Environmental Stewardship
A Sustainable Ecosphere

August 18, 2014

Board of Directors
Lower Colorado River Authority
3700 Lake Austin Blvd
Austin, TX 78703

Re: Agenda item 10: Approve Amendments to Pending Water Management Plan Application

Dear Board Members:

Having served as an alternate on the Water Management Planning Advisory Committee and participated in many of the hearings before this Board and the TCEQ regarding the Water Management Plan, I appreciate the competing interests and challenges faced in structuring a plan that balances these interests. You have difficult choices to make.

I am writing to express concerns related to the environmental aspects and impacts of the amendments being considered in agenda item 10.

Consistent with Texas laws and codes regarding environmental flows, it is a key objective of this plan to maintain and promote a sound ecological environment for the basin and the bays associated with the Colorado River. The TCEQ 2010 Order requires LCRA to address, along with other issues, "provisions governing the manner in which LCRA provides water from lakes Buchanan and Travis to address environmental flow needs using the best available scientific information, and *shall provide water for such needs to the maximum extent reasonable and practicable* when considering all public interests[1]."

The Legislature, in passing Senate Bill 3 in 2007, recognized that "*maintaining the biological soundness of the state's rivers, lakes, bays, and estuaries is of great importance to the public's economic health and general well-being"* ... that is, to maintain a "Sound Ecological Environment. To maintain such a sound environment, the Legislature recognized that it is necessary to *"provide for the freshwater flows necessary to maintain the viability of the state's streams, rivers, bay and estuary systems".*

Meeting the objectives of the Legislature and the TCEQ order with respect to a sound ecological environment is a fundamental cornerstone of a viable and responsible water management plan.

Having great respect for the hard and professional work of the LCRA staff, there are, none-the-less, three areas of great concern:

1) Lack of commitment by LCRA WMP to met instream and freshwater inflow needs.
2) Annual and Multi-Year Caps on Water for Environmental Flows (Exhibit C, Part B), and
3) No demand reductions for firm customers (Exhibit A, Firm demand reductions).

Lack of commitment by LCRA WMP to met instream and freshwater inflow needs.

Most urgent concern: The current draft and amendments to the LCRA WMP do not make a straightforward, unconditional commitment to meet environmental flow needs *in all years*. The current plan does not include the two statements below that were in the approved 2010 WMP:

[1] LCRA "Supplemental Filing May 2012", Section 1.3, page 1-4.

"Instream flow needs will be met by the release of stored water from Lakes Buchanan and Travis to maintain the daily river flows at no less than the critical instream flow needs *in all years*.[2]" [emphasis added]

"Critical inflow needs of 171,120 ac-ft./yr. will be met *in all years* with releases of stored water from Lakes Buchanan and Travis.[3]"[emphasis added]

Though not stated in the text of the current draft WMP, Technical Papers A-3, A-4 and A-5, provided by the LCRA to TCEQ[4], demonstrate the operational intent that *subsistent instream flows be met in all months of all years*, and that *threshold freshwater inflows to the bay be met in all months of all years, with the proviso that, only storable inflows are released to the extent that they are available from that month's inflows*. To the degree that these technical papers are not legal guidelines, the WMP should reflect these same mimimum standards and should make the same straightforward, unconditional commitments to environmental flows as previous water management plans.

Annual and Multi-Year Caps on Water for Environmental Flows

This proposed method of limiting water for environmental flows does not appear to be reasonable or practicable. First, it is not reasonable that, as the duration of a drought extends over multiple years, the amount of water provided to meet the lowest level freshwater inflows to Matagorda Bay is reduced. Since *"Threshold," is a fixed monthly value to provide refuge conditions that would ideally be achieved 100% of the time*,[5]" it is not reasonable to arbitrarily reduce this fixed monthly amount of water delivered to the bay over time, especially during conditions that threaten the ecological integrity of the bay system and increase the risk that the bay system will be fundamentally and irreversibly damaged.

Second, the multi-year cap accounting method is not practicable. There are two aspects of the accounting method that are impractical:

1) It appears that any water "made available" to meet instream flow "Base Dry" or "Base Average" conditions, or freshwater inflow "MBHE 1-4" conditions would also be counted in these caps. Therefore, water made available to maintain an ecologically sound environment during "Base-Dry" and "Base-Average" conditions makes less water available for the river and bay during the critical "subsistence" and "threshold" periods, thereby artificially creating a situation that puts the entire system at even greater risk than the drought conditions alone. Since the complexities of establishing annual and multi-year caps that are adequate to meet all of the adopted environmental flow standards are staggering, simplicity would suggest that the caps, if used at all, should only count water made available to meet the critical threshold level flow conditions, be adequate to maintain these levels throughout the duration of a drought, and should not decline with drought duration.

2) The trigger for caps (98% of managed available capacity) causes the artificial conditions in 1) above to be created. To be consistent with caps associated only with subsistence and threshold levels, the trigger for the use of caps should be adjusted to coincide with instituting subsistence and threshold environmental flow conditions (probably around 1.4 MAF). This will likewise ensure that adequate environmental flows are provided without artificial limitations during average dry and wet conditions.

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[2] LCRA 2010 WMP as amended January 27, 2010, item (15) page P-4.
[3] LCRA 2010 WMP as amended January 27, 2010, item (16) page P-5.
[4] Technical Papers A-1 thru A-6 provided to TCEQ by LCRA on May 31, 2012
[5] LCRA "Supplemental Filing May 2012", Section 2.4, page 2-10.

