

RMC Report, August 2014

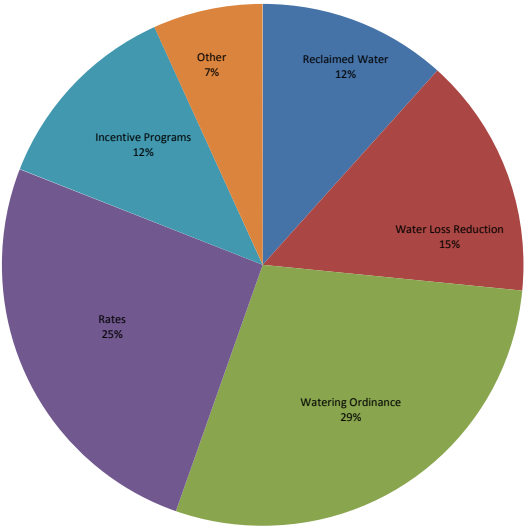
Activity	Unit	Projected Peak Unit Savings, GPD	Projected Average Unit Savings, GPD	Projected Lifetime of Savings, years	Cost per Unit, if applicable	Program Participation				Peak Reduction, gallons per day		Average Savings, GPCD		Lifetime Savings per Unit, thousand gallons	Cost of Savings		FY14 Rebate Amounts	
						FY14 Goal	FY14 To Date	Prior Year FY13 Year	Prior Year FY13 To Date	Peak Savings Goal FY14	Peak Savings To Date FY14	GPCD FY14 Goal	GPCD To Date FY14		Lifetime, 1000 gallons	Peak, 1 gallon per day	FY14 Budget	FY14, Spent To Date
Indoor																		
Clothes washer rebates, SF	1 washer	15.00	15.00	10	\$ 80.00	0	5	1,175	1,166	-	75	-	0.00	54.75	\$1.46	\$5.33	\$0	\$0
Clothes washer rebates, MF	1 washer	90.00	90.00	10	\$ 180.00	27	0	0	0	2,430	-	0.00	-	328.50	\$0.55	\$2.00	\$5,000	\$0
Clothes washer rebates, ICI	1 washer	90.00	90.00	10	\$ 180.00	27	4	1	1	2,430	360	0.00	0.00	328.50	\$0.55	\$2.00	\$5,000	\$3,650
Showerheads	1 unit	9.55	9.55	5	\$ 2.46	1,600	6,349	5,042	4,904	15,290	60,633	0.02	0.07	17.43	\$0.14	\$0.26	\$0	\$27,366
Aerators	1 unit	2.31	2.31	5	\$ 0.34	4,800	13,379	13,144	12,839	11,074	30,865	0.01	0.03	4.21	\$0.08	\$0.15	\$0	N/A
Commercial Process Rebates	1 gallon	variable	variable	5	\$ 1.00	10	24	9	9	250,000	16,429	0.27	0.02	1825	\$0.55	\$1	\$750,000	\$60,597
Outdoor																		
Irrigation audits, SF	1 audit	500.00	100.00	3	\$ 187.50	550	222	666	618	275,000	111,000	0.06	0.02	73	\$2.57	\$0.38	\$103,125	\$41,625
Irrigation audits, MF and ICI	1 audit	500.00	100.00	3	\$ 250.00	50	5	36	34	25,000	2,500	0.01	0.00	73	\$3.42	\$0.50	\$12,500	\$1,250
Irrigation rebates	1 rebate	TBD	TBD	variable	\$ 130.00	40	63	104	92								\$125,000	\$10,479
Landscape conversion rebates	1 rebate	TBD	TBD	variable	\$ 400.00	48	504	120	118								\$75,000	\$55,550
Rainwater harvesting rebates, SF	1 gallon	0.05	0.05	10	\$ 0.62	200,000	273,475	344,328	280,737	10,137	13,861	0.01	0.02	0.19	\$3.35	\$12.23	\$175,000	\$150,081
Rainwater harvesting rebates, MF and ICI	1 gallon	0.02	0.02	10	\$ 0.50	75,000	9,650	2,720	2,720	1,521	196	0.00	0.00	0.07	\$6.76	\$24.66	\$30,000	\$4,449
PRV rebates	1 valve	56.10	25.80	10	\$ 130.00	40	25	39	35	2,244	1,403	0.00	0.00	94.17	\$1.38	\$2.32	\$15,000	\$2,500
																	Total	\$1,295,625
																% of Goal		27.60%

Other Program Participation			
Education & Outreach		August 2014	FY14 YTD
Events / Booths		1,500	9,255
Public Presentations		95	3,983
School Presentations		-	17,868
Water Waste Enforcement			
Residential Citations		13	61
Commercial/MF Citations		22	233
Total Investigations		1,534	7652
Construction Permits			
Residential Irrigation		115	1208
Commercial Irrigation		11	140

