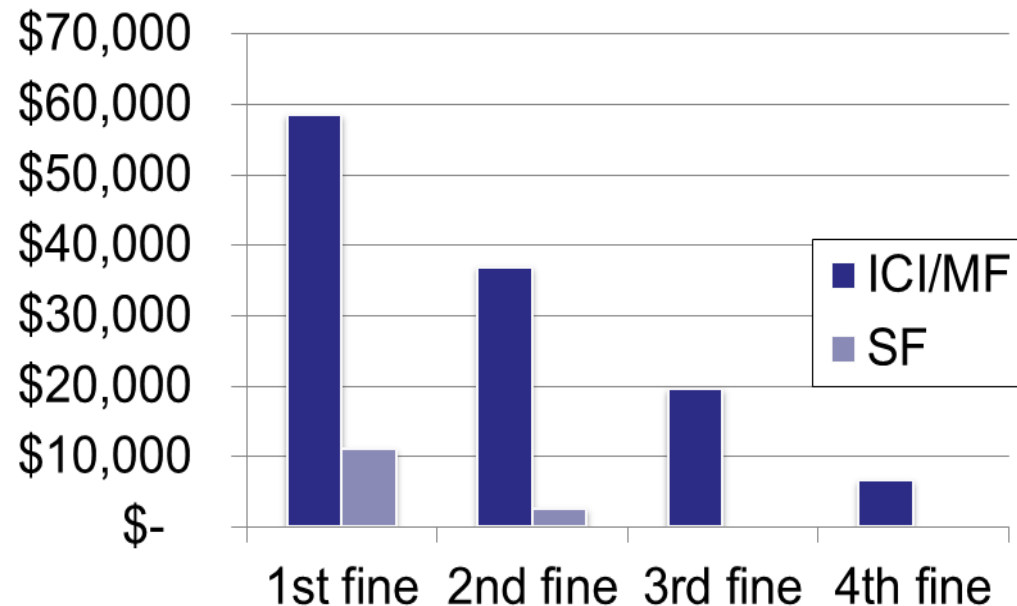


- 2036 warnings
- 328 properties fined
- 89 appeals filed
- 0 appeals overturned

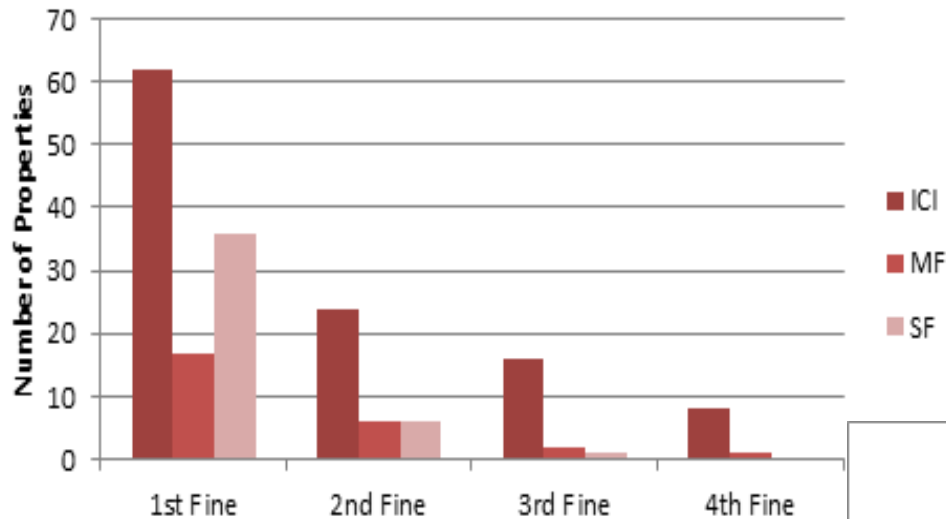


- Violations assessed only after a warning is issued
- Citizen reports generate a postcard alert
- Fines on water bills

