




TO: Mayor & Council

FROM: Marc A. Ott, City Manager 

CC: Robert D. Goode, Assistant City Manager
Greg Meszaros, Water Director

DATE: June 29, 2015

SUBJECT: Water Restrictions

As you are aware, the month of May brought rains of historic proportions to the Austin region, including to the watersheds that contribute to the Highland Lakes. These rains brought the combined storage volume of Lakes Travis and Buchanan to about 1.42 million acre-feet (MAF) or 70% of full (on 6/29/2015). Full volume is about 2.01 MAF. Specific totals are shown below.

- Lake Travis: ~958,413 acre-feet (84% of full volume of ~1.1 MAF)
- Lake Buchanan: ~457,368 acre-feet (52% of full volume of ~0.9 MAF)

Austin's Drought Contingency Plan - Austin is currently under Stage 2 water restrictions. Under the criteria in Austin's Drought Contingency Plan, the City could return to Stage 1. The Drought Contingency Plan calls for consideration of returning to Stage 1 when combined storage in Lakes Travis and Buchanan reaches 1.1 million acre-feet and is projected to stay above 900,000 acre-feet for four months. The lakes have exceeded the 1.1 million acre-feet level and the Lower Colorado River Authority's (LCRA) projects that the lakes will stay above 900,000 acre-feet for at least the next four months. LCRA's figures assume that curtailed releases to agriculture will not resume. At the same time LCRA, is cautioning against moving too rapidly away from drought restrictions and Austin's utility, Austin Water, concurs with that analysis, for several reasons:

- The new Water Management Plan (which governs how much and how often water is released downstream for agricultural purposes) is currently pending before the Texas Commission on Environmental Quality (TCEQ). As previously reported, this plan protects Austin's rights in a stronger fashion than the current plan. We expect that TCEQ could issue the Water Management Plan in July and consider adoption by late summer. I've also included in the Attachment a status report on LCRA's Emergency Order application.

- Going back immediately to a schedule less restrictive than the one-day-per-week watering schedule could send a signal that concerns about water are over. On the contrary, as shown in the attachment, history shows that massive rains during a drought can be followed by more years of drought.
- Citizens have adapted to one-day-per-week watering, as called for under Stage 2 restrictions, and have adopted a strong conservation ethic.

Therefore, based on these considerations, we will remain in Stage 2 Water Restrictions for the next few months. We will reevaluate conditions after the TCEQ issues the Water Management Plan.

Next Steps - The Drought Contingency Plan was adopted by the Council in 2012 after an extensive citizen stakeholder process. This Plan has served the City and region very well, and continues to do so. We continue to learn lessons from the drought and it may be wise to consider adjustments in that plan. Most prominently, the largest savings measure has been the one-day-per-week watering restrictions. Austin Water has suggested that it is time to consider adopting one-day-per-week watering permanently. This would be a major step for the City, and would mean changes to the Drought Contingency Plan and the City Code. Consequently any such changes should be considered by a new stakeholder process.

Going to a permanent one-day-per-week watering approach features several positives and important features consistent with community values.

- It acknowledges that the region could still be in a long-term drought or even a permanent shift in climate.
- It acknowledges that citizens have adapted to one-day-per-week watering and that conservation is a strong community value.
- It continues to encourage residents to convert their yards to drought-tolerant landscapes, something that is important in the mid- and long-term for continuing to drive down water use.
- Austin Water's budget forecast already assumes one-day-per-week watering restrictions for the next five years, although the utility will continue to pursue changes in the business model.
- It keeps Austin in a conservation leadership role in the region and the country.

I have directed the Water Utility staff to bring a potential change to the City's Drought Contingency Plan to the Public Utilities Council Committee as soon as possible to begin the community discussions.

