



Water Conservation Update

Resource Management Commission

February 16, 2021

City of Austin | Austin Water





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Goals, Strategies,
Metrics

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Research and Planning

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Customer Service

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Enforcement and
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What's Ahead

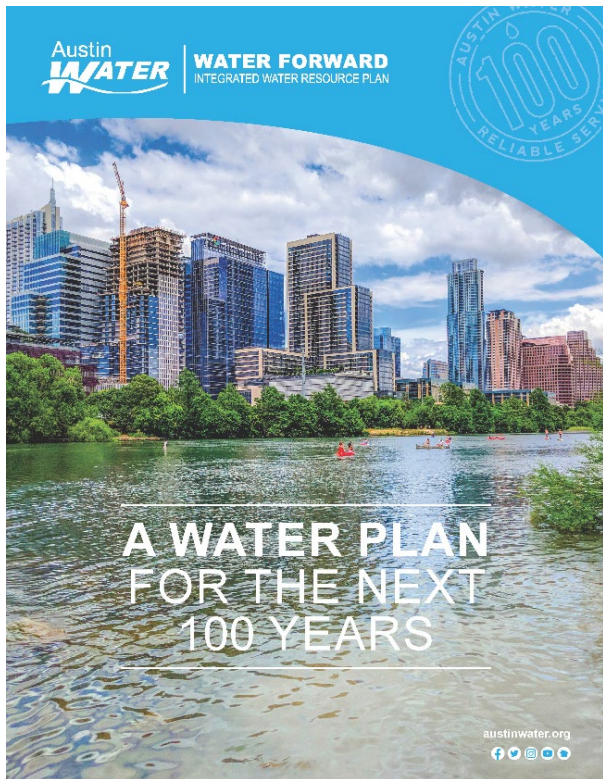
01



Goals, Strategies, & Metrics



GOALS

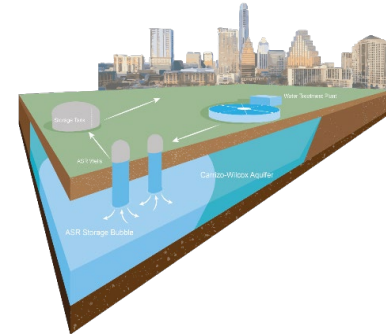
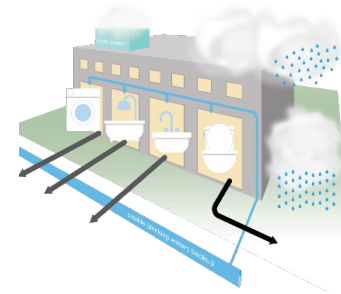
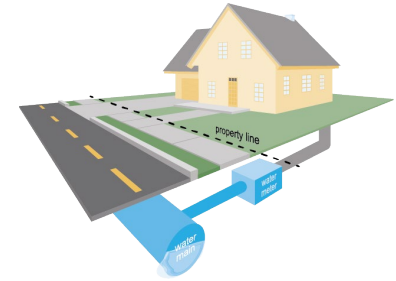
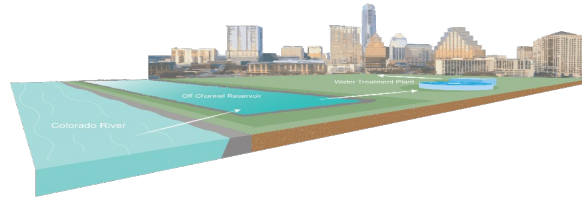


- Sustainable water use given limited available supplies and climate change impacts
- Defer, minimize additional treatment, distribution, infrastructure and transactional costs
- Delay, minimize increases in cost of service and rates
- Protect the environment by reducing river diversions and reducing runoff