## Fines Collected



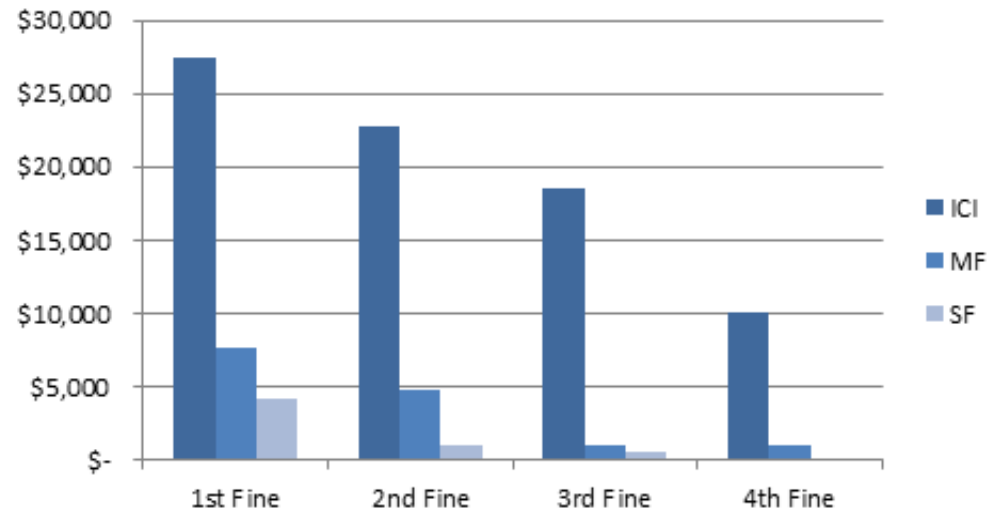
## FY 14-15 Assessed Violations 10/1/14 - 9/30/15



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

- 1264 warnings
- 145 properties fined
- 29 appeals filed
- 4 appeals overturned

## Fines Collected



# FY2016 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



# FY15 Program Budget Spending



Program	Budget	Spent	Remaining
Residential	\$360,000	\$278,121.42	\$81,878.58
Commercial	\$570,000	\$36,557.06	\$533,442.94
Multi-Family	\$70,000	\$825	\$69,175
Municipal	\$50,000	\$54,800	\$0
Total	\$1,050,000	\$370,303.48	\$684,496.52

# Budgeting Factors

- Goal: Sufficient to cover current and new programs throughout fiscal year
  - Past activity and trends; continuing drought
  - Maximum potential rebate amount for each program (e.g., \$100,000 Spansion)
  - New and discontinued programs
  - Marketing initiatives
  - Contingencies
  - AWU budget availability





# Spending challenges

- Rebate amounts that cover less than 50% of cost
- Rebate formulas other than flat amounts
- Inability to pay for code compliance
- Paperwork and processing times
- Customers more focused on reducing higher energy costs
- Customer cash flow and budget cycles



# Marketing strategies

- Add Customer Service Representative
- Enhance AWU web page
- Continue to partner with other successful web sites and publications
- Increase use of social media
- Increase advertising in trade publications
- Provide list of WaterWise businesses to event organizers, Austin Visitors Bureau, and Chamber of Commerce
- Increase use of customer surveys
- Interdepartmental focus on Hospitality Sector and District 2030
- Re-evaluate rebate amounts/formulas based on results of integrated water resources planning effort



# 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



# Water savings, cost/benefit analysis

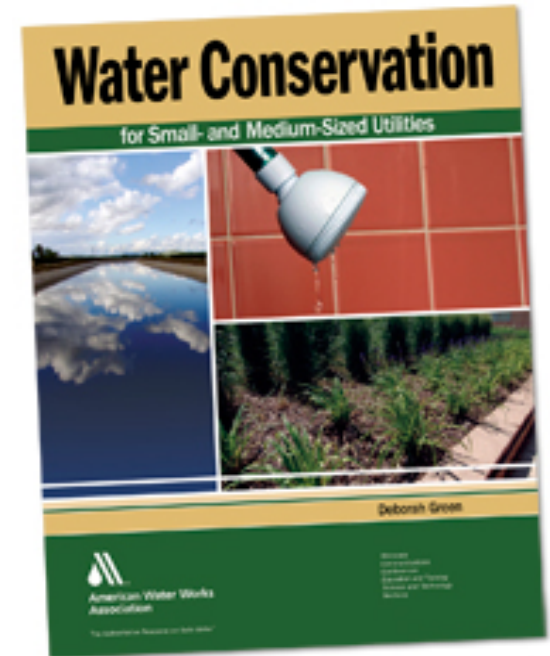
- **National and state conservation organizations**

