



City of Austin
**Drought
Contingency
Plan**

May 2009

*Developed to Meet Requirements
Outlined in 30 TAC § 288.20*

Water Conservation Division
Austin Water Utility

City of Austin, Texas

Drought Plan Briefing

January 31, 2012

Daryl Slusher
Assistant Director, Environmental Affairs

Drema Gross
Division Manager, Water Conservation



Water Conservation & Drought Response

February 15, 2012

Grow Green Landscape Professional Training

Drema Gross

Austin Water Utility

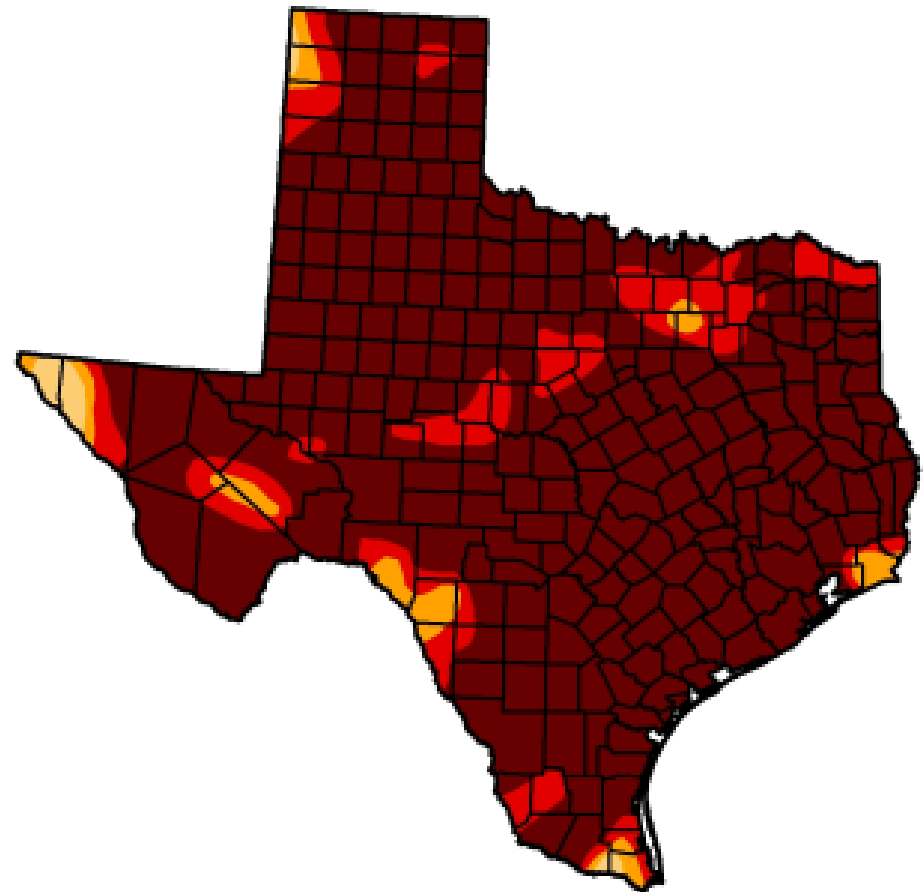
Water Conservation Division Manager

Texas Drought: September 2011

Drought Conditions (Percent Area)

