

Al Braden

December 6, 2018

Senator Brian Birdwell
Sunset Advisory Commission
PO Box 13066
Austin, TX 78711

RE: Lower Colorado River Authority

Dear Senator Birdwell and Commission,

Reviewing the Lower Colorado River Authority (LCRA) is complex and multi-faceted. There is so much they do so much well that is appreciated:

1. Managing the storage and distribution of the surface waters of the Colorado River for beneficial use among a wide range of stakeholders.
2. Managing the floods on the Colorado River as demonstrated this October.
3. Providing Electric Transmission service for a wide area of Texas, including bringing renewable energy supplies from West Texas.
4. Providing public parks and river access points throughout the region.
5. Providing community services and grants throughout the region.

The Sunset staff report focused on areas for improvement. These - merit serious consideration:

Key Recommendations

1. Require LCRA to adopt an open public engagement for water supply projects.
2. Direct LCRA to provide more detailed financial information in its public documents.
3. Direct LCRA to provide more transparent, consistent and accurate agenda meeting notices.

To these, I add three more:

1. LCRA should be prohibited from groundwater exploitation, transport and sale.
2. LCRA should do proactive long-range planning for their water, transmission and electric generation businesses that utilizes the best available science for future conditions.
3. The Sunset Commission should also review LCRA's electric generation and transmission operations as a means of Legislative review and public interest engagement. The first Sunset Review of LCRA electric operations should occur within two years.

I would like to discuss these three points in greater detail.

1. LCRA Should Be Prohibited from Entering Groundwater Business

During the drought of 2008-2016, LCRA Management and Board of Directors made a goal of increasing their water supply by 100,000 acre-feet/year (AFY) to meet potential shortages in future droughts and to supply new customers. A major portion of that goal was recently achieved with the opening of the Arbuckle Reservoir in Wharton County. With the right conditions, this could add up to 90,000 AFY to serve downstream users, allowing more water to be retained in the Highland Lakes. Other supply plans were also adopted to build LCRA's reserves and resiliency.

One additional water supply LCRA plan included was the purchase of groundwater rights from the Griffith League Ranch in Bastrop County in 2015. LCRA originally told the press they planned to pump 5,000 AFY. In their 2018 permit application, they asked for a 25,000 AFY permit with the Lost Pines Groundwater Conservation District. Local residents were blindsided and shocked. The District website shows an estimated 47,811 in current pumping against a projected recharge rate of 35,500 AFY - but the current permits total **126,488 AFY before LCRA.**

LCRA Management characterized this project in a very low-key way – hardly mentioning it in their plans or reports – and yet it crosses a fundamental red line. They may have underemphasized the distinction of between surface water impacts and groundwater impacts to the Board. They have yet to hold public information sessions or meet with affected landowners, seeming instead to force the permit through hearings and legal challenges where they hold tremendous financial and staff advantage over local landowners. This demonstrates the lack of transparency that the Sunset staff discusses in their need for improvement.

LCRA's mandate is to manage the waters of the Colorado River which it does that through a Water Management Plan with input by all the interested stakeholders. This plan is then ratified by TCEQ, the state's authority over surface water. All parties come to that table understanding LCRA's role and responsibility in managing the Colorado River's water for the optimum benefit of all.

Groundwater is a different thing all together: It is not just some more water. It is a precious local resource for farmers, ranchers, homeowners and municipalities to serve their local needs. Though groundwater aquifers may stretch across great swaths of Texas, they can be easily depleted on a localized basis by over-pumping. Water in a sand/sandstone aquifer - like the Carrizo-Wilcox aquifer - faces resistance in moving laterally through the sand layers. Faced with a high level of pumping causing a localized depletion, water will be drawn from nearby layers above and below as well as surface water and shallow well formations before it can be drawn in from hundreds of miles away in a horizontal layer.

Thus - on a local basis - groundwater is a zero-sum game. Excessive pumping of any layer will deplete others as is demonstrated in hydrological studies conducted by George Rice for Environmental-Stewardship. (See White Paper attached and links at end of letter.)

