



**COMMENTS OF CENTRAL TEXAS WATER COALITION  
ON LCRA'S DRAFT RAW WATER CONSERVATION PLAN  
May 2019**

**General Comments**

The updated draft Raw Water Conservation Plan posted for comment on the LCRA website in late April 2019 includes some detailed information regarding the current and past water uses by LCRA and its customers. Despite LCRA's efforts to address its conservation achievements, the Plan is somewhat vague and overly generic with respect to some of the specific conservation strategies for the next five years. It is unclear whether an actual, in-depth evaluation of LCRA's conservation efforts implemented to date has been conducted for all customer groups. In 30 Texas Administrative Code §288.30, the Texas Commission on Environmental Quality (TCEQ) rules set forth the minimum contents for a Water Conservation Plan, and also require an implementation report. As currently drafted, the Plan does not appear to include the specified information.

For the various water user groups (municipal, industrial, and irrigation), the implementation reports should include such elements as: 1) a list of dates and descriptions of the conservation measures implemented; 2) data about whether or not targets in the Plans are being met; 3) the actual amount of water saved; and 4) if the targets are not being met, an explanation as to why any of the targets are not being met, including any progress on that particular target. The Plan must be expanded to address these criteria for agricultural irrigation conservation efforts in much greater detail. As the Plan correctly notes, irrigated agriculture provides one of the best opportunities for LCRA to reduce overall water demand through conservation programs. We encourage LCRA to pursue this opportunity using all available strategies, including water pricing that fully recovers LCRA's cost of service to this specific customer group, without reliance on revenues from rates charged to other water customers, on state or federal funds or grants, or on other LCRA resources and revenues.

**Section 1.2 -- History of LCRA Water Conservation**

LCRA notes that most of the conservation efforts in LCRA's irrigation divisions have been funded or partially funded by surcharge monies from Williamson County, as provided by House Bill 1437 in 1999. However, as the irrigation divisions are also the largest users of water in the Lower Colorado River basin, it is unclear why LCRA has not included needed and cost-effective conservation projects as part of the price of water charged to irrigation customers. These costs

should be included in the rates for irrigation customers, and irrigation water rates should not be subsidized by LCRA's other customers.

### **Section 1.3 -- 2014 Water Conservation Plan Results**

LCRA notes that it “has an ongoing process to expand conservation strategies with its customers to collect baseline data, conduct an extensive benchmarking effort of other successful water providers, and work with builders, landscape and environmental interests.” LCRA also notes that it has “mandatory requirements such as irrigation standards and permanent landscape watering schedules” for municipal customers, which “account for nearly 70 percent of the savings.” In contrast, the paragraph on the Conservation Plan's results for agricultural irrigation water use is even shorter than the one describing other water users, although the dramatic disparity in the magnitude of the water usage numbers and the huge quantities of potential water losses and savings for such customers would justify much more attention to irrigation users than to other users. LCRA should apply the same critical processes and evaluations used for non-irrigation users to the agricultural irrigation customers, who represent the largest historical water user group.

### **Section 2.1 -- Overview of LCRA Water Service Area**

Although CTWC realizes that Conservation Plans are prepared at five-year intervals, it would be helpful to provide a greater emphasis and evaluation of the unusual conditions during 2014 to 2018 that impacted the "Total Water Use" values set forth in Table 2-1. This reporting period includes widely varying conditions such as irrigation curtailment years and relatively wet years. As a result, it is challenging to use the data from this snapshot in time to develop long-term conservation strategies and metrics for evaluating their success during implementation. Perhaps these issues can be identified and flagged for further evaluation in the next couple of years?

With respect to the presentation of Table 2-1, please consider these editorial suggestions:

- Add the word "Agricultural" before "Irrigation Operations" on the left side of the table.
- In footnote 4, add the year "2015" to the years in which water use was curtailed.

### **Section 2.2.5 Agricultural Irrigation Water Use**

It is encouraging to see that LCRA is tracking and reporting water usage and canal losses by irrigation division via a metrics-based approach, as shown in Table 2-3. At the same time, we suggest a more detailed collection, presentation, and review of the water use numbers and metrics. For example, the Table should reflect the fact that some crops are less water-intensive than rice crops. In such cases, the amount of water per irrigated acre should be lower. The Table does not indicate whether groundwater was used to supplement irrigated acreage. If so, the data for assessing the beneficial, non-wasteful use of water is not reliable. A field could receive significant volumes of surface water in addition to groundwater, thus exceeding the total duty that is reasonable for the crop. We understand that LCRA has data providing information on irrigated acres and the crops being grown, and we request the use of such data to more closely

assess and assure the beneficial use of water for crop irrigation on a customer's fields. This kind of scrutiny was envisioned in the 1988 Adjudication Order for these water rights and in the Certificates of Adjudication subsequently issued by the state. LCRA should focus more closely on meeting the metrics initially established in those documents and apply the expected conservation savings that the state expected to see when these water rights were issued 30 years ago.