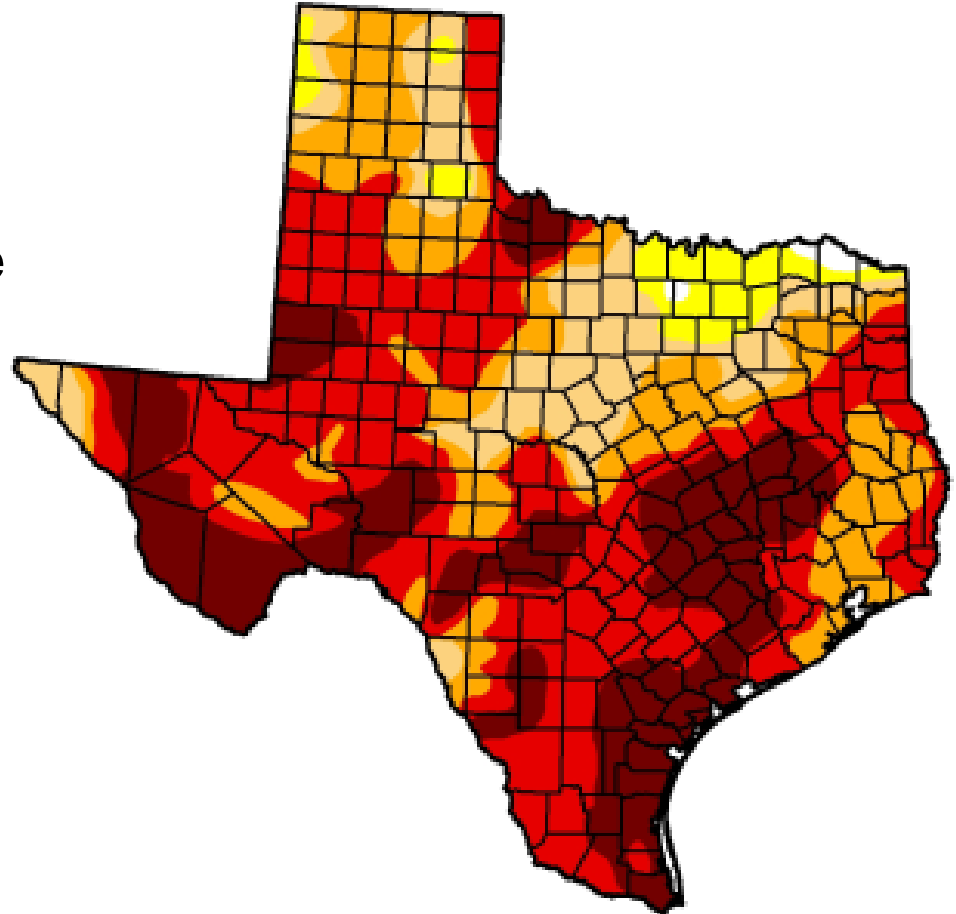
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	100.00	99.03	96.10	85.43
Last Week (09/13/2011 map)	0.00	100.00	100.00	99.17	96.75	87.83
3 Months Ago (06/21/2011 map)	3.33	96.67	95.71	94.52	91.31	70.61
Start of Calendar Year (12/28/2010 map)	7.89	92.11	69.43	37.46	9.59	0.00
Start of Water Year (09/28/2010 map)	75.57	24.43	2.43	0.99	0.00	0.00
One Year Ago (09/14/2010 map)	77.93	22.07	3.37	0.97	0.00	0.00

Intensity:



