

# Austin Water Resource Planning Task Force

**May 5, 2014**

# Welcome and Orientation

- Welcome from Austin Water - Greg Meszaros, Director
- Orientation Items:
  - Introduction of Task Force Members
  - Communication Plan
  - City Council Resolution

# Task Force Members

**Stefan  
Schuster**

Appointed by  
Mayor Leffingwell

**Sharlene  
Leurig**

Appointed by  
CM Riley

**Marisa Perales**

Appointed by  
CM Martinez

**Jennifer  
Walker**

Appointed by  
CM Tovo

**Lauren Ross**

CM Morrison

**Tom Mason**

Appointed by  
CM Spelman

**Paul Robbins**

Appointed by  
MPT Cole

**Luke Metzger**

Elected by RMC

**Brian Smith**

Elected by EB

**TBD**

Elected by W&WW

**Kris Bailey**

Elected by JC

# Communication Plan

- Website
  - Austin Water Resource Planning Task Force
    - <http://www.austintexas.gov/content/austin-water-resource-planning-task-force>
- Agenda Postings
- Video Recordings

# Communication Plan, cont.

- Member Notebooks
  - Process Discussion
  - Contents Review
- Board and Commission Updates
  - As appropriate, members should provide updates to respective Board, Commission, or Committee
  - Agenda item should be added to regular meetings

# City Council Resolution

- Resolution Review
  - Task Force Purpose and Expectations

“The Austin Water Resource Planning Task Force is created to evaluate the City's water needs, to examine and make recommendations regarding future water planning, and to evaluate potential water resource management scenarios for Council consideration.”

# City Council Resolution

- Resolution Review, cont.

- Task Force Purpose and Expectations, cont.

“The Task Force shall examine and make recommendations regarding any alternative water sources including, but not be limited to, conservation, reuse, regional transmission systems and partnerships, groundwater, aquifer storage, as well as other potential sources in the region. In doing so, the Task Force shall consider and make recommendations consistent with the goals and provisions of the Imagine Austin Plan.”

# City Council Resolution

- Resolution Review, cont.
  - Task Force Purpose and Expectations, cont.

“The Task Force shall issue a final report containing its recommendations to the City Council no later than June 20, 2014.”
  - Discussion and Questions

# Voting Items From Task Force

# Voting Items

- Election of Officers
  - Elect Chair and Vice Chair
- Rules of Procedures
  - Review and Discussion
  - Consideration of Approval by Task Force

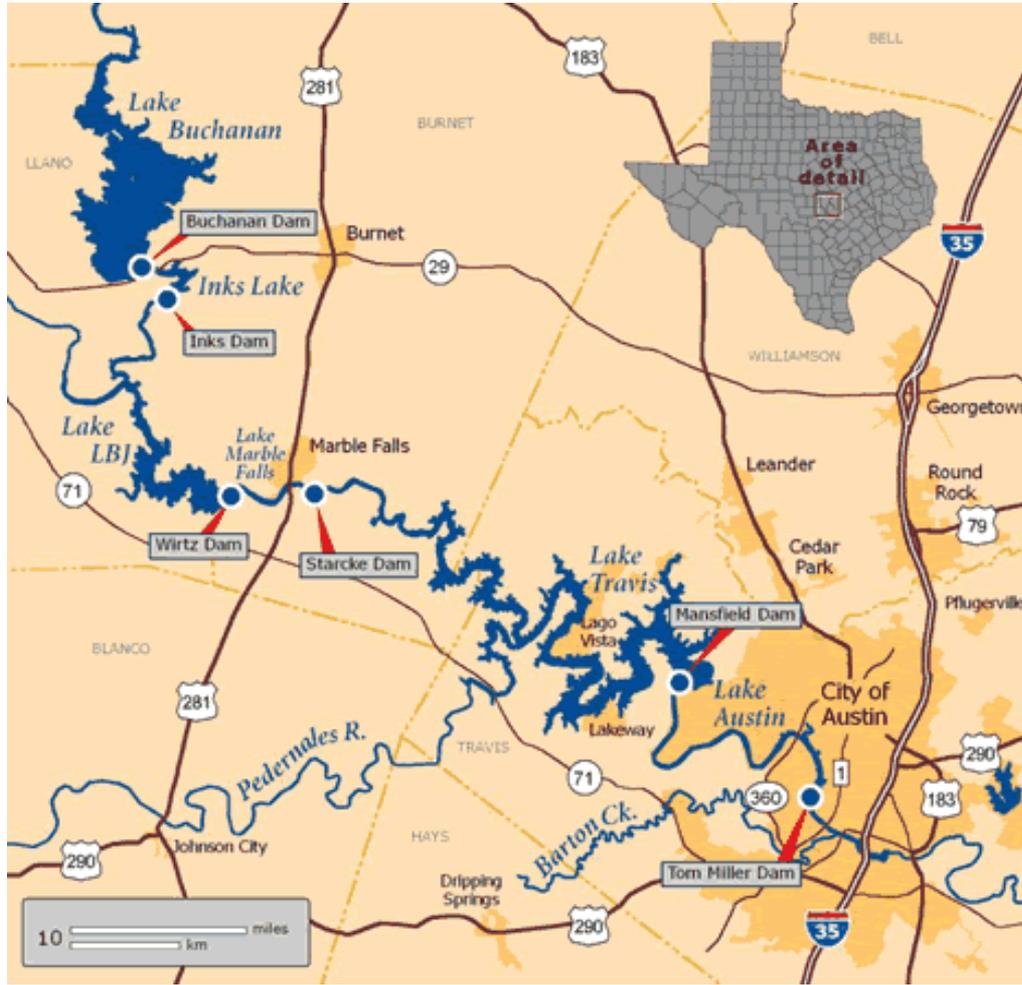
# Voting Items, cont.

