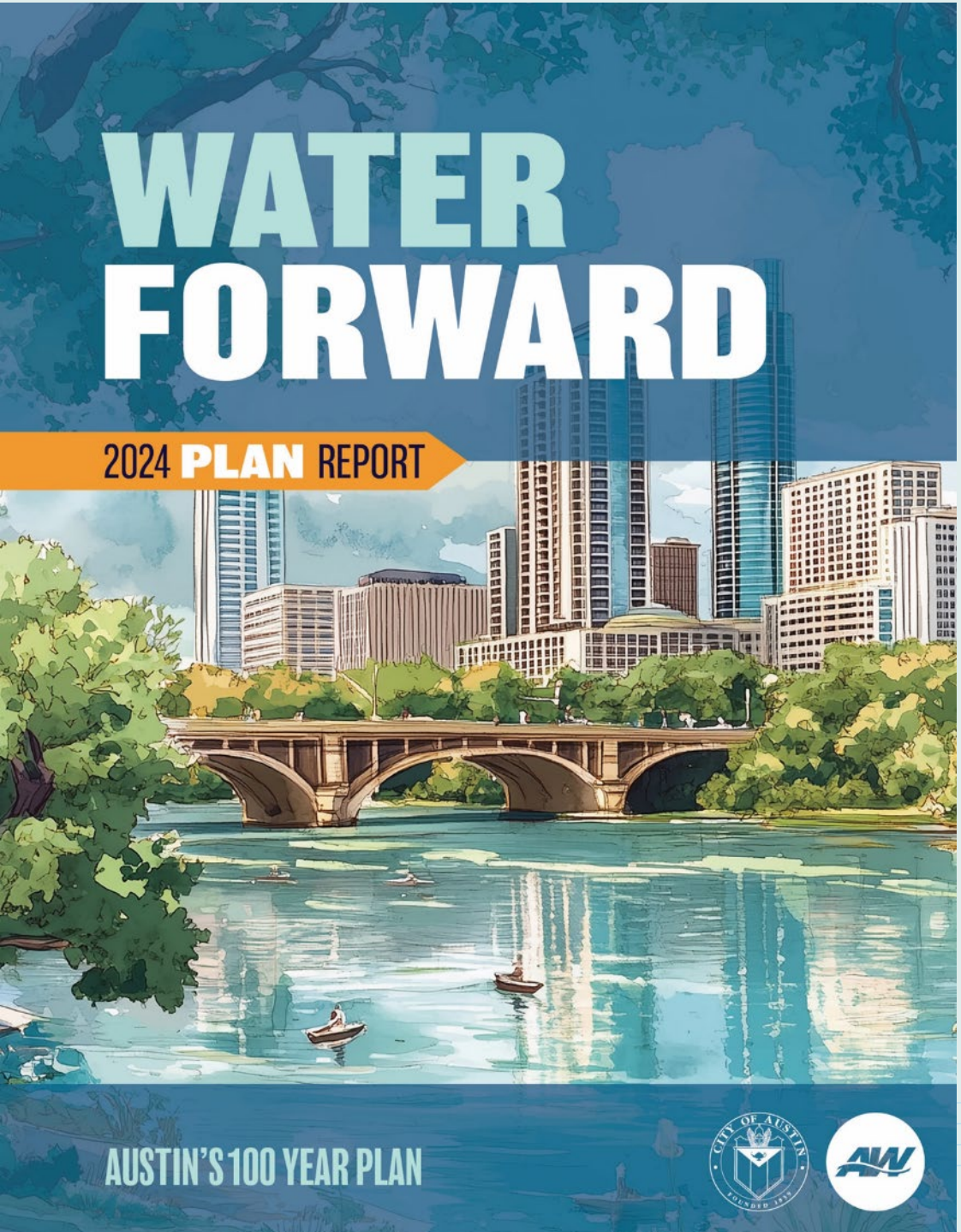


Water & Wastewater Commission

- Water Forward 2024
- Water Conservation Plan
- Drought Contingency Plan

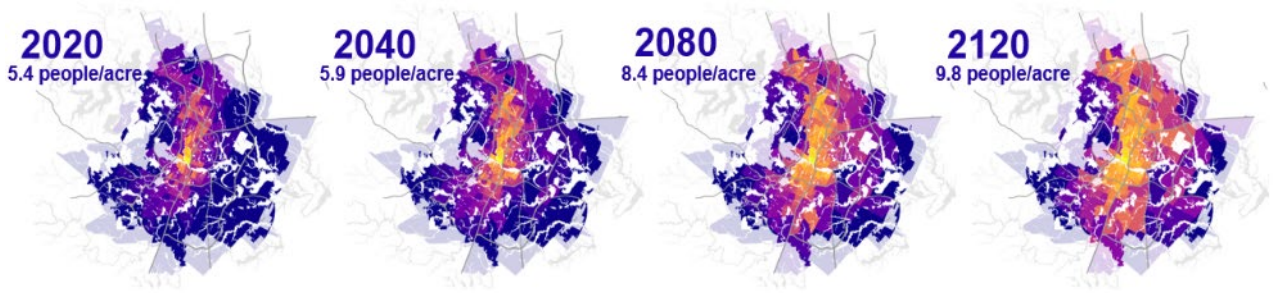
Shay Ralls Roalson, PE
November 13, 2024

Water Forward

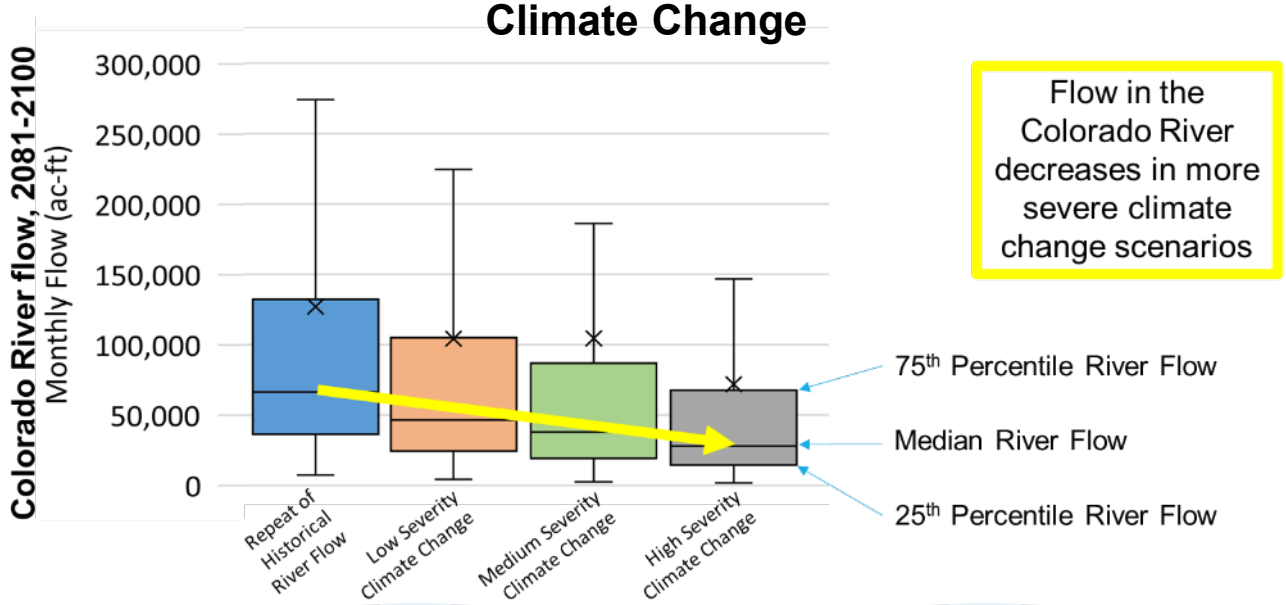
Water Forward is **Austin's 100-year integrated water resource plan,** unanimously adopted by Council in November 2018. Water Forward identifies diverse and environmentally-conscious water management strategies to **adapt to growth, drought, and climate change** and ensure a sustainable, resilient, equitable, and affordable water future for our community.