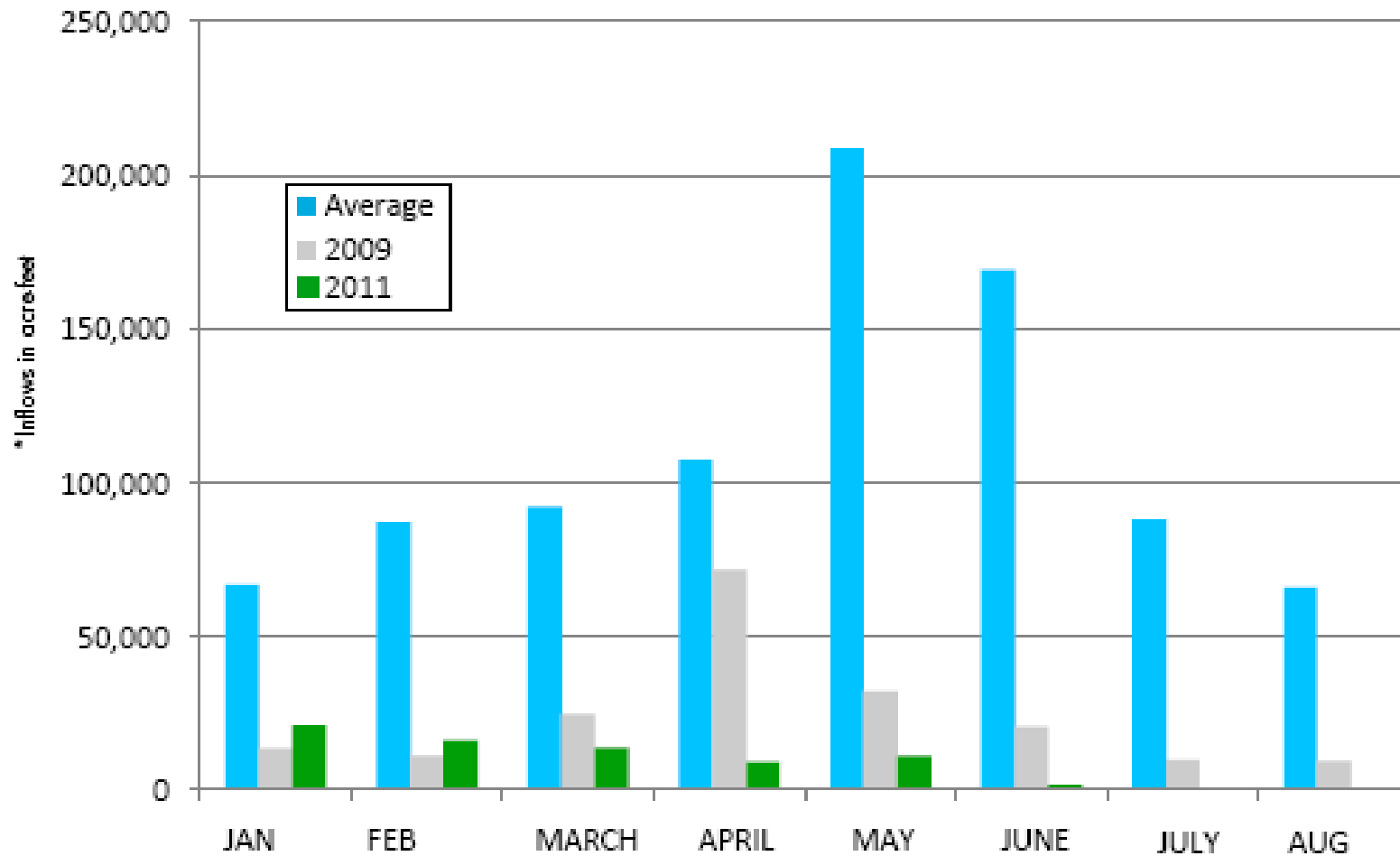
Texas Drought: January 2012

- 99.5% of state in some level of drought
- 83% in severe drought or worse
- Little to no improvement in Central Texas
- Significant rainfall would be needed to end drought conditions
- La Nina conditions expected to persist