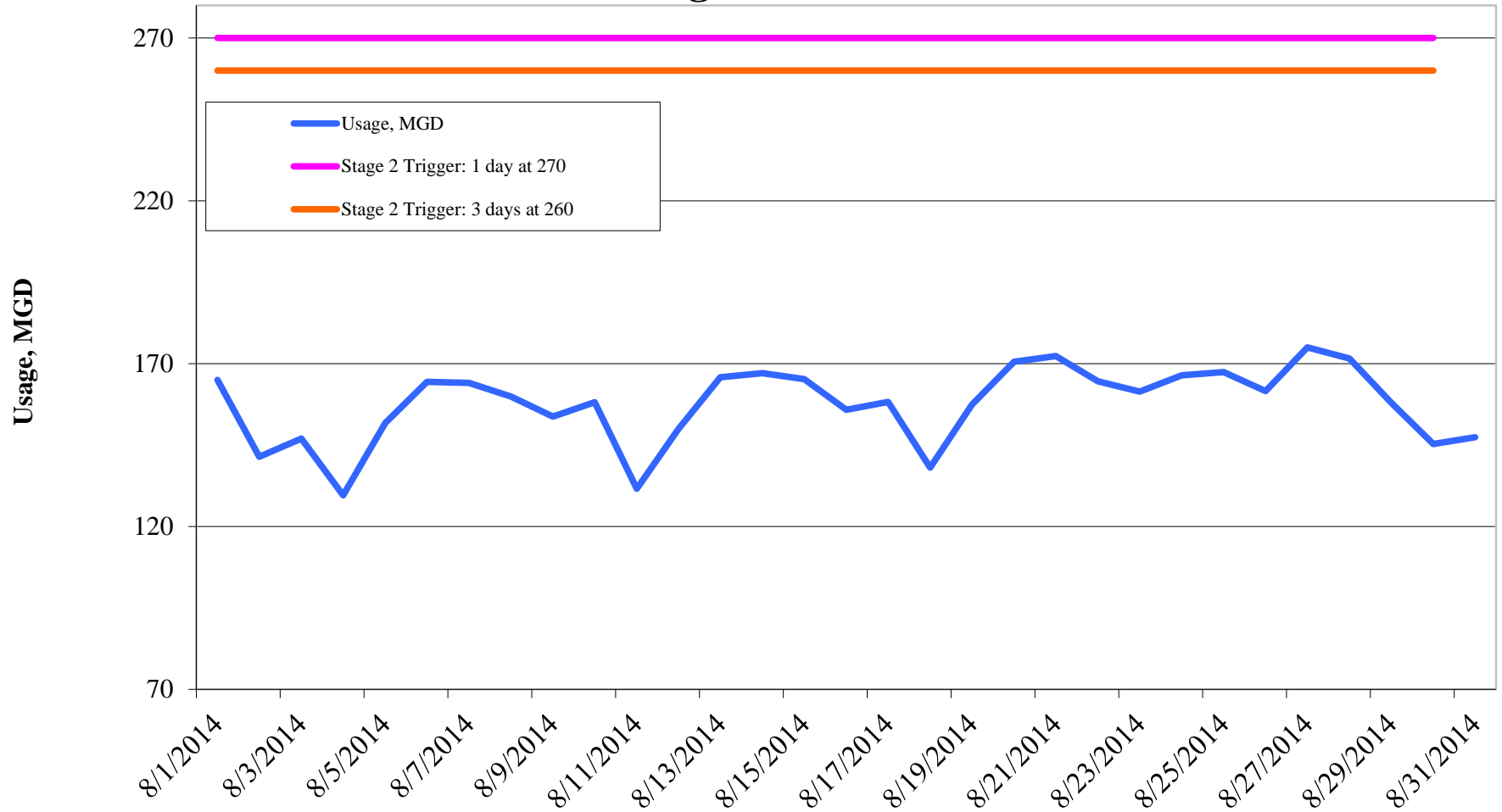
Reclaimed Water, MG	FY2014	FY2013	FY2012	FY2011
Quarter I	232.52	355.06	387.37	347.61
Quarter II	155.12	306.31	306.78	225.33
Quarter III	280.30	347.78	380.87	377.83
Quarter IV		462.43	445.61	499.09
Total	667.94	1,471.58	1,520.63	1,449.86

Cost Benchmarks		
Benchmark	Peak, \$/gallon of capacity	Average, \$/kgal
Variable Water Treatment and Distribution Costs	N/A	\$0.35 (approximate)
System Expansion	\$3.75+ (approximate)	N/A
Avoided LCRA Payments	N/A	\$0.28 (approximate)