- American Water Works Association
- EPA
- Alliance for Water Efficiency
- Water Conservation Advisory Council
- Sierra Club/NWF “Drop by Drop”
- TWDB guidance documents

- **Outside engineering consultant**

- **Staff studies based on local data**

- **Cost/benefit benchmarks for peak and average day water use reduction**





# Program Digest Example

<b>Unit:</b>	1 washer	1 washer
<b>Peak Savings:</b>	15 GPD	90 GPD
<b>Average Savings:</b>	15 GPD	90 GPD
<b>Est. Unit Costs:</b>	Variable - \$50(current) to \$100 (former) water rebate. Additional electric or gas rebates may apply	Variable - \$150 water rebate. Additional electric or gas rebates may apply
<b>\$/1000 gal saved over expected lifetime:</b>	\$1.46	\$0.55
<b>Assumptions:</b>	40 gal/load standard, 25/gal HE, 1 load per day	15 GP load, 6 loads/ day
<b>References:</b>	<a href="http://www.twdb.state.tx.us/conservation/municipal">http://www.twdb.state.tx.us/conservation/municipal</a> <a href="http://www.allianceforwaterefficiency.org/laundromats">http://www.allianceforwaterefficiency.org/laundromats</a>	

Confidence Level: 4

Clothes Washers & Commercial Laundry Facilities (Code)			
<b>Description:</b>	Provide financial incentives for HE washer replacements; require new models to meet higher federal efficiency standards		
<b>Start Date:</b>	SF: FY1997. MF: FY1999. ICI: FY2004	<b>End Date:</b>	SF: end of FY2012 (projected)
<b>Referenced in:</b>	2007 WCTF IN-6 (ICI); 140 Plan (SF/MF)		
	<b>Single-Family (includes MF residential)</b>	<b>Multifamily (common areas)</b>	<b>Commercial</b>
<b>Unit:</b>	1 washer	1 washer	1 washer
<b>Peak Savings:</b>	15 GPD	90 GPD	90 GPD
<b>Average Savings:</b>	15 GPD	90 GPD	90 GPD
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<b>Expected Life:</b>	10 years	<b>Marketing:</b>	Bill stuffers, newspaper ads, direct mail
<b>Staff Allocation:</b>	1.3 FTEs	<b>Cost Driver:</b>	Average cost of water
<b>Notes:</b>	15 GPD savings is conservative; TWDB BMPs estimate 41g/load conventional and 11-25g/load HE. Alliance for Water Efficiency recommends using 6 loads/day for commercial machines. Survey of Austin coin-operated Laundromats confirms 3-6 loads per day. 20% market penetration by year 2.		
<b>Review Frequency:</b>	4 years for ICI rebates		
<b>Last Revised:</b>	March 21, 2012		



# Tracking and Verification

Confidence Level	Description	Review Frequency (Based on currency and reliability of estimate, existing or planned study schedules, and contribution of measure towards meeting overall conservation goal)
1 Low	Rough estimate due to non-existent, outdated or conflicting sources.	1 year
2 Moderate Low	Estimate based on studies that do not address measure fully.	2 years
3 Moderate	Estimate based on national studies that may not reflect local or regional differences.	3 years
4 Moderate High	Estimate based on recent national or state studies which account for regional differences.	4 years
5 High	Estimate based on recent national, state, regional or local studies that match measure and takes into account any local or regional differences.	5 years

# Evaluating Customer Behavior, Motivation and Response



- Are low flow toilets being flushed twice?
- Are extra cycles being added for front loading washers?
- Are low flow showerheads or automatic hot water shut off valves resulting in longer showers?
- Do rainwater systems increase total water use, increase other program participation, or is size being driven by rebate amount?
- Were rebate participants going to take the desired action anyway?

