Austin City Code, Chapter 6-4 Water Conservation

Code Revisions and Variances

Grow Green Professional Training Series 01/23/13

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Need for Code Revisions

- **2011 Drought highlighted the Code's impacts on both economic and environmental investments of Austin Water Utility commercial and residential customers**
- **AWU realized current Stage 3 regulations were not written for long-term, severe drought.**
- Needed to implement mandatory irrigation evaluations as recommended by Council
- Needed to switch to administrative enforcement of water use regulations
- Needed to correct conflicts with other City Codes
- Needed to update the Drought Contingency Plan for Texas Commission on Environmental Quality

Code Revision Process - What We Heard…

Support for…

Stronger restrictions in normal / early drought

- Enabling efficient irrigation of trees and vegetable gardens
- Protecting business interests in drought conditions
  - Requiring year round certification of efficient car washing equipment
  - Requiring irrigation audits for certain commercial properties
  - Allowing cosmetic power washing to operate longer
- Enforcement of water use regulations through water bill fines

	Conservation	Stage 1	Stage 2	Stage 3	Stage 4
Storage:	Above 1.4 MAF	<= 1.4 MAF	900,000 AF	600,000 AF	Emergency
rrigation	2x/wk (30 hrs total) No midday watering (except by hand)	2x/wk (20 hrs total) No midday watering (except by hand)	1x/wk (10 hrs total) No midday watering (except by hand)	1x/wk (6 hrs) No midday watering May require wholesale curtailment	May further restrict outdoor irrigation
Exemptions	Drip irrig , tree watering & veg garden irrig with drip, bubble, soaker exempt				
Restaurants	Water on request				
	Commercial patio misters 4p-midnight			Comm patio misters 4-8pm	Comm patio misters prohibited
Car Washing	Comm washes must meet efficiency standards	Home car wash on designated day	Home & charity car washes prohibited		All car washing prohibited
Recreational Water Use	Fountains must recirculate			Orn. fountains, splash pads & spas prohibited	No filling of pools or ponds; no outdoor recreational use
Pressure Washing	Commercial pressure washing must recycle			Comm. & private power washers must recycle	All cosmetic power washing prohibited
Commercial Plant Nursery	Exempted				

Article II, Water Use Management

Exemptions:

- [redacted]

Article II, Water Use Management

Exemptions:

- Water use nec[redacted] to comply with federal, s[redacted]opment permits [redacted] including…m[redacted]restrictions or requirements [redacted]

Article II, Water Use Management

Exemptions:

- Drip irrigation [redacted]
- [redacted]
- [redacted]
- [redacted]

Article II, Water Use Management

[redacted]

Article II, Water Use Management

[redacted]

Watering Window (Times)

- Conservation Stage (30 hours weekly)
  - Hose-end and Automatic
  - Midnight-10:00 a.m. AND 7:00 p.m.- Midnight
- Stage 1 (20 hours weekly)
  - Hose-end Midnight -10:00 a.m. AND 7:00 p.m.- Midnight
  - Automatic Midnight – 5:00 a.m. and 7:00 p.m. – Midnight
- Stage 2 (10 hours weekly)
  - Hose-end Midnight -10:00 a.m. AND 7:00 p.m.- Midnight
  - Automatic Midnight - 5:00 a.m. AND 7:00 p.m.-10:00 p.m.
- Stage 3 (6 hours weekly)
  - Hose-end 7:00 a.m. - 10:00 a.m. AND 7:00 p.m.- 10:00 p.m.
  - Automatic Midnight – 6:00 a.m.

New 1 Day/ Week Schedule
(Modified to minimize system impacts and control peak day)

Applied during Stages 2 and 3:

- Sunday — Residential Hose-End Sprinkler Systems – Even numbered addresses
- Monday — Public schools and UT
- Tuesday — Multi-family/Comm - Odd numbered addresses
- Wednesday — Residential Automatic Sprinkler System - Odd numbered addresses
- Thursday — Residential Automatic Sprinkler System – Even numbered addresses
- Friday — Multi-family/Comm - Even numbered addresses
- Saturday — Residential Hose-End Sprinkler Systems - Odd numbered addresses