- Meeting Schedule
  - Meetings 1 and 2: May 5<sup>th</sup> and May 8<sup>th</sup>
  - Plan for frequent meetings especially in first several weeks
  - Potential meeting dates:
    - May 12 or 13, 19, 27, and 29
    - June 2 and/or 5, 9 and/or 10, 16, 18, and 19
  - Review and Discussion
  - Approval of Meeting Schedule

# Water Supply Overview

## Staff Presentation

# Highland Lakes System



Lakes Travis and Buchanan are the key water supply storage reservoirs

(from [http://www.lcra.org/about/dams\\_lakes.html](http://www.lcra.org/about/dams_lakes.html))

# Municipal Water Supply

- Current municipal supply:
  - Colorado River (surface water)
- Supply comes from a combination of:
  - City of Austin senior water rights (run-of-river)
  - Water supply contracts with LCRA (providing firm back-up to ROR rights)
- Demand management/supply:
  - Water Conservation
  - Water reclamation program – direct reuse

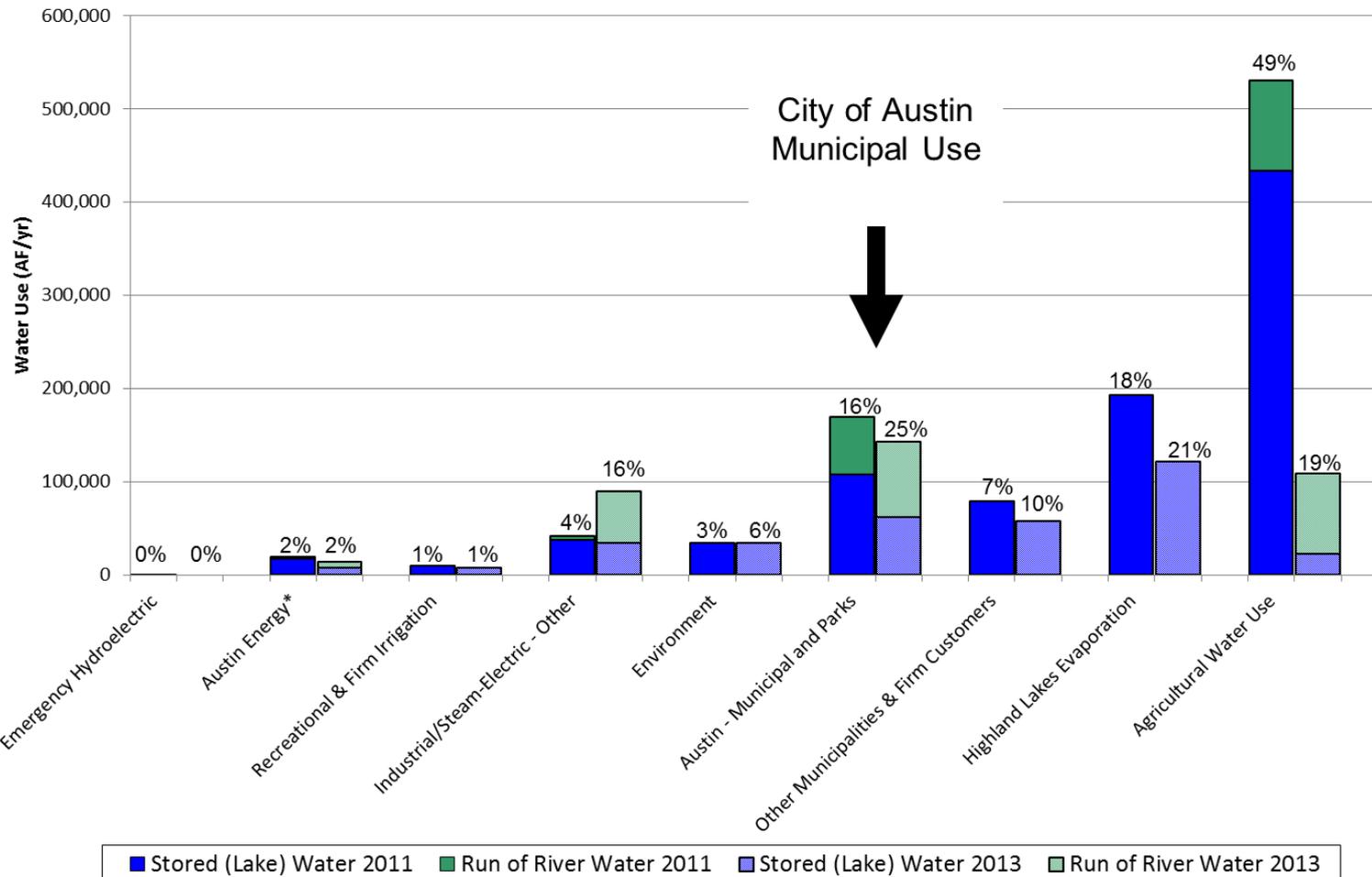
# Key Contracts with LCRA

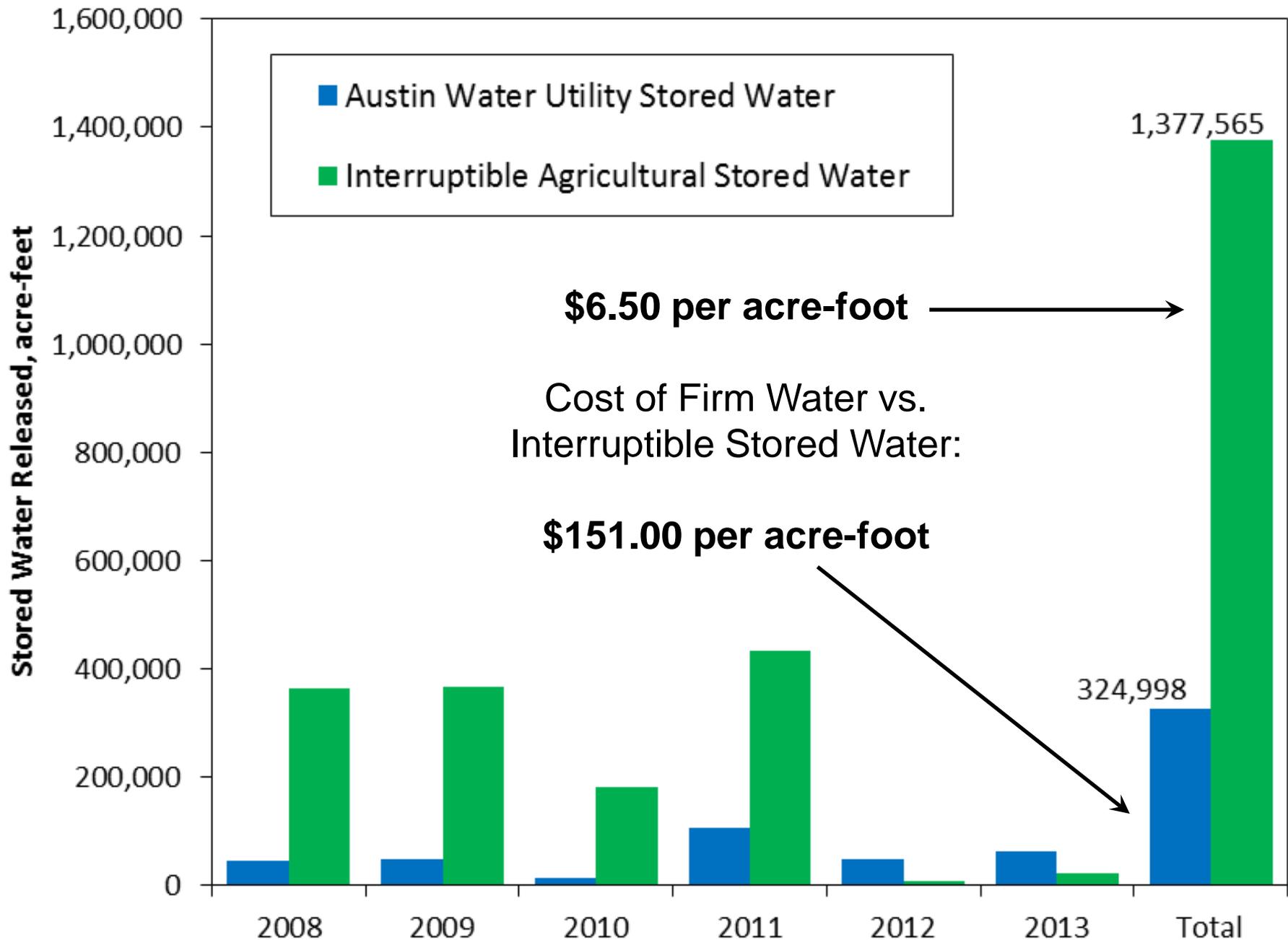
- 1999 Agreement
  - Firm back-up for Austin's run-of-river rights and additional firm water totaling 325k AF/year
  - Term extends through year 2050 with option for Austin to extend to year 2100
- 2007 Supplemental Water Supply Agreement
  - Provides up to 250k AF/year of additional supply through the year 2100 to be jointly planned, incrementally
- 2007 Settlement Agreement
  - Settled a number of water rights-related disputes
  - Created COA and LCRA Water Partnership:
    - On-going cooperation and coordination effort

# LCRA Customers

- LCRA has firm and interruptible customers
- Firm Customers
  - Mostly cities, industries, and power plants
- Interruptible Customers
  - Mostly rice farming, some other agricultural uses including turf grass and other crops

### 2011 and 2013 Uses of Lower Colorado River Water Including Highland Lakes Evaporation





# LCRA Water Management Plan (WMP)

- LCRA operates Lakes Travis and Buchanan in accordance with a TCEQ-approved WMP
- Condition in LCRA's lake permits:
  - LCRA must curtail supply of interruptible water to the extent necessary to allow LCRA to satisfy all firm water demands

# LCRA Water Management Plan (WMP)

- Emergency orders (EO):
  - EOs in 2012, 2013 and 2014 cut off of most interruptible water - primarily used for rice farming
  - EO approved by TCEQ in April for adjustment of Blue Sucker fish streamflow maintenance requirement from 500 cfs to 300 cfs
- LCRA WMP revisions in process at TCEQ