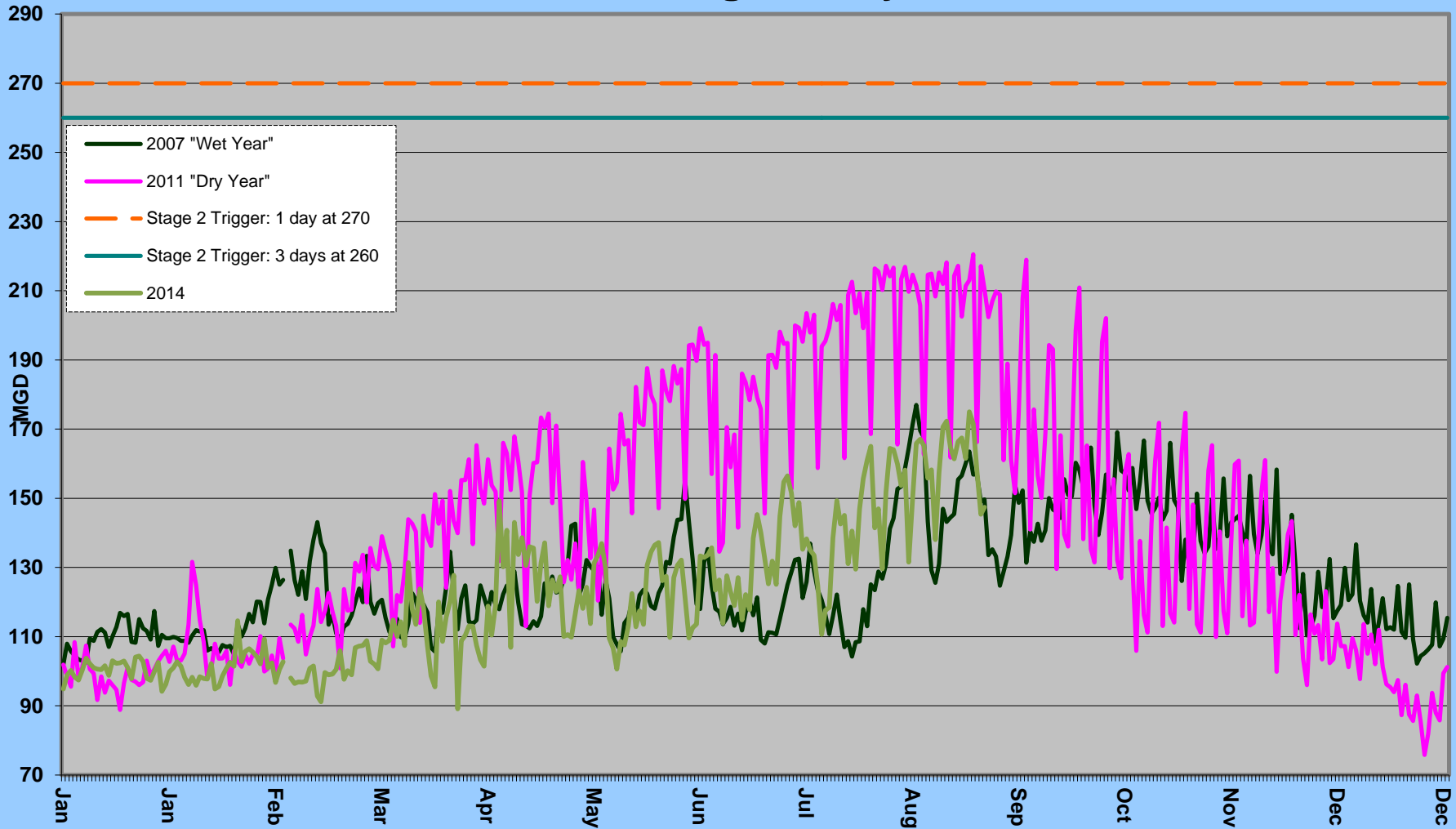
Total Cumulative Water Savings Projected for FY 2014



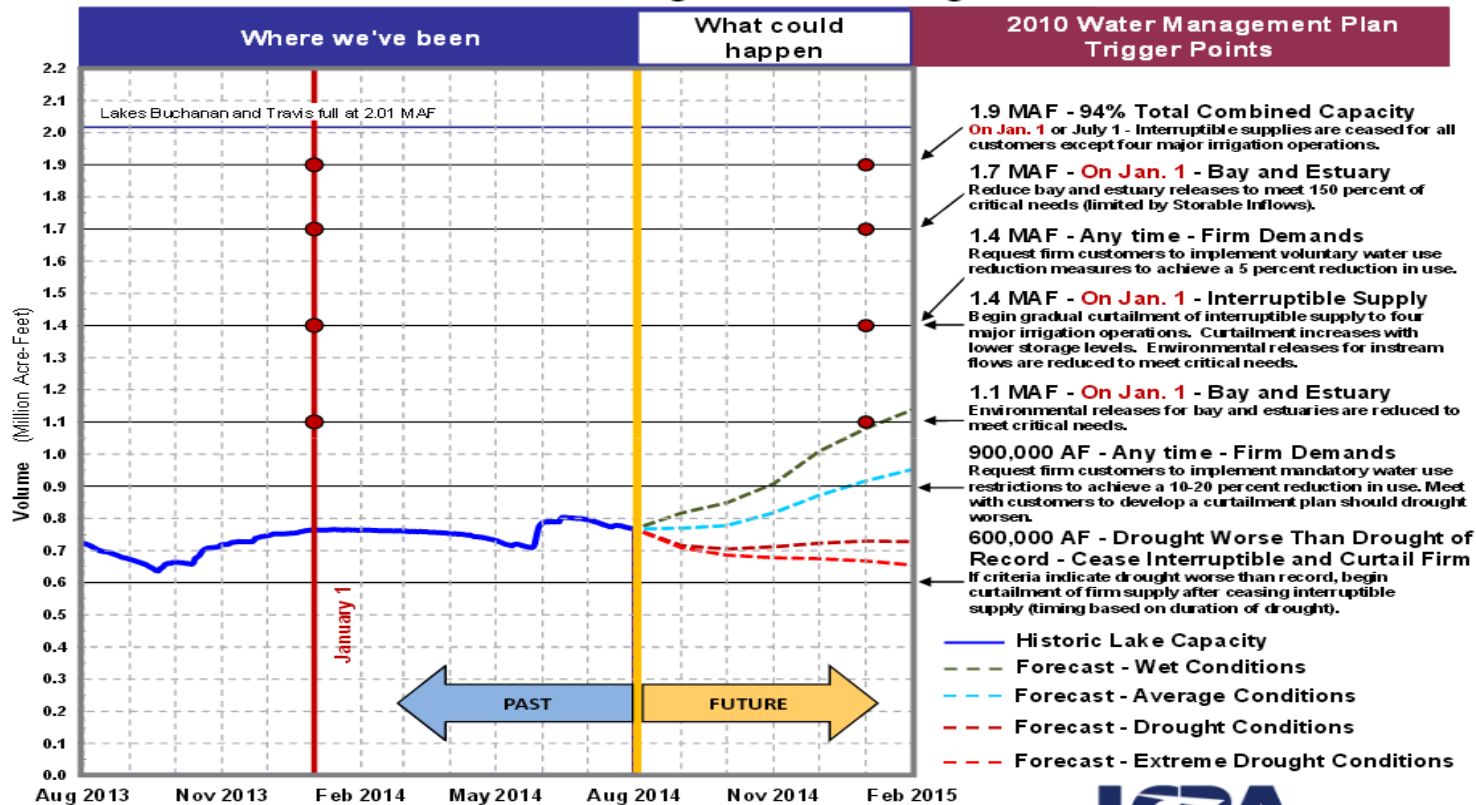
Daily Water Usage, August 2014



Water Usage Multiyear



Highland Lakes Storage *



Note: MAF equals 1 Million Acre-Feet

One Acre-Foot (a-f) equals 325,851 gallons.