### **Section 2.3 -- 2019 Water Conservation Goals**

It is encouraging to see that LCRA is now setting and reporting water conservation goals for both municipal and agricultural irrigation uses. However, LCRA's 5-year conservation goal of 15,000 acre-feet per year for agricultural irrigation is confusing, as it appears that it includes the 13,000 acre-feet that has already been achieved in 2018 and is only calling for an additional 2,000 acre-feet in savings by 2023. These goals are too small, given the very high total water usage by these customers. It also seems that it would be more effective to set and track goals by irrigation division, given the fairly large range in usage per-acre between divisions. Further, it is unclear why LCRA requires mandatory water restrictions for municipal customers, but does not impose mandatory restrictions on water provided to its agricultural irrigation customers, particularly related to the 5.25 acre-feet per acre waste standard. For LCRA's irrigation divisions, the 5.25 acre-feet of water per acre metric for irrigation of rice crops included canal losses, although it appears that this standard has not been consistently applied through the years.

### **Section 3.3 -- Reservoir Systems Operations Plan**

In the second paragraph of this section, there is a brief list of LCRA's actions to improve its reservoir management operations, noting that it is "improving control of releases from the Highland Lakes to more precisely match releases to downstream demands." Assuming that this action refers to improvements in the handling of stored water that is ordered but not diverted (OND water), please expand the discussion of this important topic to quantify and propose strategies for minimizing the huge volumes of water that are released from storage but not diverted after being ordered by LCRA's downstream customers.

### **Section 3.14 -- Conservation Research and Verification**

The February 2011 TWDB Report by R.J. Brandes Company, the more recent August 2017 TWDB Report "Evaluation of Rainfall/Runoff Patterns in the Upper Colorado River Basin" by Kennedy Resource Company and the recent very low inflows during drought periods appear to indicate that adverse changes have, and may be continuing to occur, in the watershed that result in significantly less inflows than historically recorded. This is becoming an urgent matter, as LCRA data shows that 8 of the lowest annual inflows have occurred in the last 13 years, even though rainfall totals are roughly the same or even up. A new, currently underway, TWDB Study of the watershed will hopefully provide more quantifiable information, including specific impact issues, such as proliferation of upstream stock ponds, drilling of alluvial wells, and increases in brushy vegetation. Please add the protection and evaluation of inflows to the Highland Lakes to the list of topics for further research, analysis, and response.

## **Section 4.0 – Agricultural Water Conservation Strategies**

LCRA's discussion of Agricultural Water Conservation Strategies (Section 4.0) is woefully inadequate. For all strategies, the Plan should include a cost/benefit analysis to better understand the overall value of the past or future conservation efforts. The Plan seems to overlook proven and effective water conservation strategies, including LCRA's yearly opportunity to set water rates that promote efficient water use. In conjunction with the implementation of reasonable and nondiscriminatory water rates based upon full cost recovery by usage for agricultural irrigation customers, there are at least two additional strategies that should be included in the draft Conservation Plan. First, the Plan should include a description of how the new Arbuckle Reservoir will be used to improve LCRA's water conservation efforts -- as a tool for avoiding water losses, maximizing the beneficial use of water, minimizing waste, and managing the timing of water distribution to LCRA's downstream customers.

Second, the management of OND water should be addressed, with strategies for minimizing the release of such water from upstream reservoir storage, along with plans for recovering LCRA's losses for the sales of such water. According to records of the OND releases for the 1940-2016 period, an average of 45,813 acre-feet per year was released from reservoir storage for the non-Garwood customers. In 2011, 75,768 acre-feet of OND water was released – during an epic drought. It appears that 72,311 acre-feet was released during 2016, but no mention of that OND loss was made in LCRA's 2016 Water Use Summary Report. The sheer size of these effectively un-managed releases is somewhat mind-boggling, as the high-year OND releases of over 70,000 acre-feet represent almost ½ of the City of Austin's annual water usage and almost 5 times LCRA's conservation savings goal for all of the agricultural irrigators. It is recommended that OND water should be tracked and reported as a key component of LCRA's Conservation Plan and should be much more carefully managed. As with any business, the risks should be borne by the user as opposed to the supplier (LCRA). The volumes of OND water should be included in the annual water usage curves provided in the Water Management Plan, and, most importantly, appropriate raw water rates should be charged for the stored water that is ordered but not diverted. The release of stored water for specific downstream customers who do not purchase the water has negative financial implications for LCRA, which should not be overlooked. Given its potential quantity, it is also recommended that OND water be separately identified in LCRA's Annual Water Use Reports.