# Questions and Discussion on Water Supply Overview?

# Status on Water Supply and Drought Conditions

## Staff Presentation

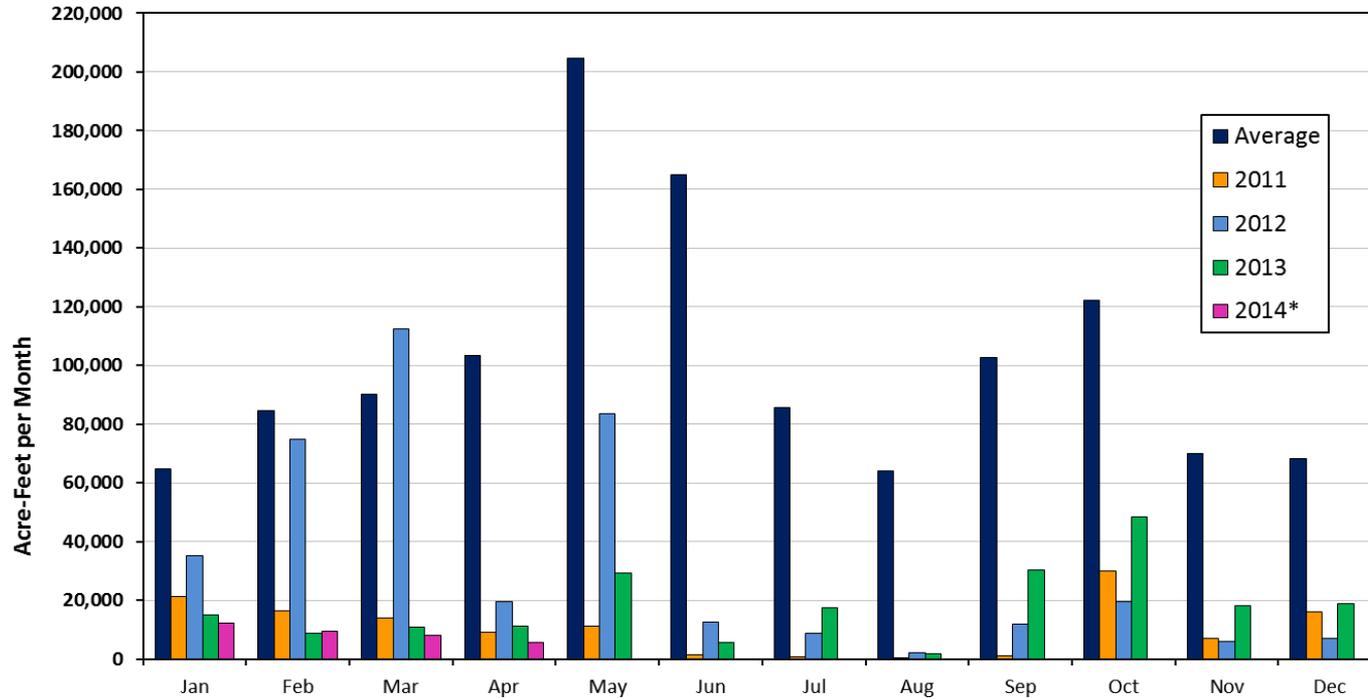
## 10 Lowest Annual Inflows on Record

Rank	Year	Annual Total in acre-feet
1	2011	127,801
2	2013	215,138
3	2008	284,462
4	2006	285,229
5	1963	392,589
6	2012	393,163
7	1983	433,312
8	1999	448,162
9	2009	499,732
10	1950	501,926
Average Annual Total	1942 to 2013	1,230,284