Date: August 1, 2014

* Based on emergency drought relief measures affirmed by TCEQ on Feb. 26, April 30, and June 4, 2014, and additional emergency relief suspending releases of interruptible stored water for customers in the Gulf Coast, Lakeside and Pierce Ranch irrigation operations through the end of the irrigation season.



Source: LCRA

Highland lakes storage summary as of August 31, 2014

Combined lake storage: 0.698 million acre feet

Combined reservoir total: 35% full



Drought Status & Water Supply

Monthly Report September 2014

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



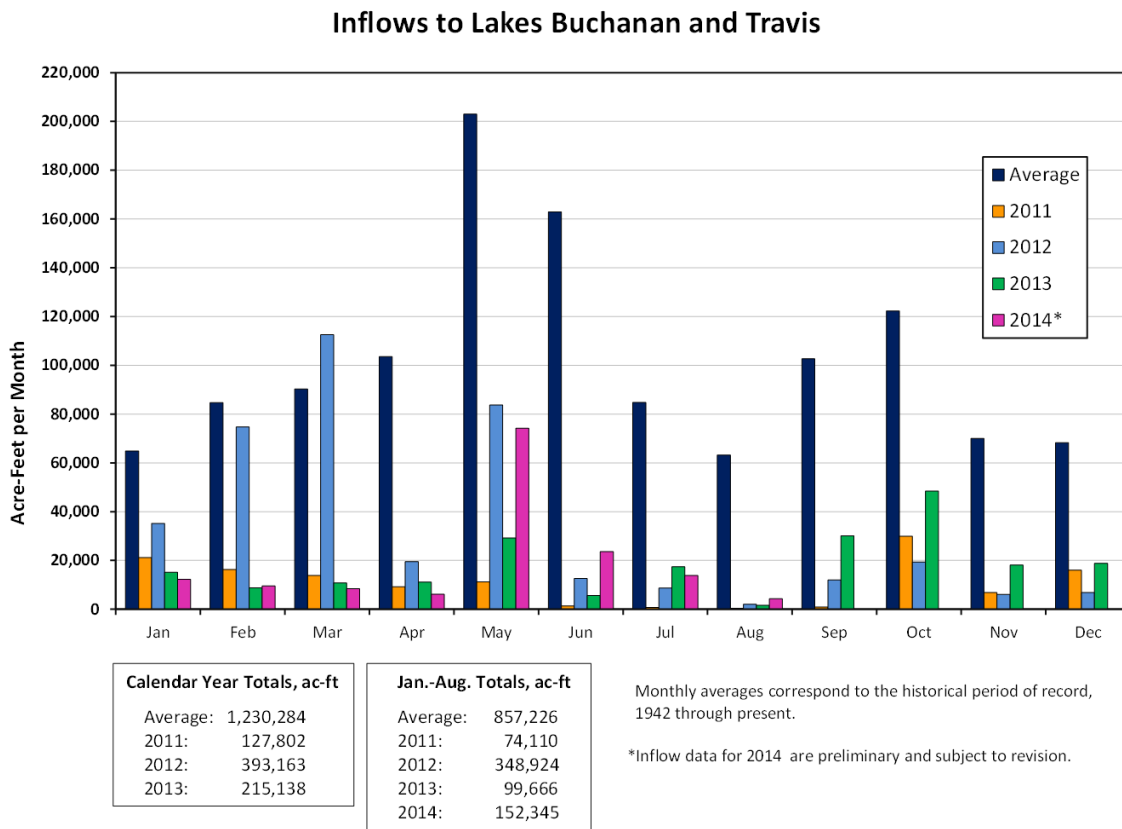
Monthly Drought Status and Water Supply Report:

The Colorado River basin is experiencing an epic drought that is continuing to deepen and may continue to do so for years into the future. The information in this drought status and water supply report is updated on a monthly basis.

Inflows to Lakes Travis and Buchanan:

Inflows to lakes Travis and Buchanan are a key measure of the drought's intensity. The top four all-time lowest inflow years in the period of record have occurred since 2005. These low inflows are considerably lower than the lowest annual inflow during the 1950's drought of record (501,926 AF in 1950). The extreme low inflows of 2011 were only 10% of the average annual inflow since lakes Travis and Buchanan were first filled in the early 1940's.