STRATEGIES



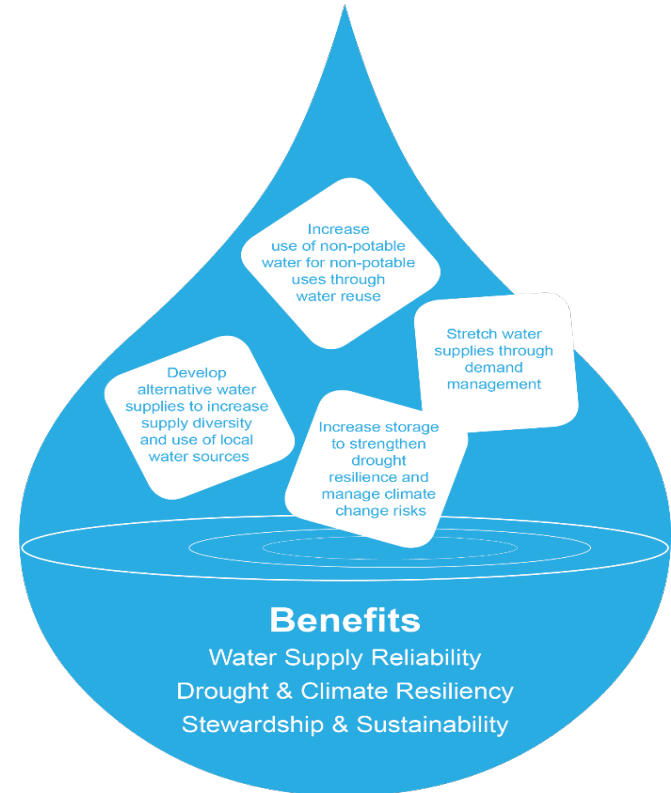
- Regulatory – codes, ordinances, rules and permitting
- Pricing signals using tiered rates
- Operational efficiency – the water/energy nexus
- System water loss control
- Reclaimed water use
- Reduced energy consumption that relies on cooling water
- Patrols to enforce water waste prohibitions and watering restrictions
- Reporting and inspection programs to enforce water efficiency standards and equipment requirements
- Public education and outreach
- Rebates, incentives and behavior modification tools