Top 4 All-time  
Lowest have  
occurred since  
2006

In past 6 years  
only 2010 not  
in Top 10

## Inflows to Lakes Buchanan and Travis



### Calendar Year Totals, ac-ft

Average: 1,230,284  
 2011: 127,802  
 2012: 393,163  
 2013: 215,138

### Jan.-Apr. Totals, ac-ft

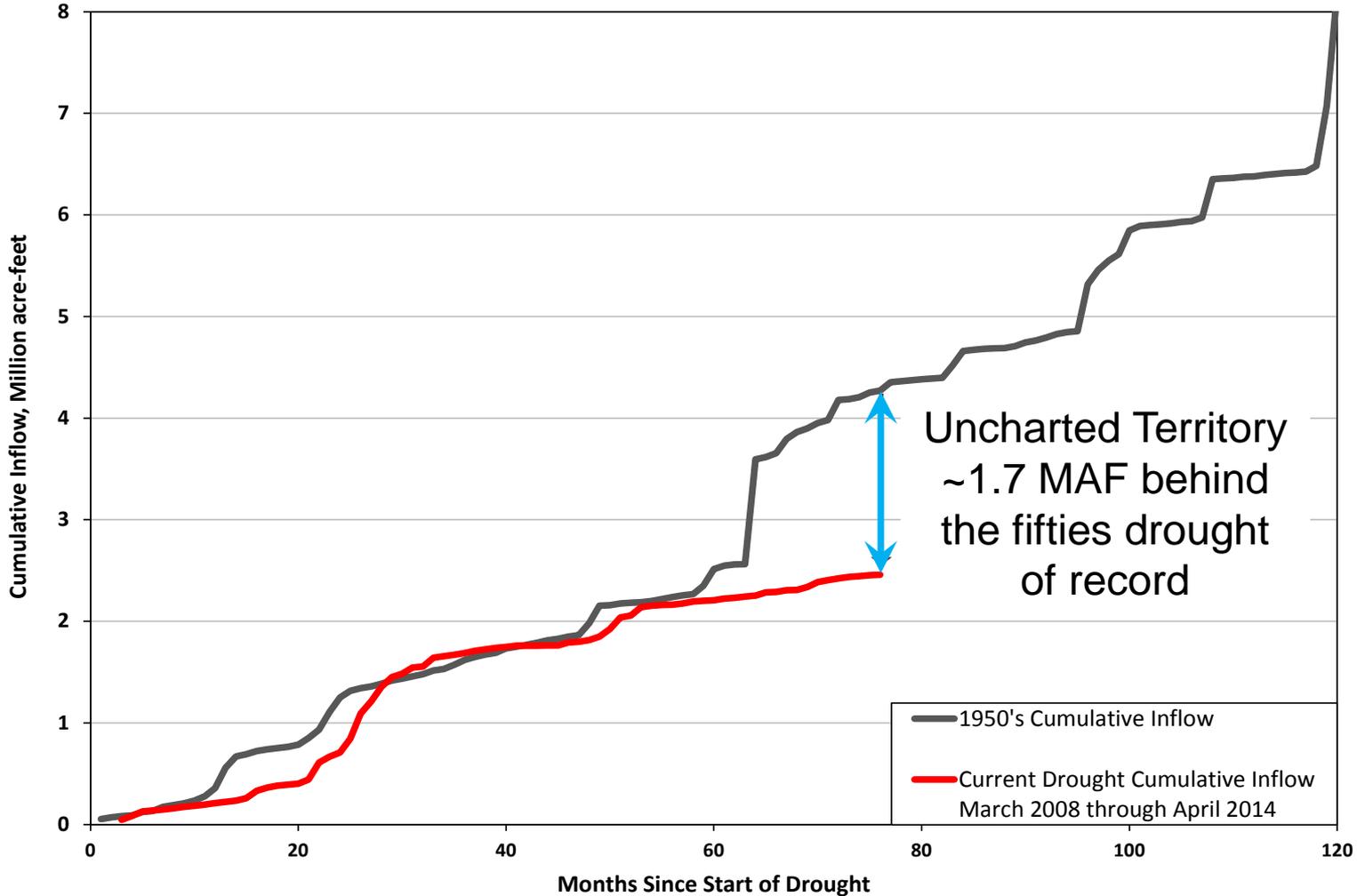
Average: 343,320  
 2011: 60,450  
 2012: 241,872  
 2013: 45,777  
 2014: 35,529

Monthly averages correspond to the historical period of record, 1942 through present.

\*Inflow data for 2014 are preliminary and subject to revision.

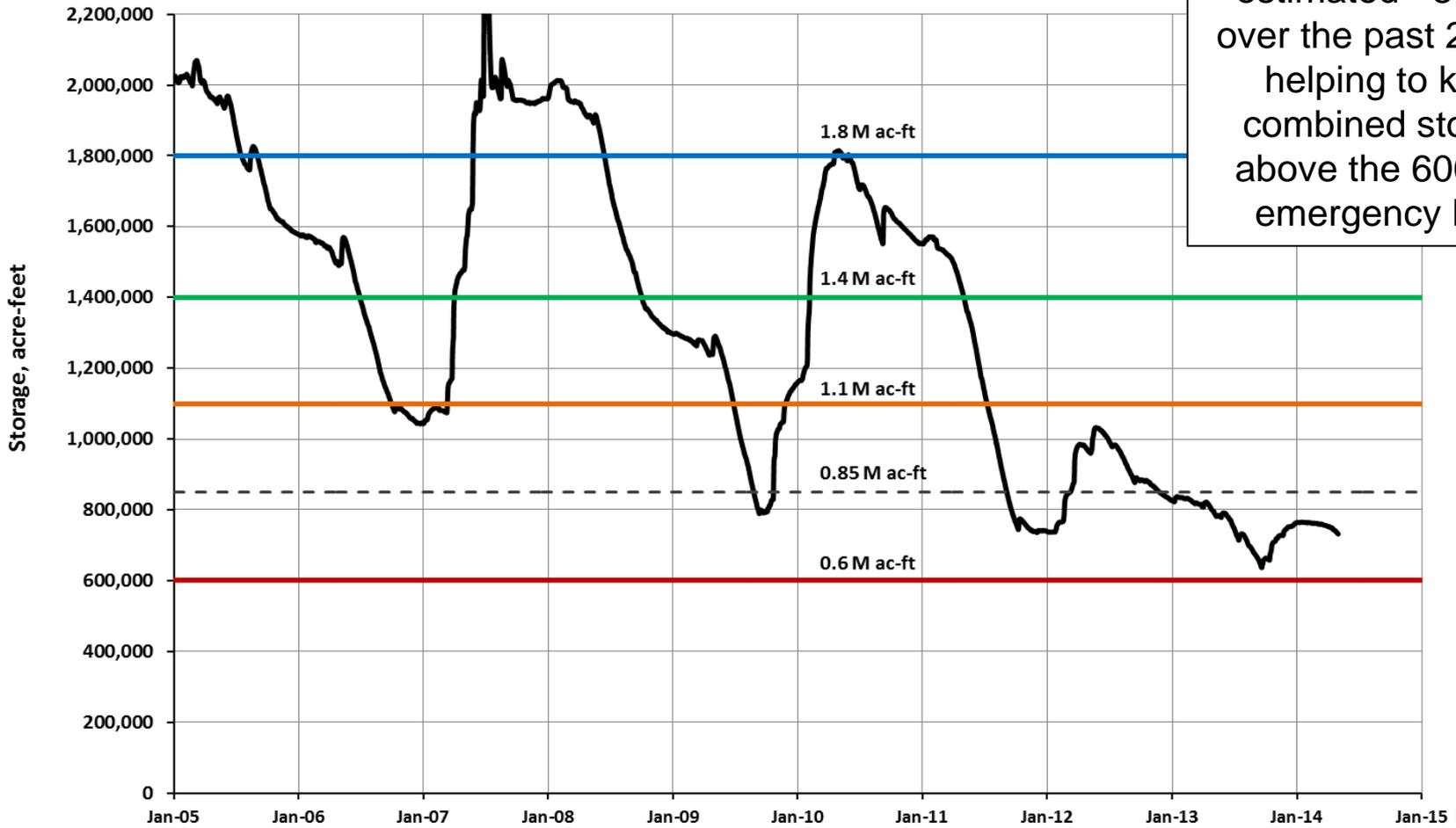
2014 January-April is driest stretch  
since the lakes were built