Water flowing into the Highland Lakes

Rivers and streams are drying up

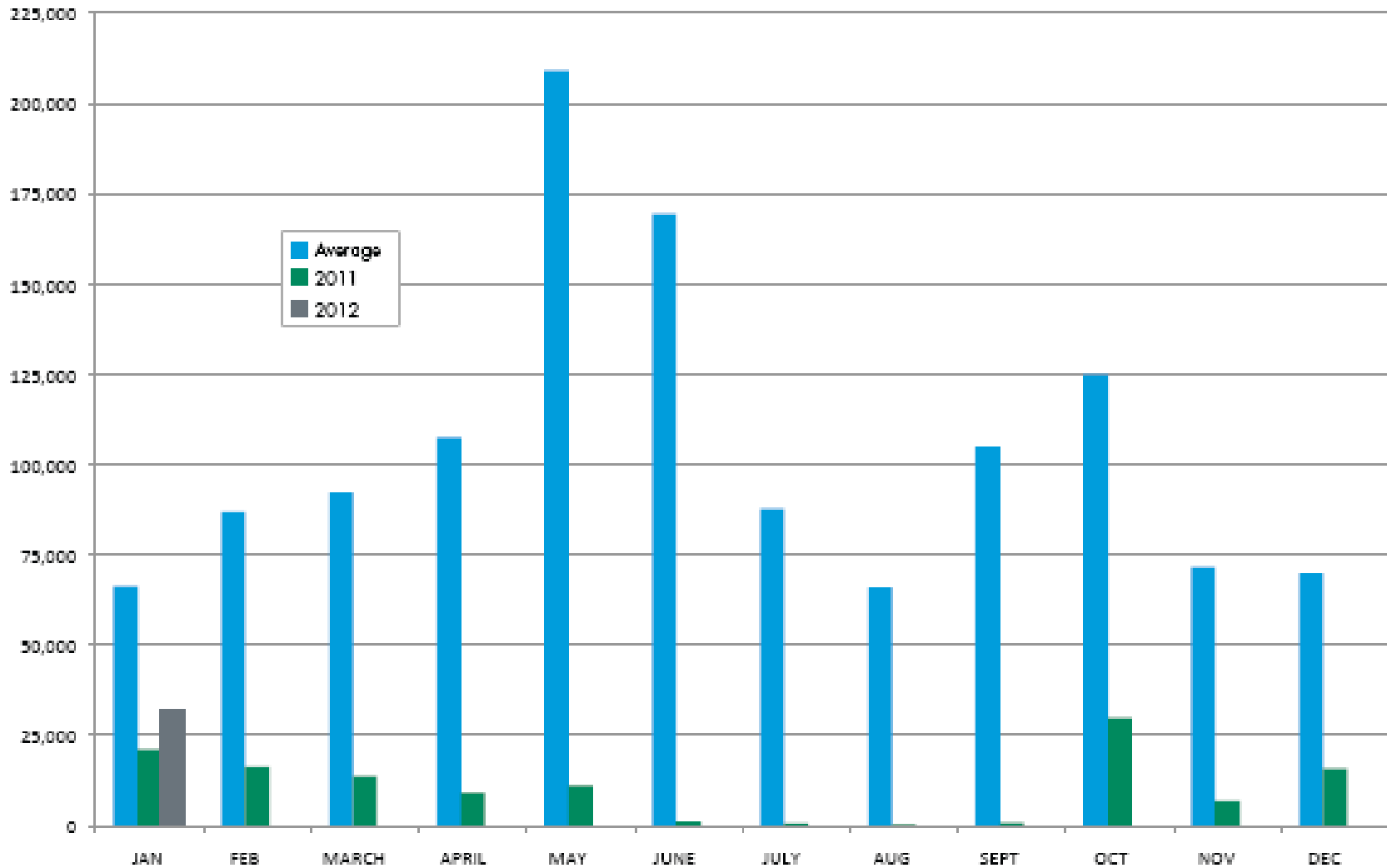


*Inflows: the estimated amount of water flowing into the Highland Lakes from rivers and streams.

January - August totals
(in acre-feet)

Average:	885,379
2009:	192,547
2011:	74,061

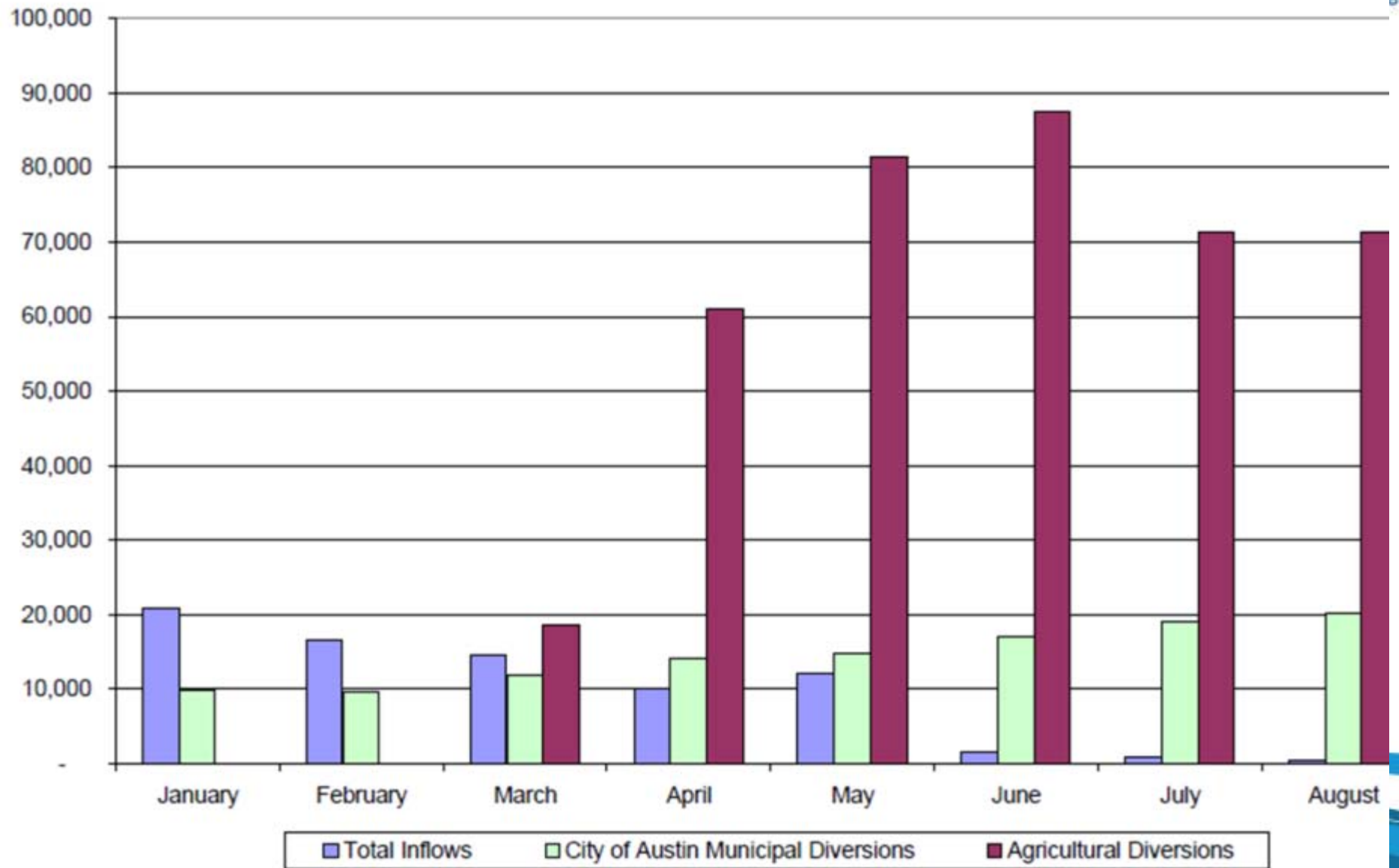
Water flowing into the Highland Lakes



*Inflows: the estimated amount of water flowing into the Highland Lakes from rivers and streams. Data for 2011 and 2012 are preliminary and subject to change.