Excessive pumping by LCRA and other commercial permit holders will deplete local wells that landowners depend on for their livelihood. Landowners are fighting all the groundwater export merchants, but LCRA - as a state agency - is a special case.

It is clearly not the role of a state river authority to take well water from one group of citizens to export and sell it to another.

Residents of Bastrop and Lee Counties most affected by LCRA's move into groundwater have organized a coalition to protest and challenge that permit application. The Lost Pines Groundwater Conservation District (LPGCD) – whose job it is to grant permits consistent with sustainable or tolerable use or Desired Future Conditions (DFCs) in groundwater parlance – held public hearings in Bastrop on September 26th with several hundred residents. About fifty spoke to the board about the damage LCRA groundwater pumping could cause in their lives. I can provide a link to that testimony at the hearing if you have time to view it.

The District then took all the permit contestants to the State Office of Administrative Hearings (SOAH) - now scheduled just after Sunset review for December 19th. Following SOAH's determinations of law and facts, the ball will be back in the LPGCD's court for a decision on the LCRA groundwater permit. See page 14 of Sunset Staff Report for their analysis of LCRA's lack of public engagement on this issue.

We asked the [LCRA Board of Directors at their November 14th](#) meeting to look into this carefully and understand that groundwater is not just some more water for their portfolio.

It is a serious threat to existing users and to their well-being and property rights. We have presented the [LCRA Board with a White Paper](#) detailing the critical issues involved and providing hydrological studies – using the state directed water models. It shows water migration between layers and impacts on aquifer flows into the Colorado River.

Currently the river gains water from the aquifers as it passes from Bastrop to the bay. Projections show that drying up the aquifers will decrease flow into the Colorado River. In the future it could be called on to contribute to recharging the aquifers. LCRA's responsibility to protect the river's flows will be threatened by its own exploitation of groundwater.

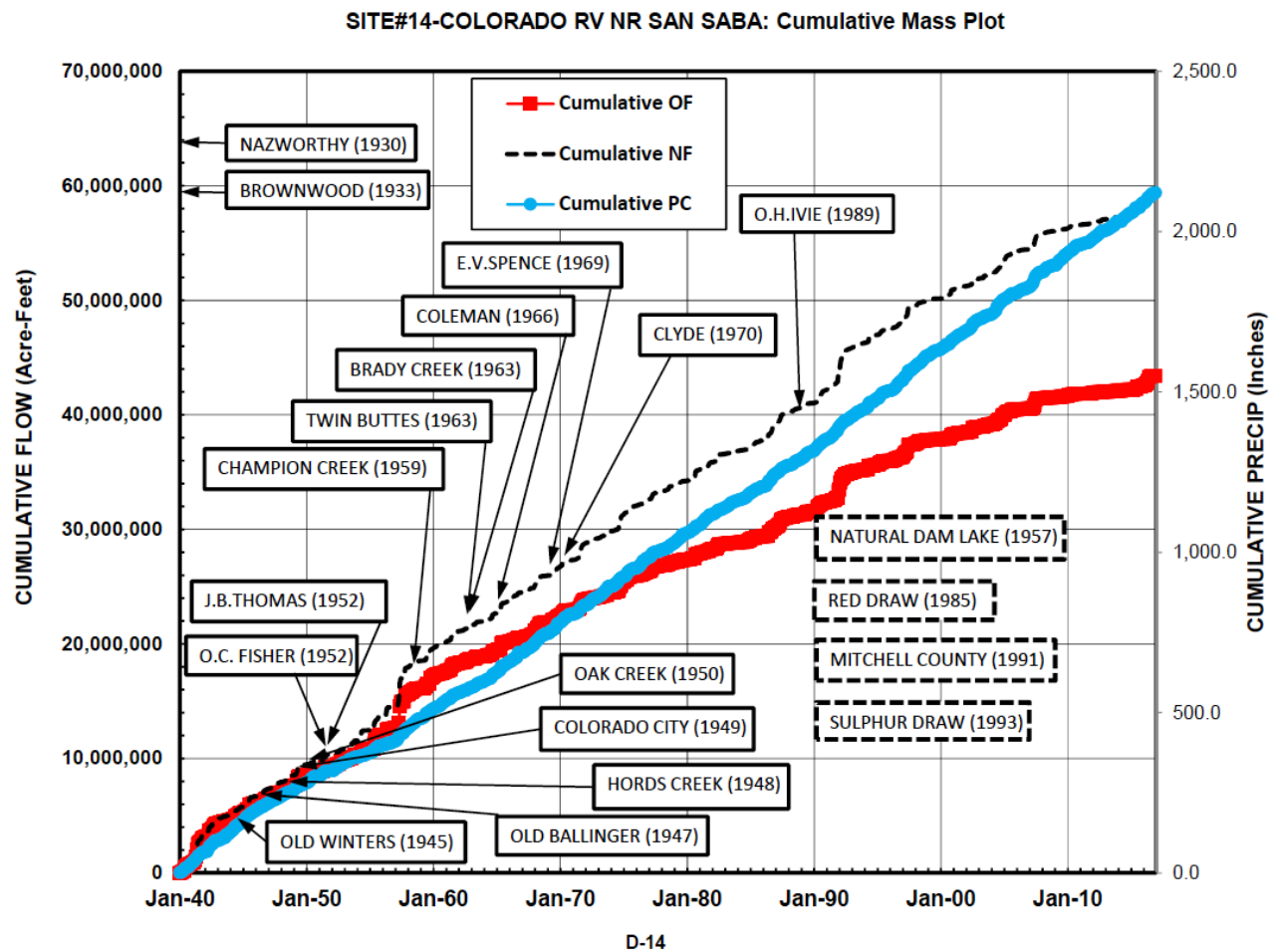
We urge the Commission to study our White Paper, understand these issues and restrict LCRA from entering the groundwater business. Direct them to manage the Colorado River and protect their interest in the river's flows from excessive groundwater pumping. Please restrain them from being part of the aquifer depletion problem.