Planning for Uncertainty

Population Growth

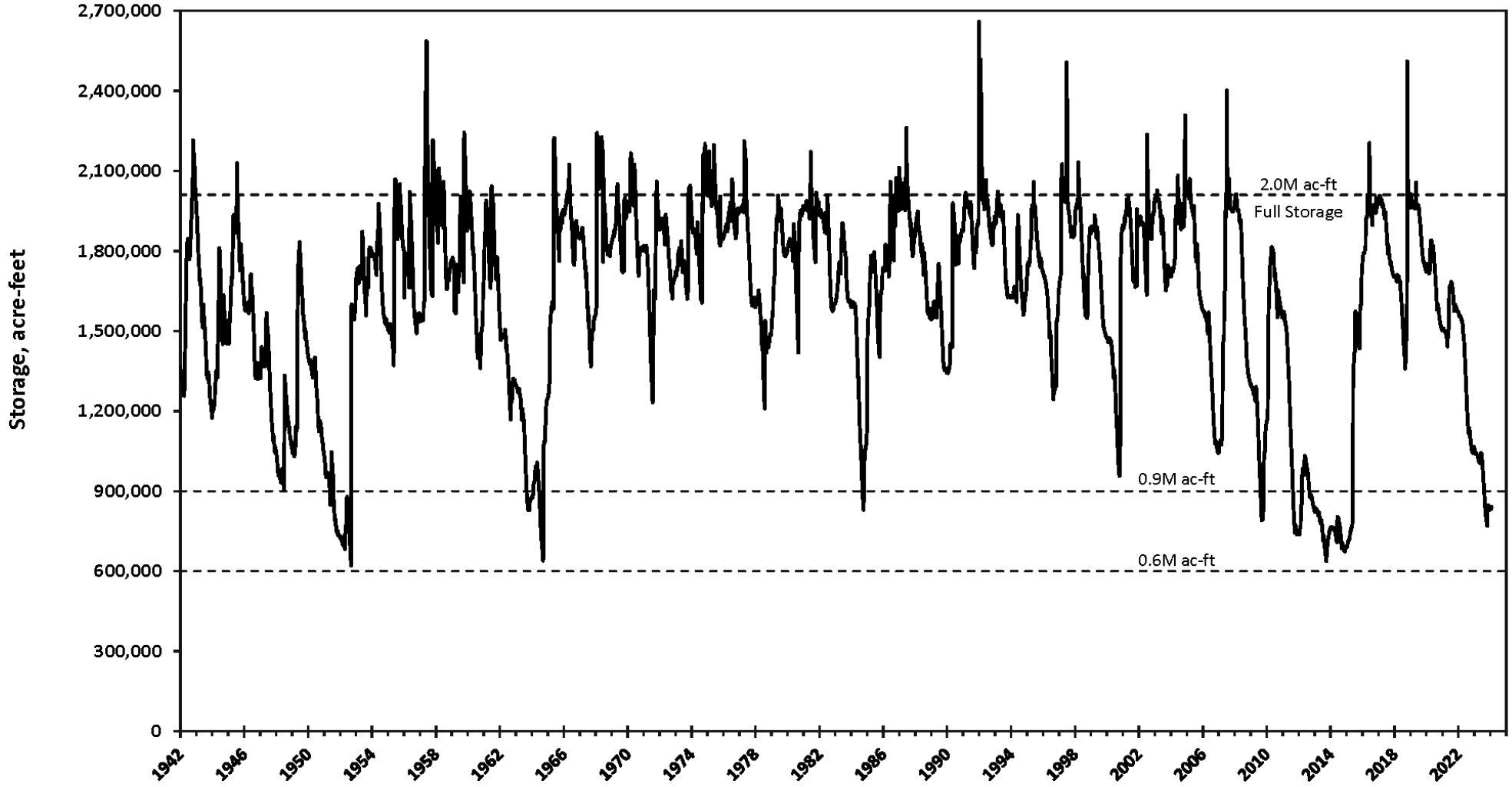


Climate Change



Flow in the Colorado River decreases in more severe climate change scenarios

Combined Storage
Lakes Buchanan and Travis



Adaptive Management Plan

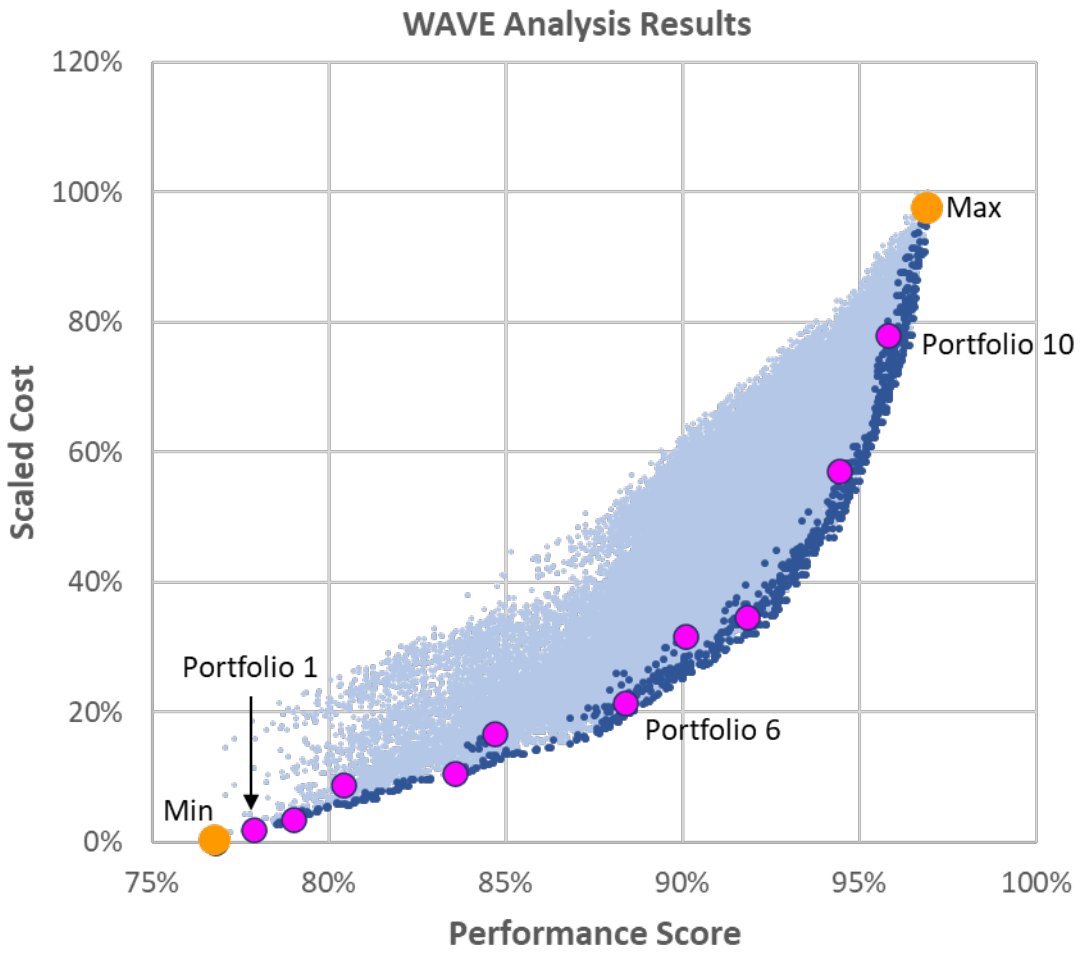
Conservation

Reuse

Supply

Partnerships

Portfolio Evaluation



		2080 Portfolios									
	Strategy	1	2	3	4	5	6	7	8	9	10
Conservation	Utility-Side Water Loss Control	x	x	x	x	x	x	x	x	x	x
	Customer-Side Water Use Management	x	x	x	x	x	x	x	x	x	x
	Native & Efficient Landscaping	x	x	x	x	x	x	x	x	x	x
Non-Potable Reuse	Centralized Reclaimed	x	x	x	x	x	x	x	x	x	x
	Decentralized Reclaimed	x	x	x	x	x	x	x	x	x	x
	Onsite Reuse	x	x	x	x	x	x	x	x	x	x
Potable Supplies – Water Supply Storage	Aquifer Storage and Recovery	x	x	x	x	x	x	x	x	x	x
	New Off Channel Reservoir							x	x		
	New Off Channel Reservoir with Reuse									x	
	Decker Lake Off Channel Reservoir	x	x		x	x	x				
Potable Supplies – Potable Reuse	Direct Potable Reuse					x		x		x	x
	Indirect Potable Reuse		x	x		x	x	x		x	x
Potable Supplies – Contracts	New Lower Colorado River Supply										
Potable Supplies – New Water Supplies	Brackish Groundwater Desalination				x	x	x	x	x	x	x
	Seawater Desalination										x
	Interbasin Transfer										x
	Conventional Groundwater								x	x	x