ATTACHMENT

Status of LCRA Emergency Order Application to TCEQ

- Emergency order expired June 18, 2015.
- LCRA has filed for a new emergency order (EO), with revisions based on the recent rains
- If EO not extended then the 2010 WMP would go back into effect

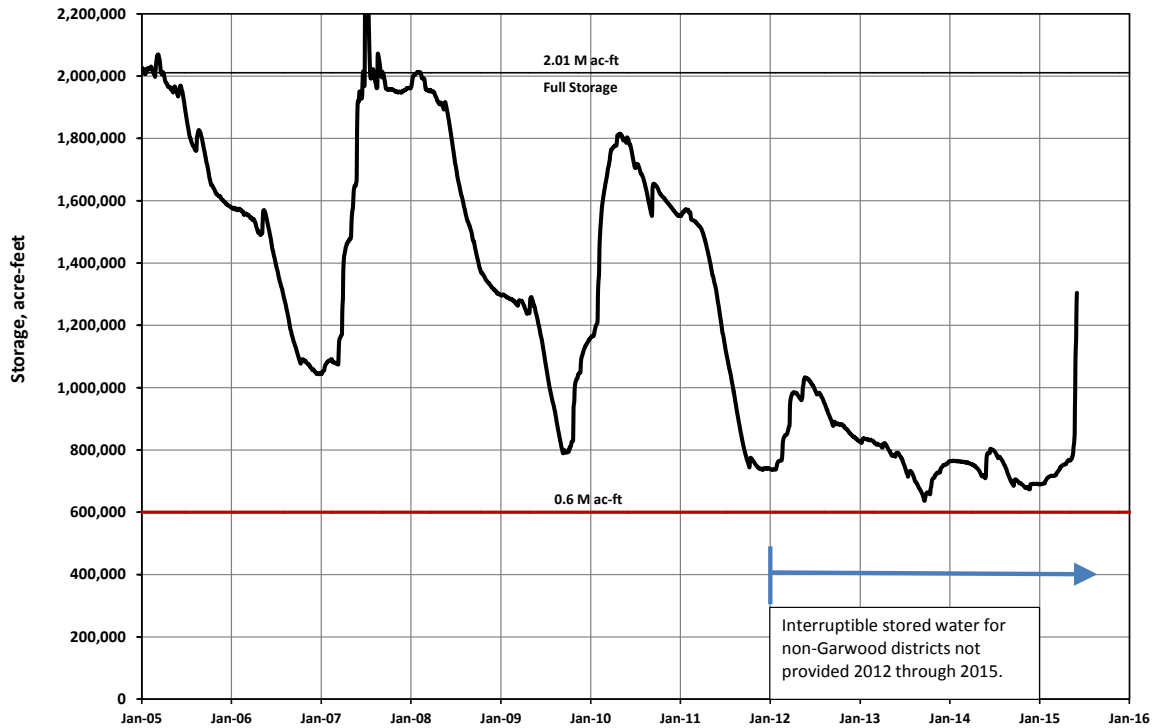
As you likely know, in 2011, the hottest and driest year of the drought, stored water totaling 433,251 acre-feet of was released to LCRA's downstream interruptible agricultural customers (primarily rice farmers), more than four times Austin's municipal stored water use that year. On total water use, which includes run of river, these agricultural customers use about three times what Austin customers used in 2011. This action was devastating to lake levels, but was consistent with the Water Management Plan (WMP) in place at the time, starkly illustrating the need for revision. After that LCRA applied to TCEQ for an emergency order to curtail most agricultural, or "interruptible," releases and a series of emergency orders have been in place since then. The emergency order currently in effect expires on June 18, 2015. Before the recent rise in lake levels, LCRA applied for another emergency order to continue after June 18 which would be expected to cover the remainder of the crop season. On June 4, LCRA amended this emergency order application based on the recent increase in lake storage. LCRA's amended application continues to request the same cut offs of interruptible stored water releases to the end of the crop season this year. If there is no emergency order in place after June 18, then the management of the lakes would return to the 2010 Water Management Plan (WMP).

Under the 2010 LCRA Water Management Plan (current plan) based on a January 1 look at combined storage (which was at 689,648 acre-feet) the amount available for downstream irrigated agriculture would be 175,000 acre-feet at the downstream diversion points. On average there are about 20% transportation losses, which in this instance amount to 35,000 acre-feet, for a potential total release of 210,000 acre-feet. Generally less water is needed for making a "second crop" and only some of the farmers have planted rice this year on groundwater, so it is unclear that they would need this full amount of water.