January totals
(in acre-feet)
Average: 66,262
2011: 21,158
2012: 32,022

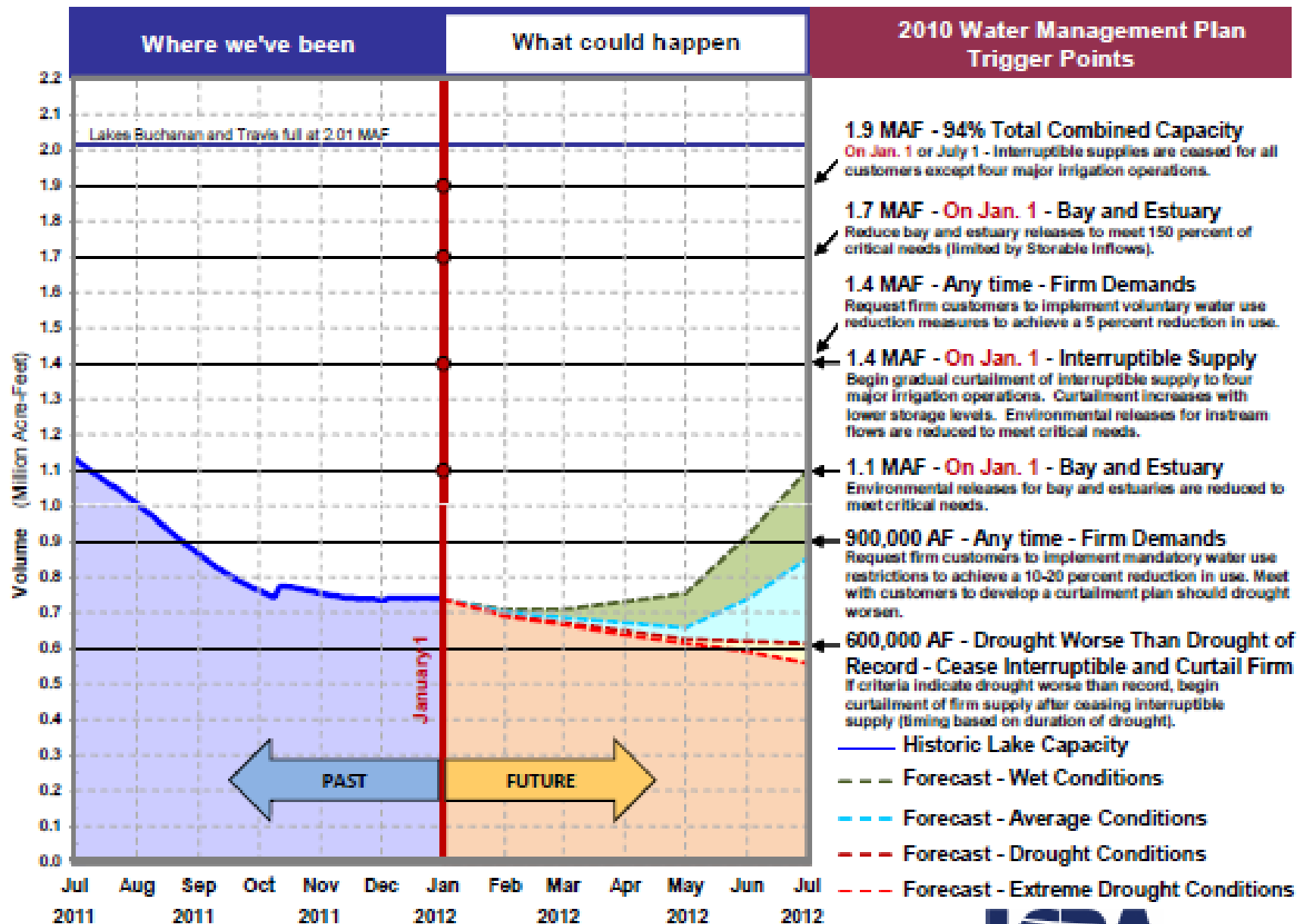
Monthly 2011 Highland Lakes Inflows with City of Austin and Agricultural Diversions (lower three counties in basin)



LCRA's Water Management Plan (WMP)