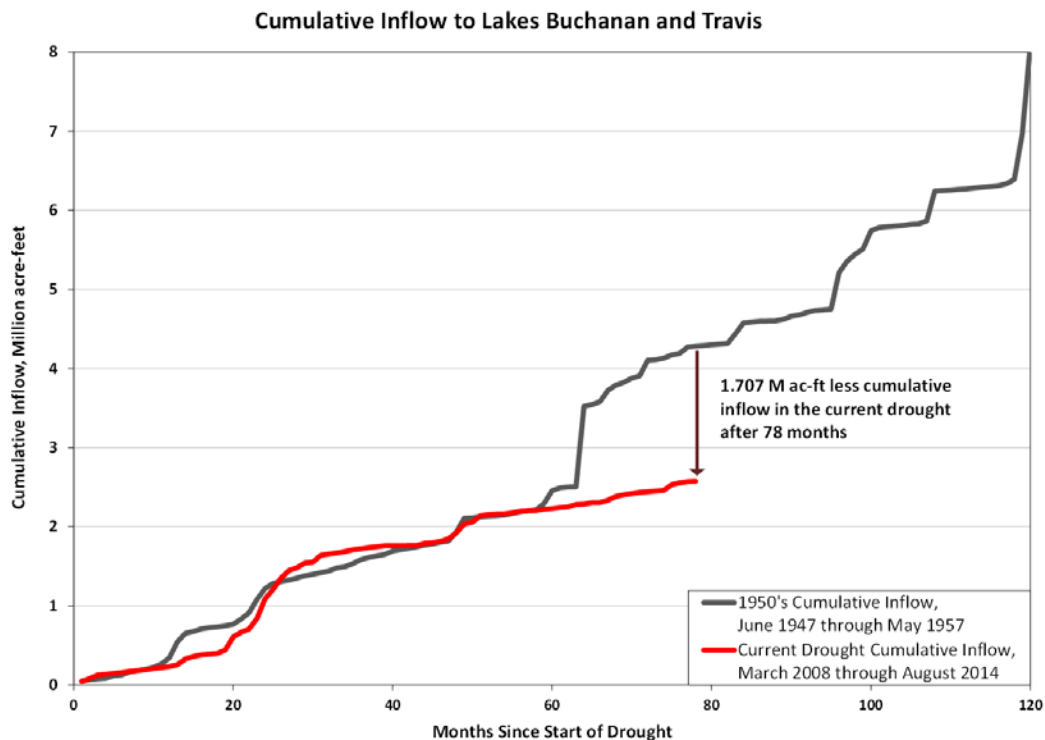
The January-August 2014 period is the 4th driest January-August stretch since the lakes were built. The inflows during this 8-month period were 152,345 acre-feet (AF). August 2014 lake inflow was 4,355 AF. One acre-foot equals 325,851 gallons. The monthly inflows for January 2011 through August 2014 are shown in the graph below:



The following is a table of the top 10 lowest inflow years. These inflows represent the volume of water flowing in to lakes Travis and Buchanan on an annual basis.

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

The cumulative inflow graph below shows the cumulative inflow into lakes Travis and Buchanan since March 2008 as compared to the cumulative inflow in the 1950's drought of record. The current cumulative volume of inflow is approximately 1.7 million AF below the cumulative inflow through the same number of months in the drought of the 1950's. These extreme low inflows represent uncharted territory for drought in this basin. The cumulative total of inflows to the lakes through the drought is a key hydrological measure of the drought's intensity and duration.

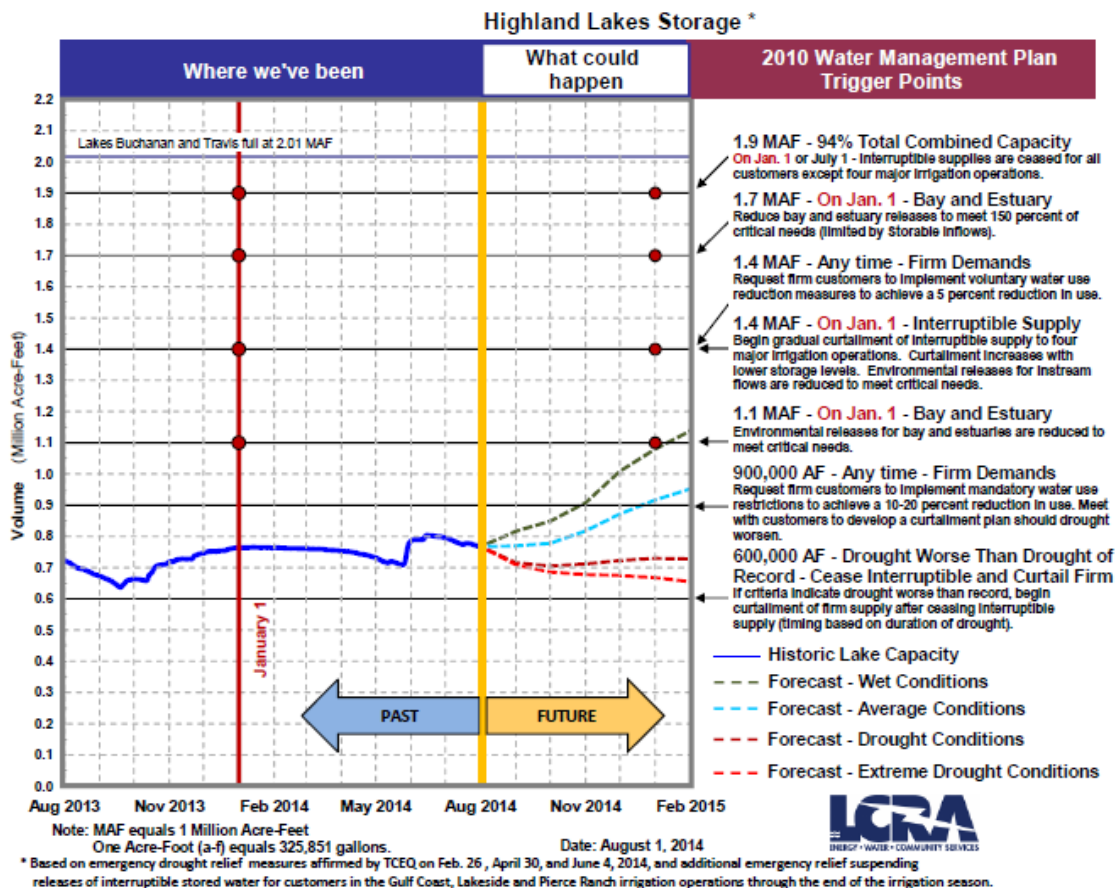


Combined Storage Volume and Forecast:

Another key measure of the drought's duration is the combined storage volume of lakes Travis and Buchanan. As of September 8, 2014, the current combined storage was approximately 698,000 AF (35% of full). For reference, the lowest all-time combined storage volume was 621,221 on September 9, 1952. Last summer the combined storage reached as low as 637,046 AF on September 19, 2013.