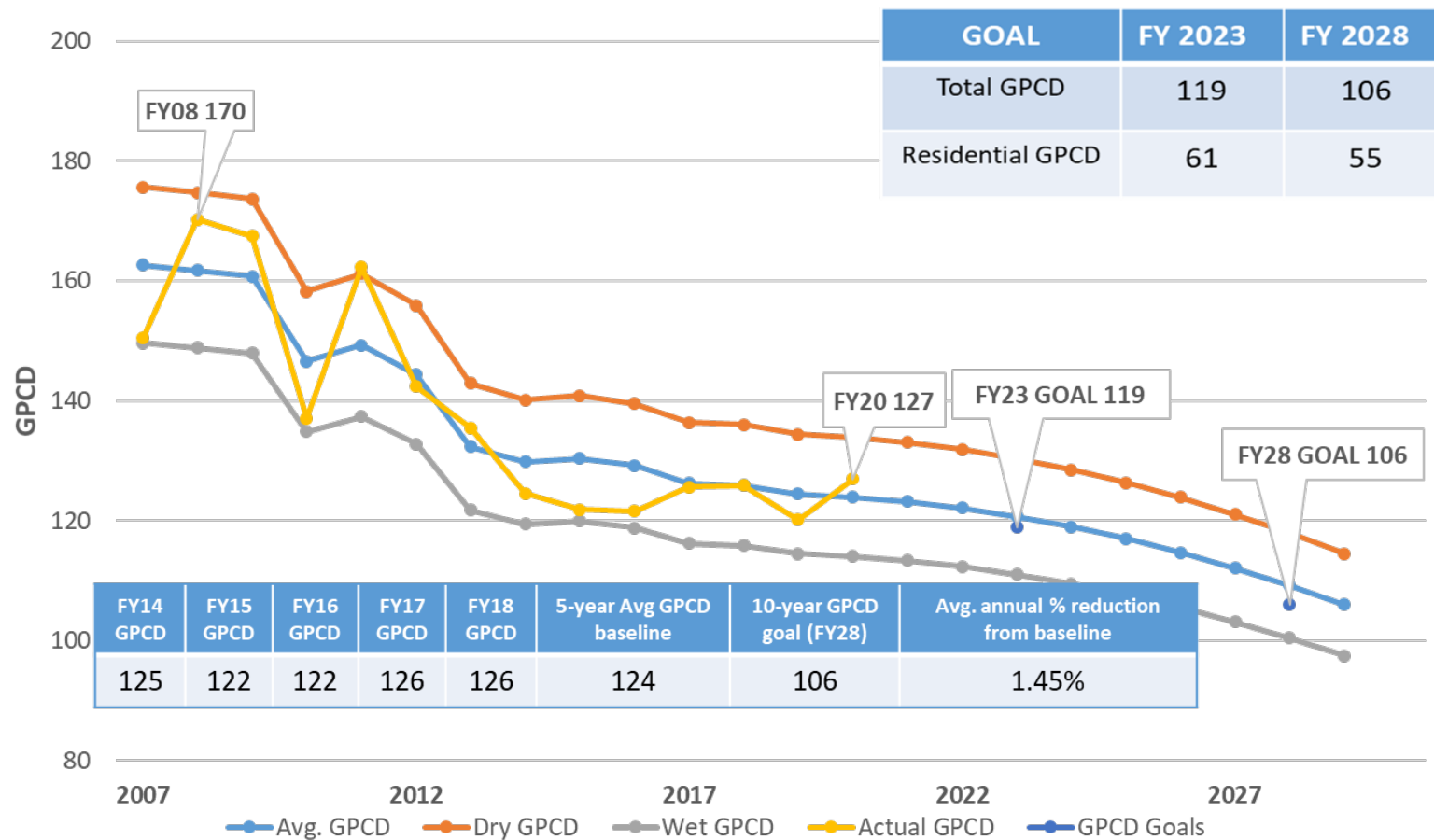


METRICS

- Total annual average gallons per capita per day (GPCD) on a 5-year rolling average
- Peak day demand – total GPD
- Total potable water offsets
- Total annual raw water divisions
- Delay in remaining payment to LCRA



Water Use - Gallons Per Capita Per Day (GPCD)



LOOKING FOR “BIG WATER” IN CONSERVATION

- Reduce system loss
- Increase reclaimed water use
- Increase alternative on -site water use
- Reduce outdoor water use: landscape transformation and limits on irrigation systems
- Reduce water consumption used for energy production



02

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Research and Planning



RESEARCH PLANNING AND ANALYSIS

- Develop short - and long -term goals
- Research potential strategies to meet goals
- Estimate water savings and perform cost/benefit analysis of potential strategies
- Review, revise or phase out programs
- Evaluate new and innovative technology
- Prepare and submit water conservation and drought contingency plans
- Maintain data integrity; create GIS layers



REPORTING

- TWDB, TCEQ, LCRA
- City council, RMC, WWW
- Water Forward Task Force



PROGRAM DIGEST EXAMPLE

Unit:	1 washer	1 washer
Peak Savings:	15 GPD	90 GPD
Average Savings:	15 GPD	90 GPD
Est. Unit Costs:	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
\$/1000 gal saved over expected lifetime:	\$1.46	\$0.55
Assumptions:	40 gal/load standard, 25/gal HE, 1 load per day	15 GP load, 6 loads/ day
References:	http://www.twdb.state.tx.us/conservation/municipal http://www.allianceforwaterefficiency.org/laundromats	

Clothes Washers & Commercial Laundry Facilities (Code)				Confidence Level: 4
Description:	Provide financial incentives for HE washer replacements; require new models to meet higher federal efficiency standards			
Start Date:	SF: FY1997. MF: FY1999. ICI: FY2004	End Date:	SF: end of FY2012 (projected)	
Referenced in:	2007 WCTF IN-6 (ICI); 140 Plan (SF/MF)			
	Single-Family (includes MF residential)	Multifamily (common areas)	Commercial	
Unit:	1 washer	1 washer	1 washer	
Peak Savings:	15 GPD	90 GPD	90 GPD	
Average Savings:	15 GPD	90 GPD	90 GPD	
Est. Unit Costs:	Variable - \$50(current) to \$100 (former) water rebate. Additional electric or gas rebates may apply	Variable - \$150 per water rebate. Additional electric or gas rebates may apply	Variable - \$150 per water rebate. Additional electric or gas rebates may apply	
\$/1000 gal saved over expected lifetime:	\$1.46	\$0.55	\$0.55	
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References:	http://www.twdb.state.tx.us/conservation/municipal/plans/doc/WCITFBMPGuide.pdf http://www.allianceforwaterefficiency.org/laundromats.aspx			
Expected Life:	10 years	Marketing:	Bill stuffers, newspaper ads, direct mail	
Staff Allocation:	1.3 FTEs	Cost Driver:	Average cost of water	
Notes:	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.			
Review Frequency:	4 years for ICI rebates			
Last Revised:	March 21, 2012			

03



Customer Service



CUSTOMER SERVICE TEAM

- Develops/implements new demand management strategies
- Administers over 20 rebate programs covering all water use sectors and end uses (most in division history)
- Conducts free irrigation audits for high water users and bill complaints
- Responds to customers calls, emails and requests for free high efficiency plumbing fixtures, materials and handbooks
- Administers partnership with Housing and Planning Department's G.O. Repair! program to fund plumbing repairs for low -income customers
- Provides pro -active, targeted public outreach and education
- Makes presentations to organizations and associations
- Conducts public and stakeholder input meetings