- LCRA operates and manages the Lakes Buchanan and Travis for flood control and water supply purposes.
- Determines how water is allocated from the Highland Lakes
- TCEQ approved emergency request that allows LCRA to deviate from its current WMP (December 2011)
 - LCRA may cut back or cut off Highland Lakes water sent to downstream farmers if drought does not significantly improve
 - On March 1, 2012, water is cut off if lakes contain less than 850,000 AF and reduced if lakes contain between 850,000 and 920,000 AF
- LCRA is in the process of revising its WMP
 - Will better balance diverse demands on Highland Lakes resources
 - Will make plan more flexible & responsive to growing demands in basin

Highland Lakes Storage

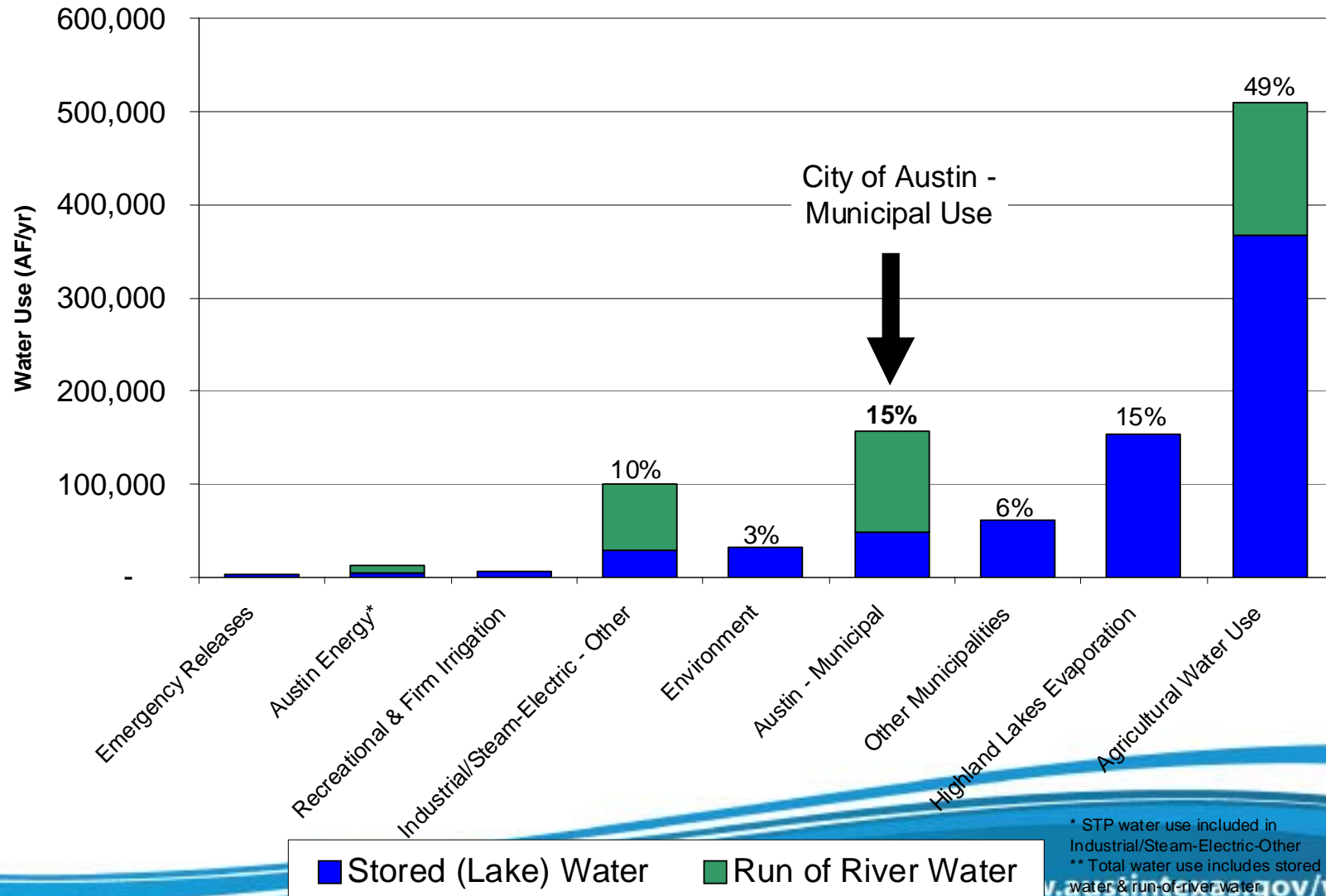


Note: MAF equals One Million Acre-Feet
One Acre-Foot (AF) equals 325,851 gallons.