Candidate portfolio results • Optimal results for rel. res., and vul. ● Identified portfolios

Recommended Portfolio

Utility-Side Water Loss Control

- Production meter improvements
- Expanded active leak detection programs
- Additional analysis of smart meter data

Customer Side Water Use Management

- Expanded customer incentives for conservation
- Use of smart meter data for customer-side leak identification, education, and outreach
- Water use budgeting

Native & Efficient Landscapes

- New landscape ordinances & incentives
- Irrigation efficiency incentives
- Landscape conversion programs

Non-Potable Reuse

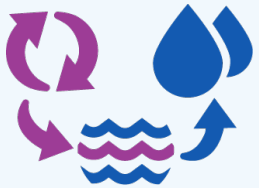
- Onsite Water Reuse Systems
- Decentralized Reclaimed
- Centralized Reclaimed

Water Supply Storage

Aquifer Storage and Recovery

Decker Lake Off Channel Reservoir

Potable Reuse



Indirect Potable Reuse

Strategies reliant on Colorado River and LCRA supplies

New Water Supplies

Brackish Groundwater Desalination

Water Forward Plan: Changes between 2018 and 2024

- Updated climate and hydrology
- Planning for uncertainty
- 100-year adaptive management pathways
- Equity and affordability roadmap
- Colorado River Land Analysis for water quality protection
- Expanded water conservation and water loss control
- Future use of Lake Walter E. Long for off-channel storage

Conservation and Drought Planning

Water Conservation Plan (WCP)

- Plan for all weather conditions
- Describes
  - Utility and water use information
  - Conservation (rebates, education, enforcement)
  - Water loss reduction
  - Reuse activities
- Includes water consumption and water loss goals

Drought Contingency Plan (DCP)

- Focuses on drought conditions
- Describes
  - Drought Stages
  - Drought Triggers (demand and supply)
  - Drought Actions & Restrictions
- Must be consistent with the LCRA DCP
- Requires Chapter 6-4 changes

Water Conservation Plan: Changes between 2019 and 2024

- Update and expand descriptions and metrics of current conservation activities
- Updated water use goals based on ‘bottom-up’ estimate of potential savings
- **Proposed new or expanded activities to meet goals:**
  - Single-family landscape transformation
  - Commercial conservation incentives
  - Water loss activities and the reclaimed system
  - Completion and utilization of the My ATX Water smart meter system
  - Public outreach and marketing

Water Conservation Plan: Additions since May

- **Drip irrigation restrictions in Conservation Stage**
- **GoPurple program**
  - reclaimed and onsite reuse requirements and incentives
- **Water loss mitigation** – external report recommendations
- **Discussion of 2019 Plan goals and outcomes**
- **Integrate future activities with Water Forward and include milestones and anticipated yields**
- **Add to the previous activities:**
  - Specific water loss activities
  - Expanded My ATX Water engagement
  - Water use benchmarking & budgeting
- **Quarterly and annual reporting**
- **Revised water use goals**