LCRA's 6-month projection update for September is not yet available. The LCRA August 2014 projection, which was provided in last month's report is shown below.

August 1, 2014 LCRA 6-Month Combined Storage Projection:



Dropping to 600,000 AF of combined storage or below would be the final trigger requiring a declaration of a "Drought Worse than the Drought of Record" by LCRA's Board. This declaration would trigger LCRA pro-rata curtailment of firm water customers at an initial 20% reduction off of a baseline demand as recorded from September 2010 through August 2011. LCRA has indicated that 30% or more pro-rata curtailment requirements could be required at lower combined storage volumes. Specific LCRA combined storage volumes for deeper pro-rata curtailment levels have thus far not been established by LCRA's Board.

The following table shows the March 1st combined storage volume of lakes Travis and Buchanan over the past 5 years.

Year	March 1 st Combined Storage in Acre-Feet
2010	1,652,638
2011	1,534,658
2012	846,820
2013	822,364
2014	761,448

The graph on the cover page of this report shows the combined storage volumes in lakes Travis and Buchanan since January 2005. Although in LCRA Water Management Plan terminology the current drought started early 2008 when the lakes were last full, a look at the combined storage graph shows that the pattern of this multi-year drought extends back through 2005. So, since unprecedented low inflow conditions can quickly return, a return to full lakes, as in 2007, does not necessarily mean that the multi-year drought is over.

Drought Conditions and Weather Outlook:

The National Oceanic and Atmospheric Administration (NOAA) National Weather Service Climate Prediction Center's United States seasonal drought outlook over much of the mid to western parts of the lower Colorado River basin through November 2014 is: drought remains but improves. Based on their September 4, 2014 prediction, the National Weather Service Climate Prediction Center projects that the chance of El Niño conditions is at 60-65% during the Northern Hemisphere fall and winter. El Niño conditions have the potential to generate wetter weather probabilities.

Demand-Side Management:

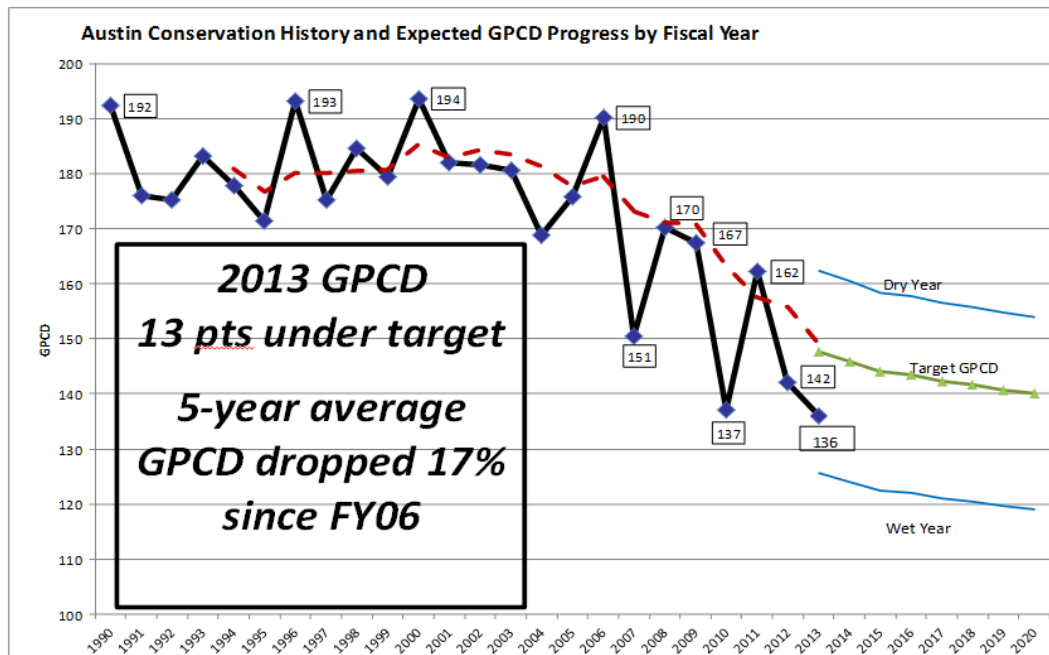
During this drought, and beyond, Austin's core water management strategies have included demand-side management through implementation of Austin's Water Conservation Program and Drought Contingency Plans, as well as continued development of water reuse.

Austin has been in Drought Contingency Plan (DCP) Stage 2 restrictions, which include no more than 1-day per week watering, nearly continuously since September 2011. Austin has already been meeting its initial 20% water use reduction goals consistent with LCRA-approved pro-rata firm customer curtailment goals in both years 2012 and 2013. As part of its firm water customer pro-rata curtailment plan process, LCRA confirmed over 26,000 AF of documented annual water savings in the "reference year" (September 2010 through August 2011) from Austin's water conservation programs, including water reuse. These documented annual water conservation savings do not include additional savings Austin has achieved through Stage 2 implementation.