RESIDENTIAL REBATES

- Cartridge Pool Filter – up to \$250
- Home Water Use Monitoring Device – up to \$200
- Irrigation Upgrade – up to \$1,000
- Landscape Survival Tools – up to \$120
- Laundry to Landscape – up to \$150
- Pool Cover – up to \$200
- Pressure Regulating Valve – up to \$150
- Rainwater Harvesting – up to \$5,000
- Watering Timer – up to \$40
- Water Wise Landscape – up to \$1,750
- Water Wise Raincape – up to \$500



COMMERCIAL REBATES

(CII/Multifamily/School)

- Bucks for Business – up to \$100,000
- Alternative Onsite Water Systems, Reclaimed Water, Cooling Towers & Cooling Systems
- Commercial Kitchen - \$40
- Irrigation System Improvement
- Large new commercial alternative water system – total program \$1 Million
- Rainwater Harvesting – up to \$5,000
- Water Efficiency Audit – up to \$5,000
- Cartridge Pool Filter up to \$250
- Pressure Regulating Valve - \$750
- Waterwise Landscape - \$5,000
- WaterWise Rainscape – up to \$500





IRRIGATION AUDITS

- Austin Water Customer or qualifying water provider
- In ground sprinkler system
- Have used more than 25,000 gallons in one month or more than 20,000 gallons in two consecutive months;
- Have submitted your request not later than 60 days from the last day of the qualifying month(s); and
- Have not previously had a free evaluation system at your property.





OTHER CONSERVATION SERVICES

- Review, comment on wholesale contract conservation requirements
- Provide water conservation information to new customers in response to Service Extension Requests
- Review commercial irrigation meter waivers
- Work with PARD to identify, help fund and implement water efficiency and conservation measures at aquatic and recreational centers
- Work with WPD and Urban Patchwork through the Rain Catcher Program to incentivize rainwater collection and rain gardens to achieve water conservation and water quality goals



04



Enforcement & Compliance



ENFORCEMENT AND COMPLIANCE TEAM



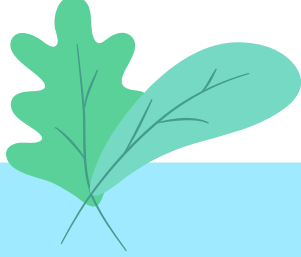
- Respond to customer calls and emails related to enforcement and compliance programs.
- Process reports of water waste received via Austin 311
- Conduct patrols for water waste/watering restrictions
- Administer Compliance Monitoring Programs
 - Car Wash Efficiency
 - Commercial Facility Irrigation Assessment
 - Cooling Tower Program

ENFORCEMENT AND COMPLIANCE TEAM

ENFORCEMENT & COMPLIANCE
PROGRAMS



- Patrols in marked vehicles
- Early Morning (3a – 8a) and Night (7p – midnight)
- City divided into zones and staff are assigned to weekly rotating zones
- Staff 1: zone 1,2,3 – Staff 2: zone 2, 3, 1
- Use IPads and GIS Collector app to collect information
- Document and process violations
- Investigate reports of water leaks
- Process water waste reports received via Austin 311
- Research Service Requests
- Issue “Alleged Violation” postcard aka friendly reminder not an NOV
- Adhere to Service Level Agreement for time to resolve SR



CAR WASH EFFICIENCY PROGRAM

- Annual program
- Inspection conducted by licensed plumber.
- Inspection must be within 90 days of due date
- Due dates via Six Zones
 - Zone 1 due January 31
 - Zone 2 due February 28
 - Zone 3 due March 31
 - Zone 4 due April 30
 - Zone 5 due November 30
 - Zone 6 due December 31



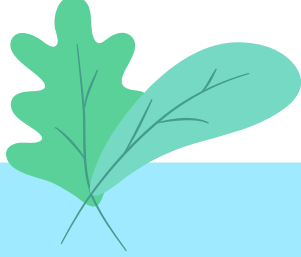


COMMERCIAL FACILITY IRRIGATION PROGRAM

- Assessments due every 2 years
- Commercial, multi-family, and COA properties larger than 1 acre
- Assessment must be conducted via AW Authorized inspector
 - Must have TCEQ Irrigation Inspector License
 - Must complete AW Irrigation Inspector training
- Due dates divided up by zip codes
 - Even addresses due on even years
 - Odd addresses due on odd years