Article II, Water Use Management

Variances

- Given where there is a threat to health, safety or sanitation
- Given where there is a threat to the applicant's primary source of income
- Must comply with the prohibition on water waste

Conservation Stage → **Drought Response Stage 3**

- Watering day variance for large properties
- [redacted], to avoid or mitigate a significant adverse impact on an endangered or listed protected plant, animal, or aquatic species or critical environmental feature present on the property or to maintain the traditional and natural character of a critical environmental feature.
- Tree disease treatment or pest control prescribed by licensed professional

Article II, Water Use Management

Variances

- **Conservation Stage** → **Drought Response Stage 1**
  - Newly installed landscaping; irrigation on a diminishing 30-day schedule (no extensions)

- **Conservation Stage** → **Drought Response Stage 3**
  - Newly installed Xeriscaping 40-day diminishing schedule (possible 40-day extension)

’ and ‘New
ed vegetation will
ated watering days

[redacted]

gnated as ‘low’’ and

- [redacted] *r commercial facility;*
- [redacted] *rovement project;*
- [redacted] *; or*
- [redacted] *n existing landscape.*

Xeriscaping Variance Irrigation Schedule

Irrigation for establishment of Xeriscaping must comply with the following:

- for the first 10 days following installation, irrigation is permitted daily before 10:00 a.m. and after 7:00 p.m.; and
- for the 11th through the 40th day following installation, irrigation is permitted twice per week before 10:00 a.m. and after 7:00 p.m.; and
- if the landscape installation is required in order to obtain a certificate of occupancy for a newly constructed single family home, the applicant shall provide a completed notice of irrigation variance to the director on the form provided by Austin Water at least one full business day before the landscape is installed.
- A one-time extension of the approved variance may be granted by the director only upon the submittal by the applicant of a written request which demonstrates a clear need for the extension to establish the new landscaping.

Xeriscaping Variance Approved Plant List

- In sync with Grow Green's guide, except for turf varieties (Bermudagrass categorized as "low").
- Provides a wide pallet of trees, shrubs, perennials and grasses from which builders, homeowners and landscape professionals can select, and know they will be approved for new landscape establishment watering.

Xeriscaping Variance Approved Plant List (cont.)

- Provides builders with a pallet of landscape options to ensure their continued ability to install vegetation as a part of their building package.
- Plants on this list will require minimal maintenance, and be less likely to fail as a result of drought conditions.
- Provides an irrigation option where none had existed before in escalated stages of drought response.

- General Regulations always in effect
  - Water waste prohibited, commercial irrigation audits & car wash certification required
- 5 Conservation Stages (one always in effect based on storage/demand)
  - Conservation Stage (Above 1.4 MAF)
    - Two days per week outdoor irrigation for residential customers (30 hours/week max)
  - Drought Stage 1 (Trigger of 1.4 MAF)
    - Two days per week outdoor irrigation (20 hours/week max)
    - Home car washing on designated outdoor water use day
  - Drought Stage 2 (Trigger of 900K ac ft.)
    - One day per week outdoor irrigation (10 hours/week max)
    - Home and Charity car washing prohibited
  - Drought Stage 3 (Trigger of 600K ac ft.)
    - One day per week outdoor irrigation (6 hours/ week max)
  - Drought Stage 4 – Catastrophic
    - Outdoor water use for health and safety reasons only
- Enforcement
  - Decriminalized and removed from the Municipal Court and moved to fines on water bills
  - Customer/AWU retains option to pursue in court

Key Points.....

Exemptions - drip irrigation and tree watering through Stage 3

Landscape vegetation must adapt to Austin's new year-round 2 day per week or, 1 day per week irrigation schedule. Irrigation systems must be designed and installed correctly to deliver water efficiently to plant material within the available watering window times (30, 20, 10 or 6 hours per week)

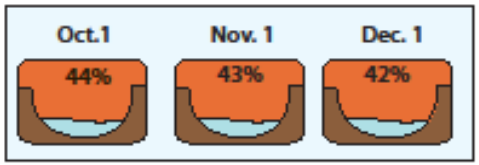
Water Supply Status

January 1, 2013

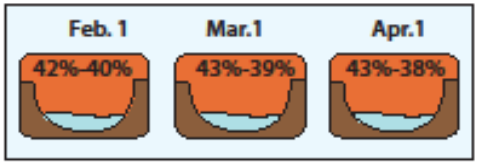
Lakes Travis and Buchanan Current Storage : 825,000 acre-feet (AF)