## **Section 4.2 -- Agricultural Water Rates**

Although it is well-known that water pricing is a very effective tool for incentivizing conservation, the topic of water rates is given short shrift in Section 4.2 of the draft Conservation Plan. This topic deserves close attention and near-term action. Since it relates to the largest water users in the Lower Colorado River basin, the largest volumes of water are at stake.

LCRA states that "tiered rate pricing encourages conservation." We encourage LCRA to build upon this reality in pricing its agricultural irrigation water. In addition, we would like to understand the components of the rates that are being used for the various "tiers." Do these rates include a fair share of LCRA's river management costs? Do these rates enable LCRA to recover

its costs of service to these customers? Do the rates include funds for recovering LCRA's conservation project expenses, such as land leveling and automatic gates in the irrigation divisions? Are these customers expending their own funds on conservation projects, as LCRA's municipal customers are required to do?

It is stated that rate surcharges are based on certain established limits. Please provide an explanation of the basis for the established limits. It is recommended that LCRA mandate water usage limits that are aligned with the 5.25 acre-feet per acre waste standard for two crops of rice, including canal losses, as discussed above.

Rather than pricing water at its full cost of delivery to agricultural irrigation customers, our research indicates that LCRA massively subsidizes these rates. It appears that LCRA relies on the following business practices, policies, and subsidies to offer artificially low rates to LCRA's agricultural irrigation customers:

- Allocating River Management costs at only 20% via a historical water use calculation, versus a more reasonable fair share allocation based on actual use of the LCRA system, particularly with the off-channel reservoir coming online;
- The 2019 decision to further delay the date for phasing in the planned increases in the irrigation customer's share of the River Management costs;
- Tapping into the Strategic Reserve Fund to contribute toward the costs of serving these downstream customers, rather than setting rates to recover those costs;
- Excluding the costs of debt service and coverage for the substantial capital outlays for upgrading the dams and floodgates for Lakes Buchanan and Travis from the rates assessed to these customers (although these investments benefit all water customers);
- Recovering the costs to improve the irrigation canals and fund future water supply projects using revenues from water sales to Firm Water customers via a Rate Stabilization Fund;
- Failing to recover the value of the 20-30% water losses that occur during delivery of water through the irrigation canal systems; and
- Failing to recover the lost revenues from Ordered but Not Diverted (OND) water that is released from upstream reservoir storage but not diverted and charged to a downstream irrigation customer.

To promote conservation (which LCRA is required to do by law) and fully recover its costs (which LCRA is also required to do by law), LCRA should immediately adopt a pricing policy that fully reflects the cost of facilities that are used to serve its irrigation division customers. The rates LCRA charges should include the cost of all facilities used to serve those customers and a reasonable amount for the commodity value of water they use. This will promote more efficient

use of water by irrigation customers and incentivize those customers to install and maintain measures that better utilize the water they consume. It will simply make economic sense for them to do so.

#### **Section 4.4 – Canal Lining**

Given the canal network of 1,100 miles within the downstream irrigation divisions, and LCRA data indicating that 20-30% of the water being delivered to the fields is lost between the diversion point on the river and the irrigation customer, this section of the Conservation Plan deserves much greater focus. It is hard to imagine that a thorough assessment of canal losses would identify only 27 miles of canals that have significant losses and only 10 miles that are "highest priority." LCRA should provide an explanation of these findings and assumptions. Perhaps the Texas A&M study failed to properly price the cost of replacing the water that is lost in the canals? From an economic standpoint, lining of canals should be done until the cost of lining equals the cost of LCRA's new water supplies. Based on publicly available information, this should be about \$200 to \$300 per acre-foot. If the Texas A&M study assumed any less than the amount LCRA is willing to pay for new supplies, it has failed to accurately capture the amount of canal lining that should be undertaken.

Another aspect of the canal losses is who pays for those losses. Under current LCRA pricing policies, it appears that the water losses between the river diversion point and the field are absorbed by LCRA as a system loss. We encourage LCRA to set rates that will address these issues, as well as the others discussed above, when it begins its ratemaking work for the 2020 Agricultural Irrigation season.

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