2. LCRA Should Do Serious Long-Range Planning

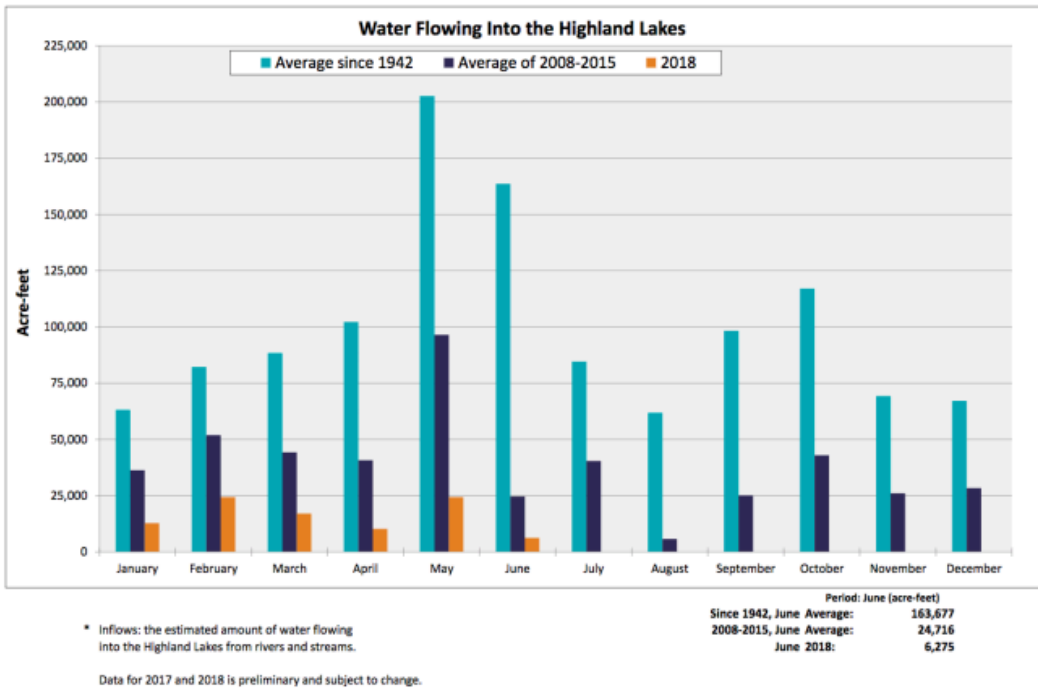
LCRA manages the region's most precious resource – water. And it manages important electric generation and transmission infrastructures. All of these resources have long term challenges in demand and supply. In the case of electricity, there are also powerful market and technological transitions underway that require long term planning.