Date: January 1, 2012



2009 Highland Lakes and Run-of-River Water Use Including Lake Evaporation



* STP water use included in Industrial/Steam-Electric-Other
 ** Total water use includes stored water & run-of-river water

Austin's Drought Contingency Plan (DCP) & Water Management Ordinance

- DCP sets reduction goals and triggers for City Manager to consider in implementing customer water use restrictions
- Lower Colorado River Authority (LCRA) manages regional water supply. Supply trigger points are set through LCRA Water Management Plan and Drought Contingency Plans (periodically updated by LCRA and submitted to TCEQ for approval)
- Chapter 6-4 of City Code defines permanent water use restrictions and restrictions in Stages 1, 2, and 3
- Chapter 6-4 also provides City Manager ability to implement undefined measures in long-term drought

Permanent Water Use Restrictions

- Mandatory 2x/week for Commercial & Multifamily
- No automatic irrigation systems 10 a.m. to 7 p.m.
- Water waste is prohibited
 - Failure to repair controllable leak
 - Runoff & ponding during irrigation
 - Operating irrigation system with broken, misaligned, or misting heads



Stage 1 Water Use Restrictions

- Mandatory 2x/week for all customers
- No irrigation between 10 a.m. and 7 p.m.
- May 1 – Sept 30, or as determined by City Manager
- Austin has been in Stage 1 since November 2009

Stage 2 Water Use Restrictions

- Mandatory Schedule for All Customers – Reduced to no more than once per week
- No automatic irrigation after 10 a.m.
- Vehicle washing on designated days only
- No ornamental fountains
- No automatic fill valves for pools or ponds
- No washing of pavement, sidewalks, driveways
- May not serve water in restaurants unless requested

Stage 3 Water Use Restrictions

- Only hand-held irrigation between 6-10 a.m. and 7-10 p.m. on designated day
- No vehicle washing (allowed at efficient commercial car washes from 12-5pm)
- Foundation watering only on designated day
- May not add potable water to pools, ponds