### Cumulative Inflow to Lakes Buchanan and Travis



**Combined Storage of Lakes Buchanan and Travis**  
January 1, 2005 through May 1, 2014

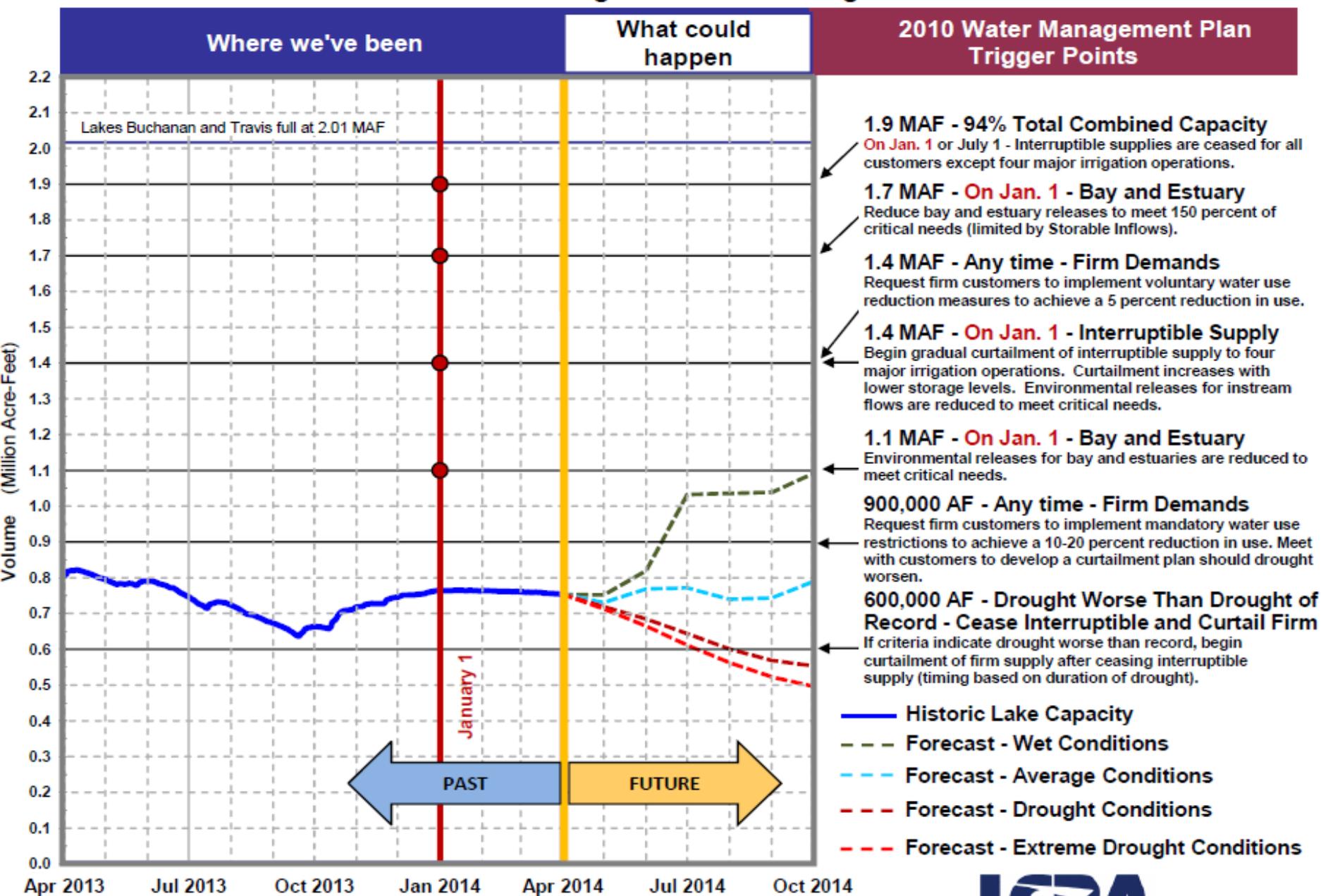
Austin has saved an estimated ~86k AF over the past 2 years helping to keep combined storage above the 600k AF emergency level



# March 1 Storage Volume Lakes Travis and Buchanan

Year	Annual Total in acre-feet
2010	1,652,638
2011	1,534,658
2012	846,820
2013	822,364
2014	761,448

# Highland Lakes Storage \*



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

Date: April 1, 2014



\* Projections take into account emergency drought relief measures affirmed by TCEQ on February 26, 2014.