In accordance with Austin's Drought Contingency Plan (DCP), Austin is prepared to implement Stage 3 restrictions when the combined storage volume of lakes Travis and

Buchanan falls below 600,000 AF. Stage 3 allows 1-day per week watering but further restricts watering hours and includes other additional restrictions.

Austin's community response to water conservation and the drought continues to be significant. Last year, Austin's water use in terms of gallons per capita per day (GPCD) was 136 GPCD. This GPCD is reflective of a trend which is on path to meet Council's goal of reducing total water pumpage to 140 GPCD by 2020. As shown in the GPCD graph below, Austin's total pumpage GPCD has decreased by 17% in 5-year rolling average since FY 2006.



LCRA Water Management Plan (WMP) Revisions and Emergency Orders:

With more than a century of reliance and investment, Austin's core supply and infrastructure systems are centered around the Colorado River supply. Therefore, protection of Colorado River system firm water interests is critical. Austin has senior water rights and firm water supply agreements with LCRA that provide Austin with firm water supplies of up to 325,000 AF per year. This amount is roughly double Austin's current level of demand.

LCRA's operations and management of the water stored in lakes Travis and Buchanan is guided by a Texas Commission on Environmental Quality (TCEQ)-approved document referred to as the LCRA Water Management Plan (WMP). LCRA's WMP is currently undergoing a critical revision process, being coordinated through TCEQ, which has been extended to incorporate drought year data (currently through the end of 2013).

Concurrently, LCRA has been operating under TCEQ Emergency Orders (EOs). These EOs allow LCRA to depart from operating under their current WMP. EOs and the ongoing drought conditions have resulted in cut-off of stored water supply from lakes Travis and Buchanan for three of the four agricultural irrigation divisions in the lower counties of the lower Colorado River basin. The current EO that LCRA is operating

under was issued by the TCEQ Executive Director on July 24, 2014 and was affirmed by the TCEQ Commissioners on August 6, 2014. The current 120 day EO terminates on November 20, 2014.

At their August 20, 2014 meeting, LCRA's Board reviewed LCRA staff recommendations for revisions to LCRA's 2012 WMP application currently pending at TCEQ. LCRA's Board set a vote for September 17, 2014 to consider approval of revisions for submittal to (TCEQ) and directed LCRA staff to meet with stakeholders to review modeling results and other information used by LCRA staff in developing their recommendations and to consider adjustments that are consistent with specified key criteria. These criteria include maintaining combined storage above 600,000 AF through a repeat of historic hydrology through 2013 and including a three-tier regime for determining water availability for interruptible agricultural customers that considers storage and inflow conditions.

City of Austin representatives continue to work diligently through the critical LCRA WMP revision process, including participating in the LCRA staff led stakeholder input meetings currently underway, and TCEQ Emergency Order processes to proactively ensure reservoir management is consistent with Austin's firm water interests and with LCRA's duties under its lake permits and its agreements with firm customers such as the City.

Drought Response Planning Update:

Austin Water Resource Planning Task Force (AWRPTF)

The Austin Water Resource Planning Task Force (Task Force) was created by City Council (Resolution No. 20140410-033) in April 2014 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. The Task Force was charged with making recommendations on any alternative water sources including conservation, reuse, regional transmission systems and partnerships, groundwater, aquifer storage, as well as other potential sources in the region. The Task Force was supported by Austin Water and Watershed Protection.

The Task Force convened its first meeting on May 5, 2014 and met intensively through June 25, 2014 to execute their charge. The Task Force's final report and recommendations to Council is available on-line at:

http://austintexas.gov/sites/default/files/files/Water/AustinWaterResourcePlanningTaskForce_ReportToCityCouncil.pdf

The attached table summarizes AWRPTF recommendations from the report.

August 7, 2014 Council Resolution (Resolution No. 20140807-090)

On August 7, 2014, City Council passed a resolution (Resolution No. 20140807-090) directing the City Manager to report back to Council by September 25, 2014 with a proposed schedule, proposed plan, and proposed budget for implementing certain key recommendations from the Task Force report and to include a plan for a stakeholder process. Council Resolution No. 20140807-090 is available on-line at:

<http://www.austintexas.gov/edims/document.cfm?id=214617>

Preliminary Draft - Subject to Change

Information in this section to be developed in coordination with Resolution No. 20140807-090 report back to Council due September 25, 2014