# Looking Ahead

- December 2 public comment meeting on 1 X week watering
- Mandatory A/C condensate recovery and cooling tower efficiency standards

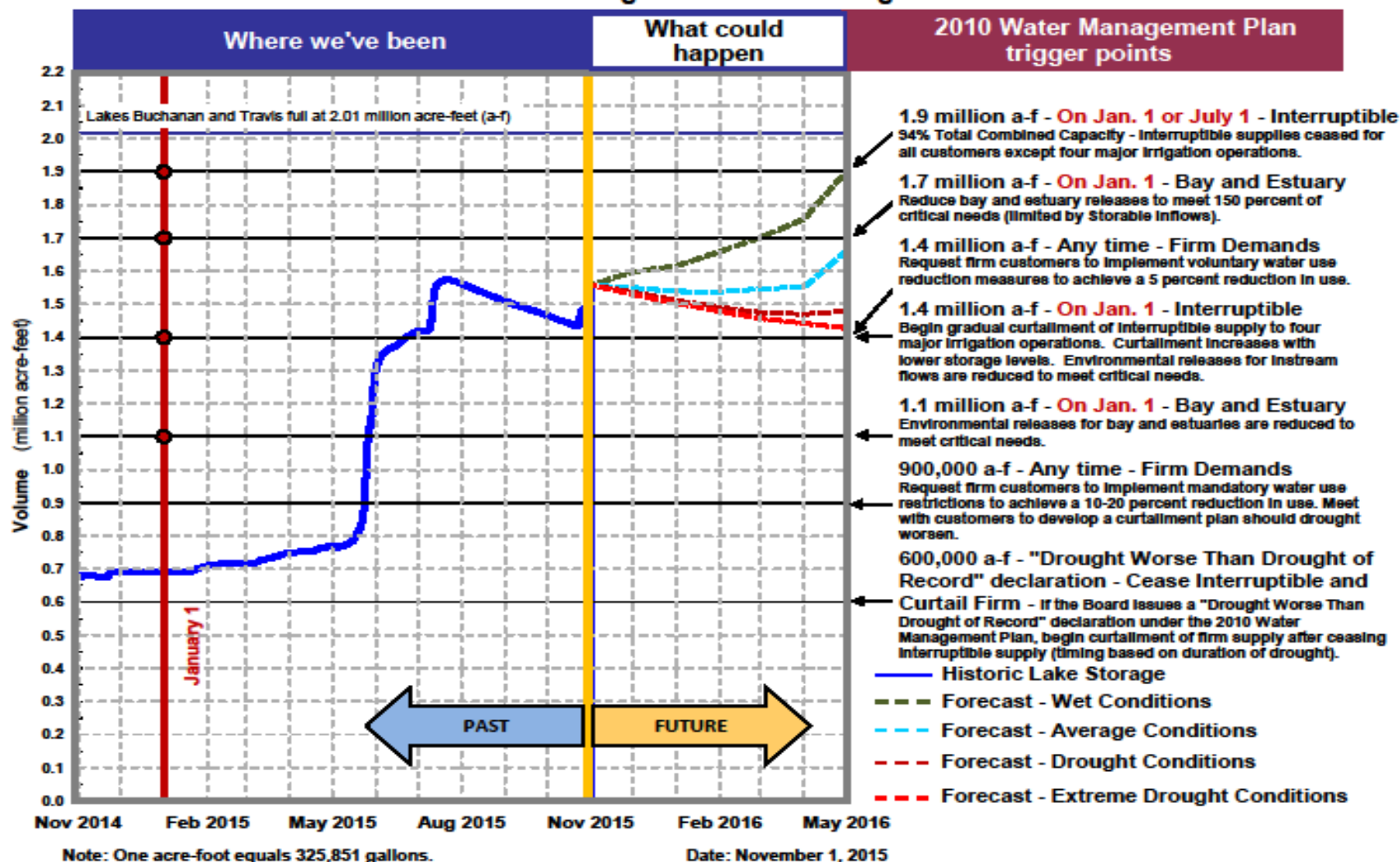


# LCRA Water Management Plan Update

- Revised WMP approved by TCEQ – November 4, 2015
- Updated hydrology through 2013
- Enhanced Firm Water Customer Protections:
  - Separate, later dates for determining water availability for 1<sup>st</sup> and 2<sup>nd</sup> crops
  - Elimination of “open supply”
  - “Interruptible” water curtailment more restrictive
    - Anytime cutoffs based on lake levels
    - Cutoffs tied to drought conditions, inflow patterns
- Earlier start to next revision process
  - Not later than January 1, 2018



## Highland Lakes Storage





# Austin Integrated Water Resources Community Planning Task Force

- Created by city council to provide input on implementation of 2014 Austin Water Resource Planning Task Force recommendations
- Alternative water supplies including, but not be limited to:
  - conservation, reuse, regional transmission systems and partnerships, groundwater, aquifer storage, other potential regional sources

# AWRPTF Recommendations

- Protect and optimize water from Colorado River Basin through conservation
- Focus on local opportunities for reusing rainwater capture & infiltration
- Initiate an integrated water resources plan to evaluate options for improving the reliability of our water supplies

# Conservation and Drought Management

- **Conservation Program Survey**
  - Submitted October 1 by independent consultant; contract managed by Office Sustainability
  - Compares AWU against “best of the for each program
- **Home water use report**
- **Stage 2 and 3 drought restrictions**
- **Code changes for new development**
- **Conservation Program Analysis (CPA)**
  - Part of IRWP consultant scope of work
  - RFP process and consultant selection expected over six months



# Conservation Program Survey

- Survey of 11 programs in US and Australia
  - Mature and successful conservation programs
  - Water efficiency leaders
  - Compiled savings goals, measures, budgets
  - Payment mechanisms & staffing
- Ways to support Austin customers
  - Innovative and new methods and strategies
  - Enhance water use efficiency
- Lessons learned from other programs

# Key Findings & Highlights



Program	Finding for Austin