	Good	Fair	Cautious	Severe	Emergency
Water Supply	2 - 1.7 MAF (> 85%)	<1.7 - 1.4 MAF (85% - 70%)	< 1.4 MAF - 900,000 AF (70% - 45%)	< 900,000 - 600,000 AF (45% - 30%)	< 600,000 AF (< 30%) (Drought worse than Drought of Record)
Impacts	None	Begin environmental reductions**	• Request voluntary firm demand reductions. • Reduce agricultural supply**	• Increase reductions for agriculture* • Increase voluntary reduction for firm demand • Increase reductions for environmental**	• Agricultural supply cutoff • Firm pro-rata curtailment
Actions		January 1, 2011, reduced supply for environmental flows when storage was 1.55 MAF	• May 2, 2011, requested voluntary firm demand reductions, when storage was less than 1.4 MAF. • April 18, 2012, requested continuation of mandatory firm demand reductions until storage exceeds 1.1 MAF	• August 23, 2011, requested firm water customers implement mandatory water use restrictions • Jan. 1, 2012, further reduced supply for environmental flows when storage was 0.74 MAF • March 1, 2012, reduced supply for agriculture when storage was 847,324 AF • Nov. 21, 2012, requested emergency drought relief measures from TCEQ to reduce availability of interruptible supply.	
Forecast				Storage could fall to about 790,000 AF by Feb. 1 if very dry conditions persist	