COMPLIANCE MONITORING PR





COOLING TOWER EFFICIENCY PROG

- Registration
- New cooling towers must register prior to operation
- Annual Inspection
- Due by March 31
- Performed by an independent third -party Texas licensed mechanical or chemical engineer or a person holding a TDLR Texas Air Conditioning and Refrigeration License (Class A) with a combined endorsement for process cooling and refrigeration.
- Must be done with 90 days of due date



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What's Next in
FY2021

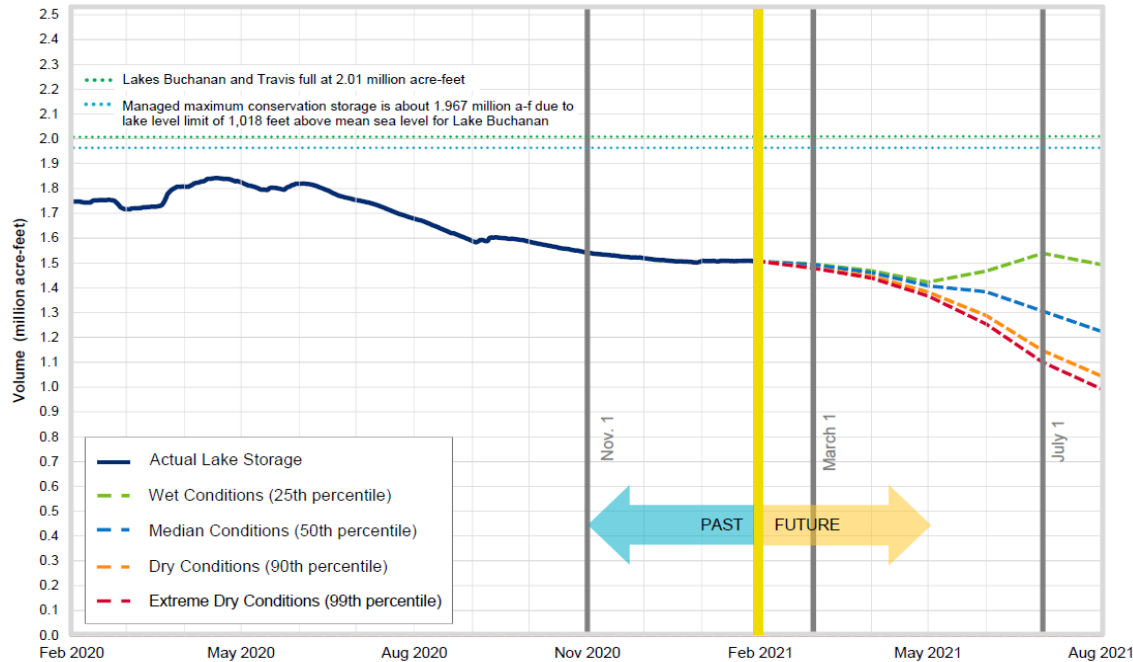


WHAT'S NEXT FOR FY 2021

- Welcome new Water Conservation Division Manager Kevin Kluge
- Implement new alternative onsite water system incentive for large new commercial and multi-family development
- Review and possibly revise Drought Contingency Plan
- Possible trigger of Stage 1 water use restrictions in late Spring 2021
- Seasonal water conservation campaigns
 - “Spring Tune-Up”
 - “Summer Savings”
- Adopt the 2021 Uniform Plumbing and Mechanical Codes with local amendments
- Review, update estimated savings and cost/benefit analysis of existing and proposed demand management strategies in 2018 Water Forward Plan
- Develop proposed landscape transformation and irrigation system ordinances



Lakes Buchanan and Travis Total Combined Storage Projections



Date: Feb. 1, 2021

Note: One acre-foot equals 325,851 gallons

[City of Austin Drought Contingency Plan Drought Response Stage Triggers:](#)

Conservation Stage:
Above 1.4 MAF

Stage I:
1.4 MAF

Stage II:
900,000 AF

Stage III:
600,000 AF

Emergency Response Stage IV:
Catastrophic event including prolonged drought

Highland Lakes Storage summary as of February 7, 2021

Combined lake storage: 1.501 million acre feet

Combined reservoir total: 75%



QUESTIONS?

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ALTERNATIVE WATER SOURCES

END USES

ROOF RUNOFF



BLACKWATER



GREYWATER



STORM WATER



COOLING
TOWERS



TOILET
FLUSHING



CLOTHES
WASHING



UNRESTRICTED
IRRIGATION