Reclaimed Water	Lower percentage of recycled water meeting total demand
Conservation spending	Average budget, spends more per capita, higher staff levels
Water saving goals	Ranks high in achieving goals; review goals as part of IRP
Conservation measures/programs	Mature, comprehensive program
Program funding source	Funds through rates - similar to most surveyed.
Commercial programs	Continue and expand upon successes
Outdoor programs	Comprehensive program but rebates smaller, no coupons
Alternative water sources	Comprehensive programs including rainscapes. Graywater still in development similar to many others
Rebates and incentives	Regularly evaluates and modifies programs accordingly.
Leak management	ILI is good; should explore AMI
Building codes	Not in checklist format; does more enforcement than most
Communication	Expand use of social media, customer surveys; enhance web site;



# Ideas for Austin

- Pursue Advanced Metering Infrastructure
- Consider keeping permanent outdoor water restrictions 1x day week
- Encourage living buildings and advanced buildings with dual plumbing, onsite water treatment, etc.
- Increase customer engagement, 1-1, surveys, etc.
- Commercial: Improve marketing, expand outreach, use electronic forms to make process work to encourage more participation.
  - Continue fostering relationships w/businesses and publish case studies
  - Continue working w/semiconductors, Univ. Texas, and government buildings
- Create relationships beyond traditional energy, water, sewer. Expand outreach network to community groups and organizations.
- Large scale rainwater capture, commercial and residential

# Ideas for Austin (con't)

- Large scale rainwater capture, commercial and residential
- Increase recycled water (purple pipe) connections
- Increase marketing and engagement with largest water users.  
Conduct large projects with effective incentives and advancements, and save large amounts of water.
- Try coupon programs, such as car wash or purchasing efficient plants
- Advance use of alternative sources and on-site systems
- Add more photos to website and multimedia for customer appeal
- As part of the Integrated Planning process: review saving goals, funding and staffing levels, and consider alternative sources as part of the supply portfolio.



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