# Near-Term Outlook

- NOAA US Seasonal Drought Outlook:
  - Drought to persist or intensify through July
- With continued drought conditions on a path to hit 600,000 AF combined storage in mid to late summer
  - Would trigger “Drought Worse than the Drought of Record” declaration by LCRA Board
  - Triggers LCRA 20% pro-rata curtailment of firm water customers
  - Austin already meets 20% goal but will implement Stage 3 restrictions when storage falls below 600K
  - AE has approved pro-rata curtailment plans for Decker Power Station and Fayette Power Project

# Longer-Term Outlook

- National Weather Service/Climate Prediction Center:
  - Chances of El Niño increase to greater than 50 percent later this year
- El Niño could generate wetter weather in fall and winter
- State climatologist, Dr. John Nielsen-Gammon has said that the drought could last for years into the future

# Questions and Discussion on Status on Water Supply and Drought Conditions?

# Drought Response Framework

## Staff Presentation

# Framework

- Overarching Goals of Drought Response Planning Efforts:
  - Water supply availability through duration of this unprecedented drought, which could last years into the future
  - Work toward stabilizing Highland Lakes water supply in coordination with other basin users
  - Consider options that create a multi-faceted response plan

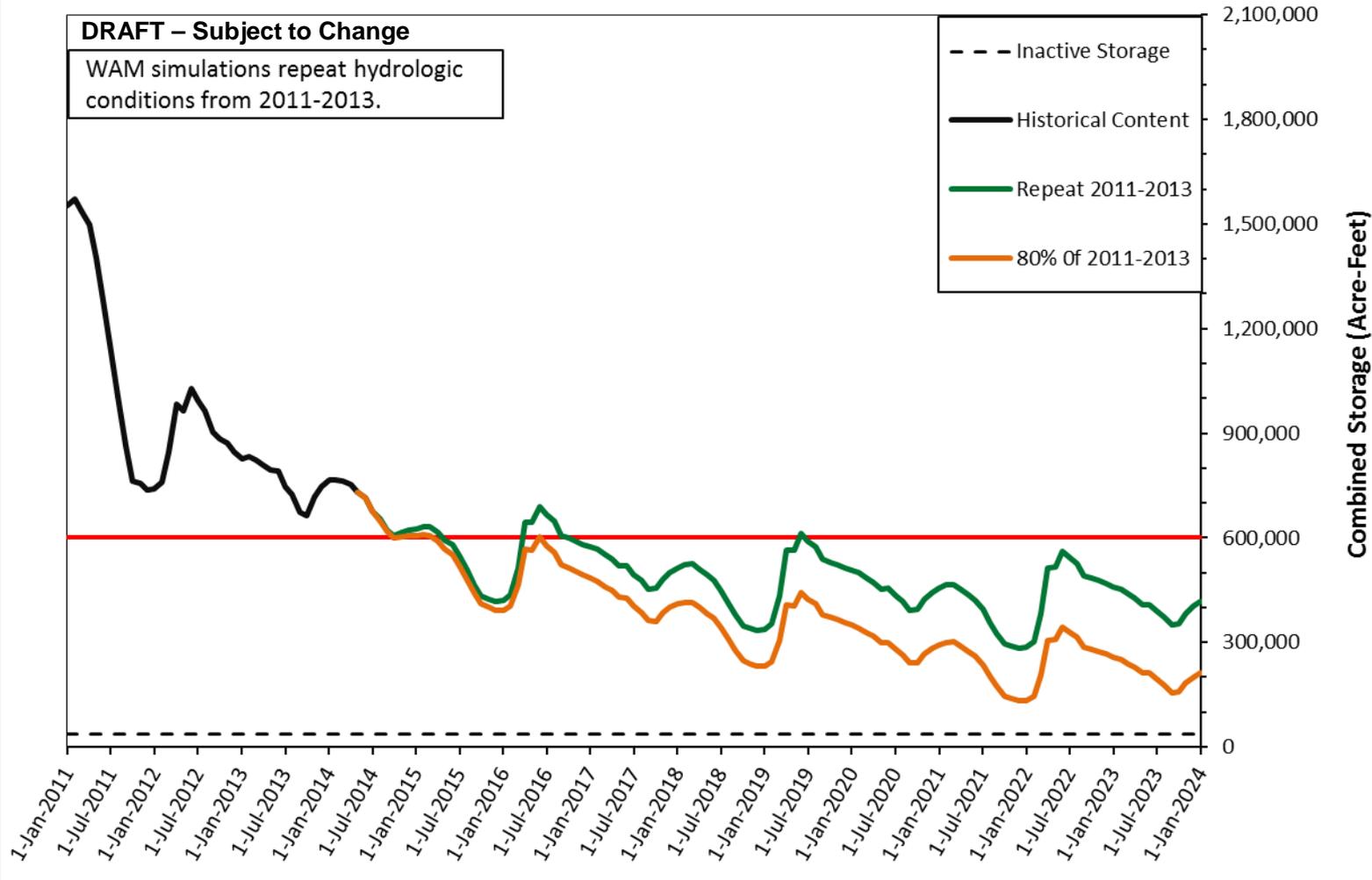
# Framework, cont.