Yet, LCRA's primary plan is an operational five-year Water Management Plan required by TCEQ that allocates available water supplies and describes the rules for interruptible supplies to lower basin farmers. Over such a short time horizon, the plan primarily looks backward at average inflows and hopes for the best.

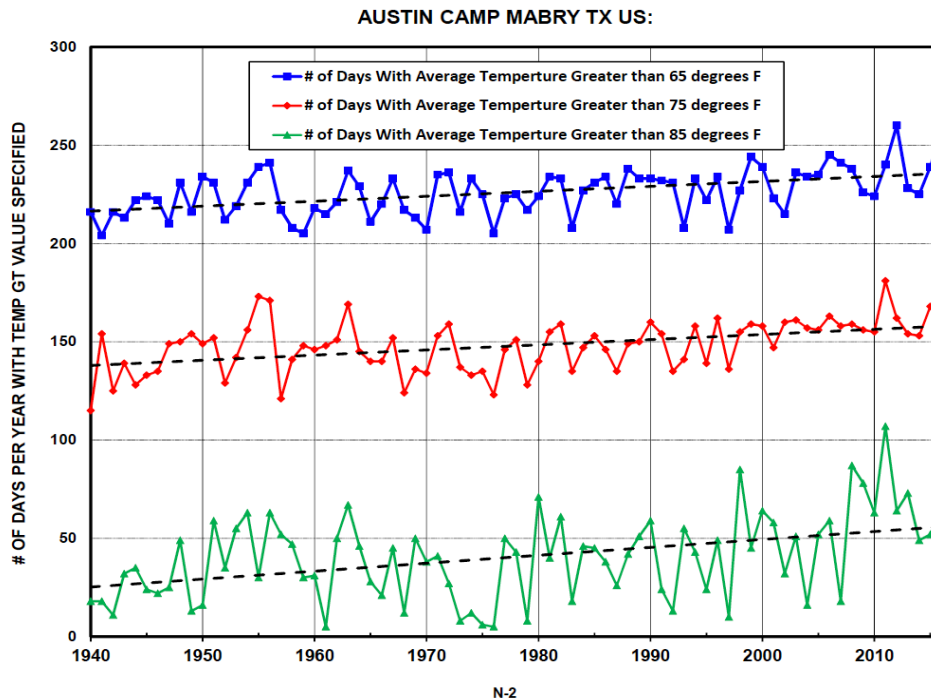
Important studies for the Texas Water Development Board (TWDB) concluded last August – *Evaluation of Rainfall/Runoff Patterns in the Upper Colorado River Basin* – shows Upper Basin's contributing flows decreasing as LCRA's own data on inflows to the Highland Lakes confirm.



Total precipitation was constant in the recent drought and nearly constant over the period of record - 1940 to present. The straight blue line shows cumulative precipitation (PC) over the period and the dotted line shows cumulative natural flows (NF) predicted by the state Water Availability Model (WAM). The sobering red line of cumulative observed flows (OF) represents what really happened. This red curve matches up well with the LCRA chart of inflows to the Highland Lakes that show a serious deficit during the drought and even into 2018. The October flood will skew the 2018 average, but the early 2018 inflows are very alarming.



The TWDB study attributes much of the declining downstream flow to upstream reservoirs, but also includes unquantified impacts of noxious brush in the watershed and stream banks, newly built stock tanks and ponds on private land, declining spring flows from groundwater declines and increased evaporation in soil and water surface due to warming temperatures.