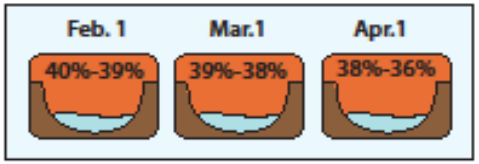
Last Three Months



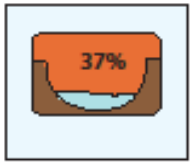
Average Outlook



Very Dry Outlook

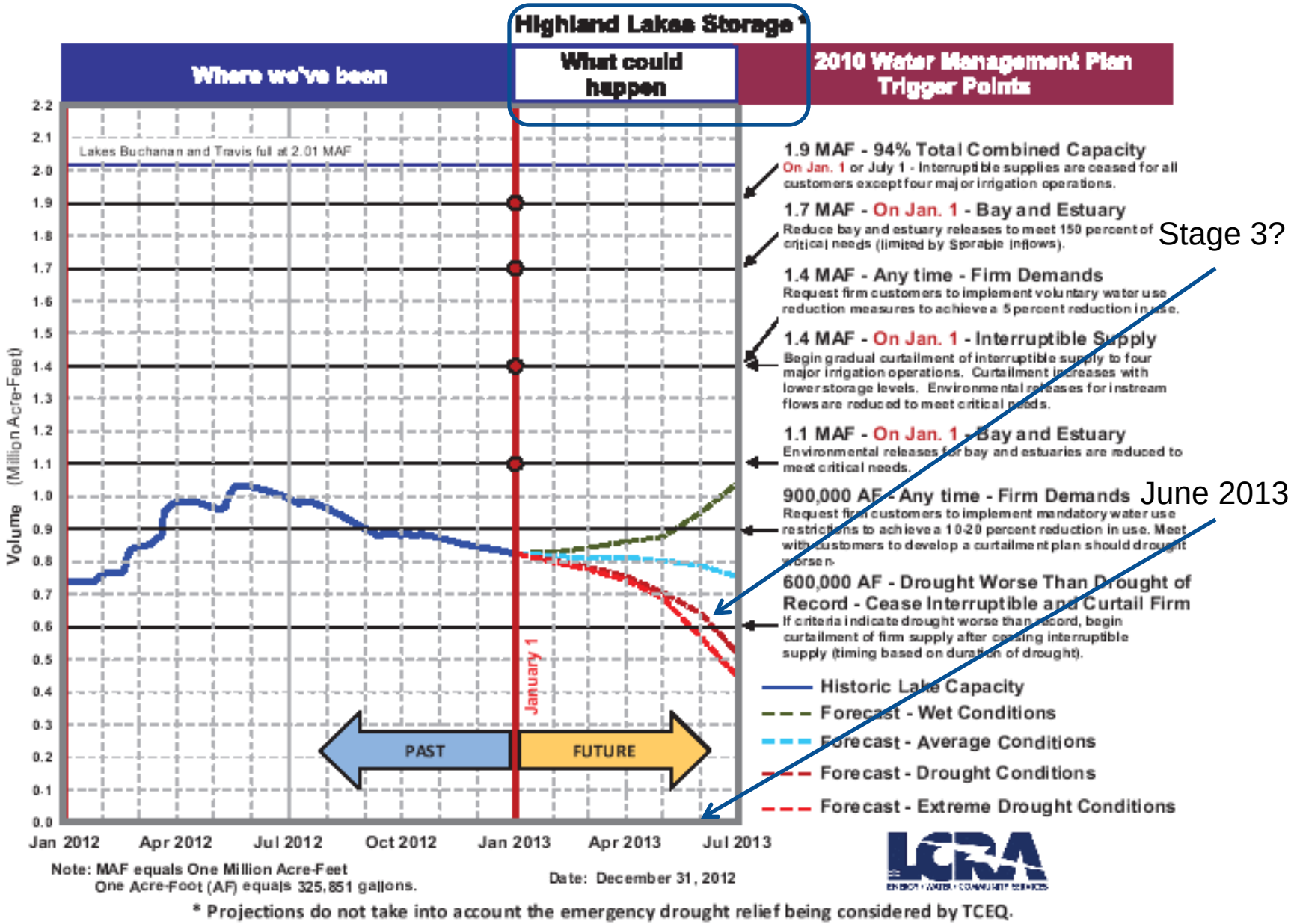


1 Year Ago



* Based on March 1 storage in lakes
** Based on Jan.1 storage in lakes

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


Highland Lakes Storage *
Where we've been
What could happen
2010 Water Management Plan Trigger Points
Lakes Buchanan and Travis full at 2.01 MAF
Volume (Million Acre-Feet)
2.2
2.1
2.0
1.9
1.8
1.7
1.6
1.5
1.4
1.3
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
Jan 2012
Apr 2012
Jul 2012
Oct 2012
Jan 2013
Apr 2013
Jul 2013
January 1
PAST
FUTURE
1.9 MAF - 94% Total Combined Capacity
On Jan. 1 or July 1 - Interruptible supplies are ceased for all customers except four major irrigation operations.
1.7 MAF - On Jan. 1 - Bay and Estuary
Reduce bay and estuary releases to meet 150 percent of critical needs (limited by Storable Inflows).
Stage 3?
1.4 MAF - Any time - Firm Demands
Request firm customers to implement voluntary water use reduction measures to achieve a 5 percent reduction in use.
1.4 MAF - On Jan. 1 - Interruptible Supply
Begin gradual curtailment of interruptible supply to four major irrigation operations. Curtailment increases with lower storage levels. Environmental releases for instream flows are reduced to meet critical needs.
1.1 MAF - On Jan. 1 - Bay and Estuary
Environmental releases for bay and estuaries are reduced to meet critical needs.
900,000 AF - Any time - Firm Demands
June 2013
Request firm customers to implement mandatory water use restrictions to achieve a 10-20 percent reduction in use. Meet with customers to develop a curtailment plan should drought worsen.
600,000 AF - Drought Worse Than Drought of Record - Cease Interruptible and Curtail Firm
If criteria indicate drought worse than record, begin curtailment of firm supply after ceasing interruptible supply (timing based on duration of drought).
Historic Lake Capacity
Forecast - Wet Conditions
Forecast - Average Conditions
Forecast - Drought Conditions
Forecast - Extreme Drought Conditions
Note: MAF equals One Million Acre-Feet
One Acre-Foot (AF) equals 325,851 gallons.
Date: December 31, 2012
LCRA
* Projections do not take into account the emergency drought relief being considered by TCEQ.

Questions/ Comments?