- Examine a variety of diversified response measures including:
  - Demand-side management: staged drought restrictions
  - Protect firm water interests: LCRA WMP revisions and Emergency Orders
  - River and reservoir system operational enhancements
  - New supply options

# Framework, cont.

- Key basin-wide context factors:
  - LCRA's Water Management Plan:
    - Interruptible supply curtailment curves and triggers
  - Senior water rights:
    - Surface water right priority system

## Drought Condition Modeling Results Preliminary Baseline – Simulated Combined Storage of Lakes Travis and Buchanan



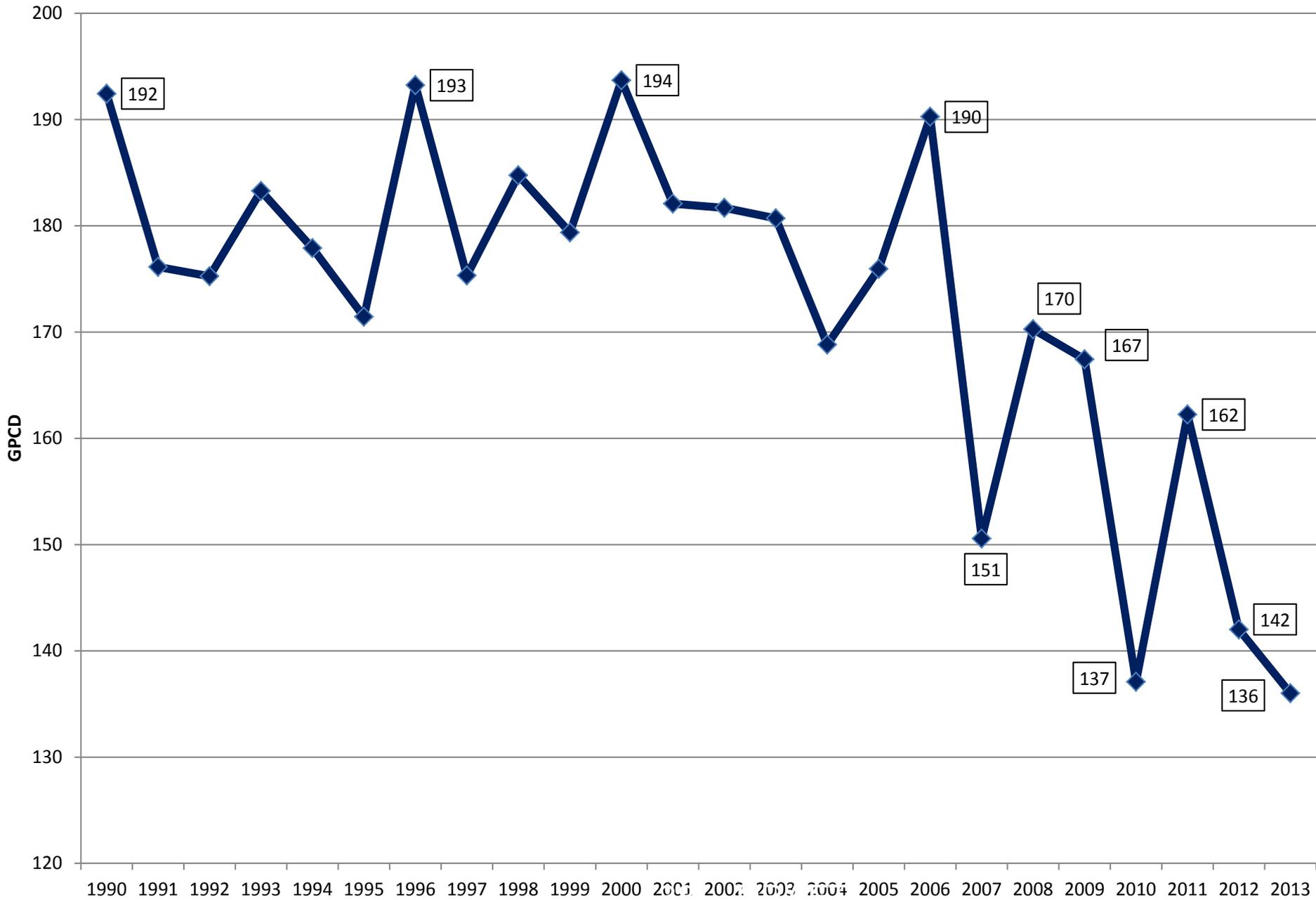
# Austin Municipal Diversions

- Calendar Year 2013: ~142,000 AF
- Most recent 6-year average: ~155,000 AF

Year	Total (AF)
2008	170,000
2009	156,000
2010	145,000
2011	168,000
2012	151,000
2013	142,000

1 acre-ft = 325,851 gallons

# Austin Conservation History - GPCD Progress by Fiscal Year



# Scale of Outdoor Water Use

Monthly Municipal Diversions (in acre-feet)

Month	Stage 2 2013	Every Month Like Winter 2013
JAN	10,400	9,600
FEB	9,700	9,600
MAR	11,600	9,600
APR	11,000	9,600
MAY	12,100	9,600
JUN	13,300	9,600
JUL	13,900	9,600
AUG	15,300	9,600
SEP	13,300	9,600
OCT	11,400	9,600
NOV	9,900	9,600
DEC	9,600	9,600
	<b>142,000</b>	<b>115,000</b>

Difference is about ~30k AF from where we are today

# Questions and Discussion Drought Response Framework?

# Task Force Goals

## Task Force Discussion

# Task Force Goals

- Conceptual Meeting Overview:
  - Water Supply Overview and Status
  - Framework and goals
  - Drought Response Strategies - examine demand-side management and supply-side options
  - Develop Task Force Recommendations and Report
  - Report to City Council due no later than June 20, 2014

# Next Meeting

- Continuation of information and discussion items from Meeting #1, as needed
- Demand-side management:
  - Background
  - Water conservation and reuse
  - Drought Contingency Plan (DCP) and drought restrictions
  - LCRA pro-rata curtailment
  - Drought-related operational impacts

# Questions and Discussion?