		Reference Location in AWRPTF Report to Council July 2014	Status	Budget	Schedule	Comments
Develop an Integrated Water Resource Plan (IWRP) and Independent Conservation Assessment		Section IV. 1.0, pg. 8				
	Include an independent analysis of the potential water supply benefits of implemented and non-implemented conservation programs - Conservation Potential Assessment	Section IV. 1.1, pg. 9				
	Additional IWRP focus items are listed in report including decentralization , diversification of supply sources, etc.	Section IV. 1.2, pg. 10				
	Create a comprehensive projected water demand model based on disaggregated uses and regularly updated to reflect advances in water efficiency and conservation technology and to capture other factors that we know affect water usage, including land use (i.e., density), water pricing, and climate trends.	Section III., pg. 7 and Section IV. 1.1, pg. 9				
Use Water Conservation and Supply Project Evaluation Matrix to evaluate different potential water supply projects		Section IV. 2.0, pg. 11				
Proactive Implementation of Drought Response Stages		Section IV. 3.1.1, pg. 13				
	Interim Stage 3 drought restrictions - Development and implementation of an Interim Stage 3 drought restriction as soon as feasibly possible to preserve water supplies. We recommend the implementation of Stage 3 Interim at no later than 500,000 acre-feet (combined storage for Highland Lakes).					
	Implementation of Stage 4 - no later than 400,000 acre-feet (combined storage for Highland Lakes).					
Implement Priority Water Conservation Measures		Section IV. 3.1.2, pg. 13				
	Develop Benchmarks - Cost effective strategies that reduce water use should be a priority. AWU should develop benchmarks with the aid of independent consultants with a historical commitment to conservation, reuse, and decentralized options to use in evaluating potential water conservation programs.					
	Toilet replacement programs —replacing older, inefficient toilets should be a priority. There are a variety of programs contemplated by the utility that target toilet replacement.					
	Capturing cooling tower condensate - in new facilities should be required.					
	Gray water system requirements - Task Force recommendation to remove all restrictions for gray water systems that comply with gray water requirements of the 2012 Uniform Plumbing Code. Also recommend removing other codes and ordinances that stand in the way of increasing our water efficiency and expanding the use of local water resources should also be removed. (Recommended by Task Force to be done prior to implementing Stage 4, Section IV. 3.1.1, pg. 13)					
	Irrigation and system-related measures - Engage home and commercial builders to discourage in-ground irrigation systems and limit irrigated area in new development (similar to programs implemented by Georgetown, San Antonio, and the LCRA). Task Force recommended that impact fees should be higher for new construction built with irrigation systems and other features that use more water and lower for water efficient or water neutral new construction.					
	Water report software or services - Invest in customer water report software or services that can realize greater customer water savings and more cost-effectively market Austin Water's existing incentive programs.					
	"Completing the Core" Reclaimed Water System Improvements - Developing the remainder of the core reclaimed water system has the largest potential water supply impact of any demand-side strategies to better utilize existing water supplies.					
	Leak and Pipe Failure Detection and Remediation - Continue and enhance efforts to reduce leaks and system losses from AWU infrastructure, with greater transparency on current efforts and a cost-benefit analysis of options for reducing system water losses. Specifically, develop and share the relationship between loss reductions and costs.					

Preliminary Draft - Subject to Change

Information in this section to be developed in coordination with Resolution No. 20140807-090 report back to Council due September 25, 2014

	Reference Location in AWRPTF Report to Council July 2014	Status	Budget	Schedule	Comments
Mid-Term Demand-Side Management Strategies - Task Force recommended including a mix of regulatory and behavior-based options	Section IV. 3.1.3, pg. 14				
Building and plumbing code modifications;					
Behavior Modification, including software tools to help Austin water customers identify water-saving opportunities;					
Education - Value of Water initiatives and building a conservation culture should be a priority;					
Rebates and incentives (e.g., irrigation system removal);					
Consumption comparisons on average household bill;					
The decentralized concept;					
Reclaiming storm water for beneficial purposes.					
Pursue Short-Term Water Supply Strategies	Section IV. 3.2.1, pg. 15				
Automation of Longhorn Dam Gates;					
Walter Long Lake Off-Channel Storage (existing capacity);					
Varying Lake Austin Operating Level - implement at below 600,000 acre-feet of combined storage. Task Force recommended that this strategy be coupled with a robust education campaign to inform the public why this is being done. Task Force recommended that this proposal would be limited to non-peak recreational months.					
Capturing local inflows to Lady Bird Lake - Austin Water Utility should immediately calculate the estimated cost and yield of this option.					
Mid-Term Strategy options - Task Force recommended to study these in more detail to fully evaluate their suitability for water supply solutions	Section IV. 3.2.2, pg. 15				
Tiered implementation approach and diversification of water supply sources - should be achieved through integration of regional strategies identified in City and Region K water planning processes. Begin with the end in mind.					
Walter Long Lake enhanced off channel storage - If there is potential to replace Decker Power Station at Lake Walter E. Long, and new electric supplies do not need this water supply, the use of Walter Long Lake enhanced off channel storage should be implemented.					
Indirect Potable Reuse - The use of Lady Bird Lake to convey treated wastewater effluent from the South Austin Regional plant to an intake for the Ullrich Water Treatment Plant represents a significant departure from historical practice. Consider exercising this option in the event of 400,000 acre-feet of combined storage or less. Discharge into the lake should occur for the shortest possible time. Task Force advised that Council should recognize that permitting for the wastewater discharge permit into Lady Bird Lake could take a considerable amount of time.					
Strategies Recommended for Study	Section V., pg. 16				
Reclaimed Water Infiltration - recharge (injection) of treated wastewater into alluvial sediments along the Colorado River and pumping from alluvial sediments down-gradient.					
Aquifer Storage and Recovery (ASR) - including in the Trinity Aquifer, brackish Edwards Aquifer, and Carrizo/Wilcox Aquifer.					
Desalination - brackish Edwards and Carrizo/Wilcox Aquifers.					
Permanent intake to capture spring inflows from Lady Bird Lake					
Flow augmentation at Barton Springs - this will not provide additional water, but will provide significant environmental benefits by providing water to Edwards Aquifer users during severe drought, providing water to recharge the aquifer, and purchasing groundwater production permits from Edwards Aquifer permittees. These actions would allow for more discharge of groundwater from Barton Springs, thereby improving the conditions for the salamanders and minimizing harm to the salamanders during severe drought.					
Codes and Ordinances	Section VI., Pg. 17				
Where warranted, implement revisions to existing ordinances and development of new ordinances to achieve the City's goal of developing a culture of water stewardship and acknowledging the true value of water.					