Amended GPCD Water Use Goals

2019 Plan	Baseline	2024 Goal	2029 Goal
Total GPCD	126	119	106
Residential GPCD	65	61	55

2024 Plan (May 2)	Baseline	2029 Goal	2034 Goal
Total GPCD	127	123	116
Residential GPCD	64	62	58

2024 Plan (Nov 21)	Baseline	2029 Goal	2034 Goal
Total GPCD	127	121	114
Residential GPCD	64	60	56

Drought Contingency Plan: Changes between 2016 and 2024

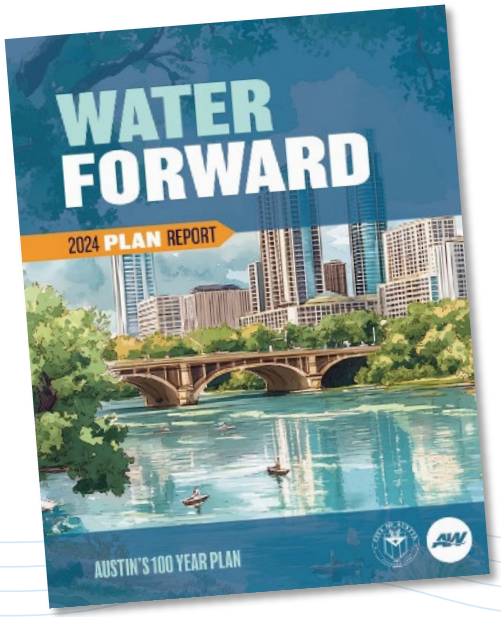
- **Stage 1** – 1.4 million acre feet (LCRA moved to 1.1)
- **Stage 2** – 900,000 acre feet + inflow trigger (LCRA)
- **Stage 3** – 750,000 acre feet added (LCRA)
  - Athletic field exemption replaced by a variance
  - No warnings for watering violations, but dismissal of penalty after completing an online irrigation conservation course
- **Stage 4** – 600,000 acre feet
  - No irrigation of nonfunctional turf (LCRA)
  - Temporary moratorium on permits for irrigation systems and single-family pool permits
- **All Stages** – identify discretionary measures to save water: expanded outreach and enforcement, additional incentives, drought surcharge, etc.

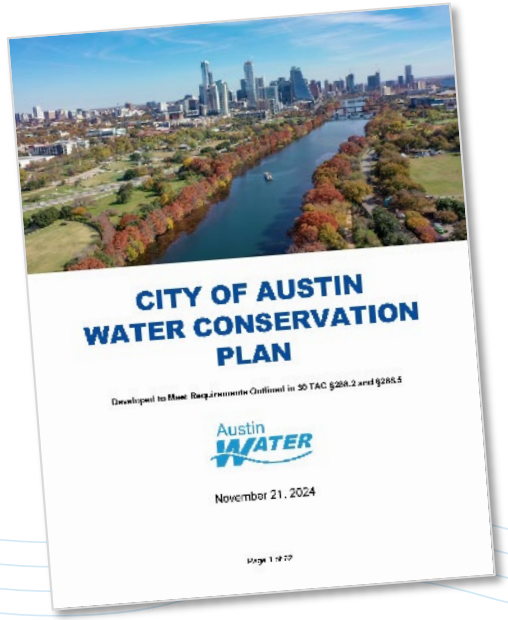
Drought Contingency Plan: Additions since May

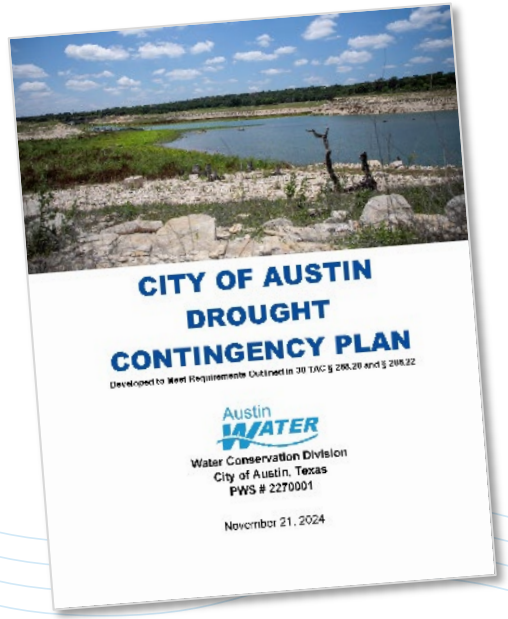
- **Add drip irrigation restrictions**
  - Currently no restrictions
- **Proposed restrictions:**
  - Conservation Stage,
    Stages 1 and 2: 2 days per week
  - Stages 3 and 4: 1 day per week
- **Discussions with landscaping and irrigation stakeholders**
- **Exemptions for trees and gardens**

Water Forward Task Force Recommendation

- Recommended **2024 Water Forward Plan**
- Recommended updated **2024 Water Conservation Plan**
- Recommended updated **2024 Drought Contingency Plan**







Questions?