History of lake storage levels during current drought

- For perspective, the combined storage on May 1, 2015 was ~767,000 acre-feet or 38%. There has been an increase of ~600,000 acre-feet, which is the largest increase since the combined storage rose by more than 1.0 MAF over a period of 7 months between late 2009 and early 2010.

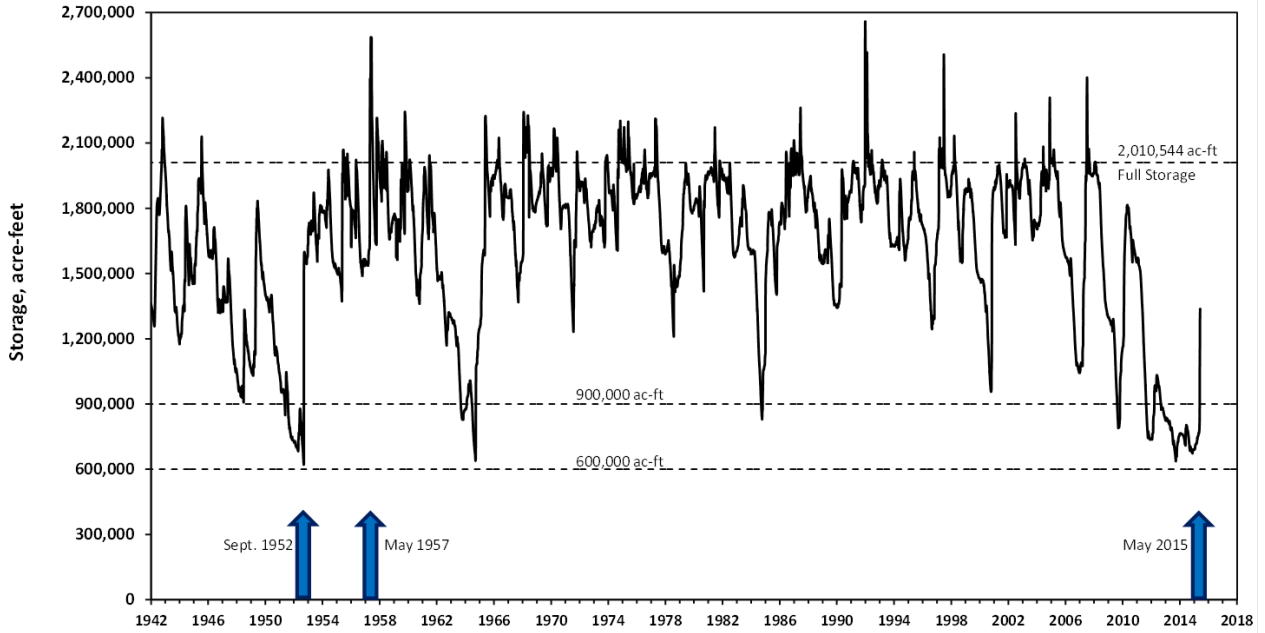
Combined Storage of Lakes Buchanan and Travis
January 1, 2005 through June 1, 2015



- For additional perspective on the current condition of lake storage, the following graph shows the combined storage volume over the period of record, since completion and filling of the lakes in January 1942. The drought of the 1950’s, which has long stood as the “drought of record” for the basin, extended from 1947 to 1957. LCRA’s Preliminary data analysis, including data through the year 2014, indicates that the current drought likely has eclipsed the 1950’s drought as the basin’s critical period for firm water supply yield. In September 1952 in the middle of the 1950’s drought the lakes experienced a significant increase in storage much greater in volume than experienced in May 2015 yet the drought continued until May 1957.

Combined Storage of Lakes Buchanan and Travis

January 31, 1942 through June 1, 2015



Inflows to the lakes still have not caught up with inflows during the fifties drought

- Inflow of water to the lakes is another key aspect of current water supply conditions. The following graph shows the cumulative inflows of water in the 1950's drought compared to the inflows in the current drought. Even with significant inflows into lakes Buchanan and Travis in May 2015, the cumulative inflow through the span of the current drought thus far is ~1.5 MAF less than in the 1950's drought. This chart shows monthly flows so does not include inflows into the lakes during June that have continued after the May rains.

Cumulative Inflow to Lakes Buchanan and Travis