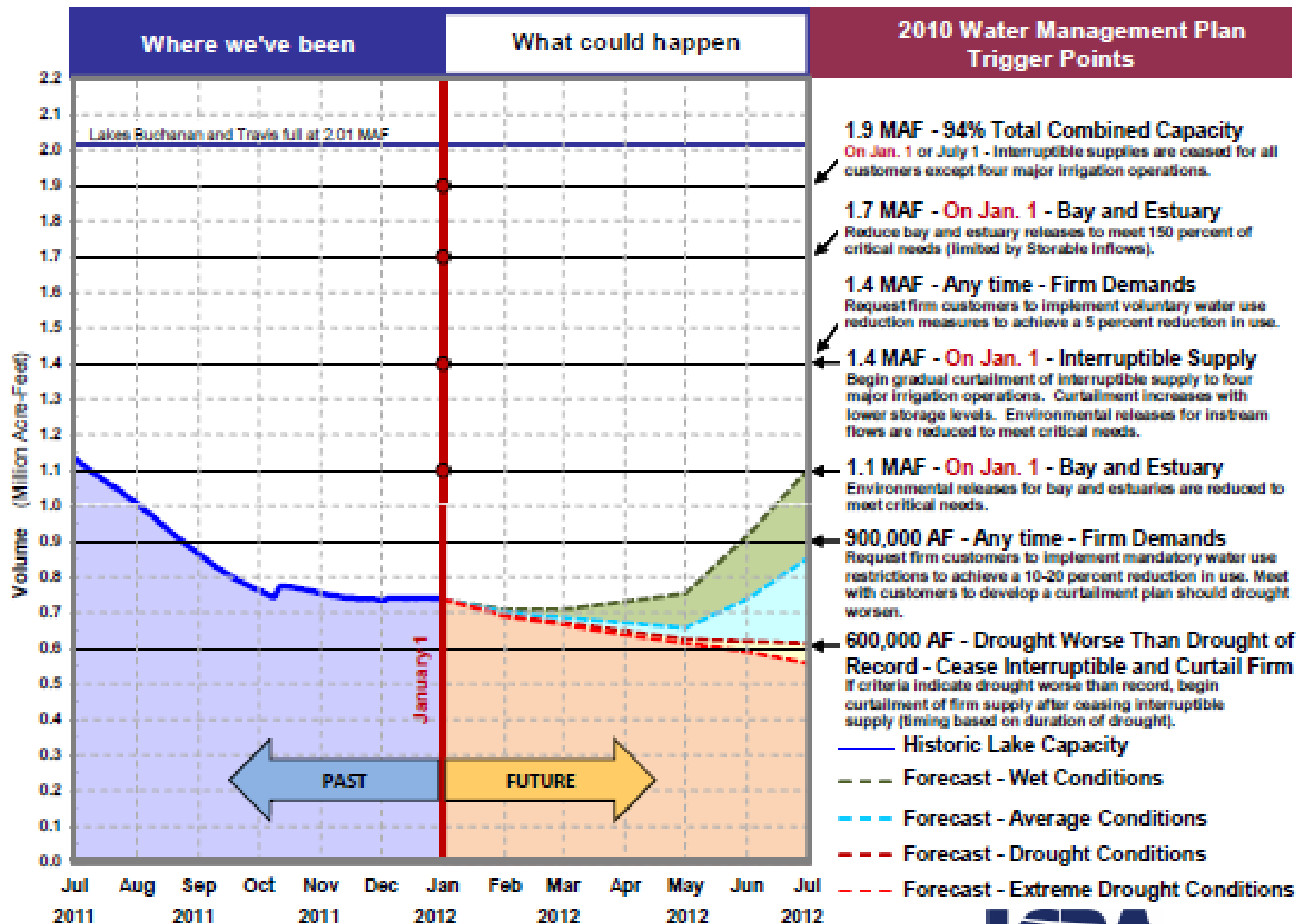
Additional Restrictions

- May be imposed by the Director of Austin Water to protect public health and safety:
 - Unusual water system operational event
 - Catastrophic occurrence
 - Severe weather event
- May prohibit all outdoor watering except with non-potable water
- May require pro rata curtailment of wholesale customers

Austin’s DCP Demand, Supply & Emergency Triggers

	Triggers	Action	Goal	End Conditions
Demand Triggers	260 mgd for 3 consecutive days	City Manager may order Stage 2 Water Restrictions	Reduce water use by 15% of 260 mgd	City Manager ends based on daily supply and demand of water
	270 mgd for one day	City Manager may order Stage 2 Water Restrictions	Reduce water use by 15% of 270 mgd	City Manager ends based on daily supply and demand of water
Supply Triggers	Combined Lake storage less than 900,000 acre-feet	City Manager may order Stage 2 Water Restrictions	Reduce water use by 15%	City Manager ends based on daily supply and demand of water
	Combined Lake storage less than 681,000 acre-feet	City Manager may order Stage 3 Water Restrictions	Reduce water use to levels deemed necessary	City Manager ends based on daily supply and demand of water or the end of supply constraints
Emergency Triggers	As determined by City Manager, system outage, equipment failure, contamination of water source or other emergencies	City Manager may order Stage 3 Water Restrictions	Reduce water use to levels deemed necessary	City Manager ends based on daily supply and demand of water or the end of supply constraints

Highland Lakes Storage



Note: MAF equals One Million Acre-Feet
One Acre-Foot (AF) equals 325,851 gallons.

Date: January 1, 2012



Revising Austin's Water Management Ordinance

- **Current code not written for long-term drought management**
- **Code revision & stakeholder process**
 - Incorporate some remaining 2007 Task Force items
 - Shift to administrative water waste fines
 - Realign drought stages to ease into restrictions, provide earlier public awareness
 - Extend supplies to protect tree canopy and environment
 - Provide sustainability for food production & local business
- **Desired completion prior to reaching 600,000 AF combined storage**

Public Involvement

- Meeting with stakeholders since late August 2011 on effects of Stage 2 and 3 restrictions
- Stakeholder workshop December 13th
 - 69 attendees representing environmental, landscaping, car wash, homebuilder & developer interests
- Public workshop January 19th
 - Over 100 attendees including homeowners and businesses
- Exercises to discuss effect of restrictions on lake levels and customers

What We've Heard...

- Support for...
 - Enabling efficient irrigation of trees and vegetable gardens
 - Protecting business interests in drought conditions
 - Enforcing water use regulations through water bill fines
 - Issuing a warning prior to a fine/citation
 - Stronger restrictions in normal /early drought (80% do more/same)
 - Status quo in moderate/severe drought (even split do more/same/less)
 - Less stringent in catastrophic conditions (44% do less, 34% same)

More to Explore...

- Summarize & discuss public feedback
- Ensure changes meet use reduction goals
- Find a watering schedule that works with system constraints
- Define rules for “efficient” equipment (car washes, pressure washing, irrigation)
- Determine process for water waste fines

Next Steps

- Continue to seek public input:
 - SpeakUpAustin.org and Waterwiseaustin.org
 - Public Workshops - February 22 and March TBD
- Draft Code Language/ Legal Review - March and April
- Boards & Commissions – April/May
- City Council – late May
- Continue to monitor drought, work with LCRA



Questions?

Drema Gross

Water Conservation Division Manager

(512) 974-2199

drema.gross@austintexas.gov

www.waterwiseaustin.org