All of this shows the serious need for realistic long-range plan by LCRA similar to Austin's just concluding 100 Year Water Forward Plan. Such a plan would look at declining inflows, population growth, increased temperature and evaporation, climate precipitation changes, the evolving renewable energy market in ERCOT and other factors that would affect all of LCRA's infrastructure and operating plans 20, 50 and 100 years into the future. They should incorporate the most robust science as well as significant and open stakeholder participation by both experts and the public. We in central Texas rely on those plans and infrastructures.

3. LCRA Manages Water - Runs on Electricity: Sunset Review Both

LCRA's business model is dominated by electric power generation and transmission operations. They too need to be reviewed by the Sunset Commission as a means of Legislative oversight and public interest. The electric business provides 95% of LCRA's revenue with Transmission Services Corporation (TSC) providing 85% of the total net income.

The electric operations should become part of the total review of LCRA in all future Sunset reviews as they are now only accountable to a Board of Directors appointed by the Governor and have no other requirement for public input and Legislative review -

yet they are critical to LCRA's ability to fund and manage major water infrastructure projects.

Presently, LCRA's investments in transmission infrastructure, including those to West Texas, are paying the bills. As a Public Utility Commission (PUC) regulated portion of ERCOT – the TSC income stream looks secure. The Texas grid continues to modernize and evolve and there will be additional opportunities for LCRA in transmission.

Electric generation, once LCRA's cash cow faces extreme market pressure within ERCOT – especially the costly coal operations at Fayette and Smithville. Many Texas coal plants have succumbed to the combination of natural gas and wind energy pricing in the past two years and independent studies suggest that the Fayette coal plant is losing money. LCRA's lack of financial transparency makes that hard to evaluate with certainty, but the low net income of the generation sector in the 2018 and 2017 LCRA financial statements suggest it is likely. The advent of low-cost afternoon solar that will put additional pressure on traditional generators.

LCRA should plan now to be a significant contributor to the future of renewable Texas electric supply. If there is a bright spot for LCRA in the demise of coal operations it is the 17,500 AFY of water used to cool the coal plant that will be freed up for other beneficial use.

CONCLUSION

Sunset review provides an important opportunity for public and Legislative input on the directions and policies of LCRA. More open public engagement, transparency and long-term planning are critical needs of this state agency that often does a great job for central Texans while shrouded in a self-contained world. Openness and engagement with the people it serves are key ingredients to future success and earning public trust.

Thank you for your work on the Sunset Commission and your consideration. I will appreciate it if this letter and attached White Paper are circulated to the Sunset Commissioners and Staff.

Best wishes,
Al Braden
Austin, TX

References:

White Paper for LCRA Water Operations Committee, November 14, 2018

http://bit.ly/LCRA_WhitePaper

Testimony for LCRA Water Operations Committee, November 14, 2018

http://bit.ly/LCRA_LostPinesCoalition

Reports referenced:

Evaluation of Rainfall/Runoff Patterns in the Upper Colorado River Basin, August 2017,

By Kennedy Resource Company in association with R. J. Brandes Consulting and Crespo Consulting Services, Inc. for Texas Water Development Board

www.twdb.texas.gov/publications/reports/contracted_reports/doc/1600012011_Kennedy.pdf

Daniel B. Stephens & Associates, April 6, 2018

Review of LCRA Permit Application Packet

Study for Lost Pines Groundwater Conservation District projecting impacts of LCRA wells in the Simsboro formation when considered in isolation for the application.

www.lostpineswater.org/DocumentCenter/View/96/LCRA-Hydrology-Review-PDF

George Rice, June 5, 2018

Evaluation of LCRA's Proposal to Pump 25,000 Acre-Feet per Year from the Simsboro Aquifer

environmental-stewardship.org/wp-content/uploads/2018/09/ReportWFig%20LCRA%2025000FINAL2.pdf

George Rice, March 22, 2016

GAM Predictions of the Effects of Baseline Pumping Plus Proposed Pumping by Vista Ridge, EndOP, Forestar, and LCRA [Power Plant]

<http://files.ctctcdn.com/421db11c001/986efdfb-ae5c-41b4-89f4-b1d0ea143209.pdf>

Coalition Organizations:

Environmental-Stewardship.org

SimsboroWaterDefenseFund.org

FriendsOfBastropWater.com