Considering the importance of the river, bay and estuaries to the public's economic health and general well-being, *it is not in public's interest* to place arbitrary limits on environmental flows that increase the risk of substantial and irreversible harm to these resources. As an alternative, we recommend a "fixed volume" approach that does not need to be tallied over multiple years and that only accounts for "subsistence" and "threshold" water made available as "released" or "storable pass-through releases". (See Attachment) We recommend that this quantity be determined by the use of historical modeling where the amount is predicted to supplement other flows (run-of-river, rainfall, uncaptured irrigation and other releases) to provide, *to the maximum extent reasonable and practicable*, the water needed to meet the minimum environmental flow standards necessary to maintain the river, bay and estuaries in an ecological sound condition.

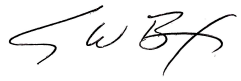
No demand reductions for firm customers

In times of plenty we tend to relax our standards and become wasteful because these practices are far less damaging during wet periods. In times of drought, however, we need to tighten our standards and encourage conservation practices. Establishing a "no demand reduction for firm customers" philosophy encourages the wasteful practices to continued as drought conditions persist and/or worsen. As we have experienced in the current drought, it has only been as the threat of pro-rata curtailment approached in the fall of 2013 that some firm water customers became serious about conservation.

Likewise, as we learned in the TCEQ 15 hour marathon SOAH hearing, is has essentially been the poor design of many of our cities' water distribution systems that have artificially caused a "public health threat" that has allowed emergency orders to set aside the practices dictated by the WMP. Systems that were designed to deliver peak flows to growing populations were not designed to, likewise, deliver conservation quantities of water during drought conditions when landscape, car wash, and other non-essential uses of water were being curtailed. The result was that the *low flows* caused residual chlorine concentrations to fall below public safety standards thereby creating a public health risk. If firm customers operate under the "no demand reduction" philosophy, there is not an incentive for them to design and operate their water treatment and distribution systems in a conservation minded way. It is not reasonable or practicable that firm customers maintain the same operating standards during drought conditions as they do during wet seasons.

Thank you for the opportunity to participate in this important public policy debate as we seek to develop a water management plan that provides for the diverse interests of our communities while protecting our environment.

Respectfully submitted,



Steve Box
Executive Director
Environmental Stewardship

cc: Myron Hess, National Wildlife Federation (WMP Advisory Committee Member)
Cindy Loeffler, Texas Parks and Wildlife Department (WMP Advisory Committee Member)
Jennifer Walker, Sierra Club (WMP Advisory Committee Member)
Judge Paul Pape, Bastrop County

Attachment

Proposed "fixed volume" approach

A. LCRA Proposed Amendment to WMP, August 20, 2014 Annual & Multi-Year Caps on Water for Env. Flows				
Multi-years	Caps	Water provided per year (Avg)	Threshold % provided by Caps	Water Needed to met Bay Threshold
1	111,000	111,000	62%	180,000
2	197,000	98,500	55%	360,000
3	271,000	90,333	50%	540,000
4	302,000	75,500	42%	720,000
5	344,000	68,800	38%	900,000
6	409,000	68,167	38%	1,080,000
7	475,000	67,857	38%	1,260,000
8	537,000	67,125	37%	1,440,000
9	601,000	66,778	37%	1,620,000
10	631,000	63,100	35%	1,800,000
11	631,000	57,364	32%	1,980,000
12	631,000	52,583	29%	2,160,000

	B. Proposed Alternative to LCRA Proposed Amendment to WMP Annual & Multi-Year Caps on Water for Env. Flows				
	Multi-years	Caps	Water provided per year	Threshold % provided by Caps	Water Needed to met Threshold
	1	108,000	108,000	60%	180,000
	2	216,000	108,000	60%	360,000
	3	324,000	108,000	60%	540,000
	4	432,000	108,000	60%	720,000
	5	540,000	108,000	60%	900,000
Current Year (1)	6	648,000	108,000	60%	1,080,000
	7	756,000	108,000	60%	1,260,000
	8	864,000	108,000	60%	1,440,000
	9	972,000	108,000	60%	1,620,000
	10	1,080,000	108,000	60%	1,800,000
	11	1,188,000	108,000	60%	1,980,000
	12	1,296,000	108,000	60%	2,160,000
	(2) Select Threshold % provided by caps value to use:			**60.0%**	

NOTES:

(1) The last time combined storage was above the 98% level (1.97 MAF) was in 2008 (see Figure 3-3 in Supplemental Filing May 2012). Therefore, 2014 is year 6 in the above scenario. How much water has LCRA "made available" for Environmental Flows during this period?

(2) A value can be entered into the cell in green in B. to populate the scenario and calculate the "Caps" column. Modeling should help determine the threshold percent (%) that would be appropriate.

(3) Any water "made available" to meet Base Dry or Base Average instream flow or MBHE 1-4 would also be counted in these caps. Therefore water made available to maintain an ecologically sound environment makes less water available during threashold periods putting the entire system at risk. The complexities of establishing annual and multi-year caps that are adequate to meet the adopted environmental flow standards suggest that the caps, if used at all, should only count water made available to meet threshold levels, should be adequate to maintain these levels throughout the duration of a drought, and therefore should not decline with drought duration. Thus, the alternative scenario (B) on the right is proposed.

(4) The declining nature of the water provided with increased duration of a drought increases the risk that the bays and estuaries will drop to below threashold levels. The adopted Environmental Flow standards anticipate that water will be made available from the Highland Lakes system to maintian instream subsistance and freshwater inflows threshold levels. It is most critical that these environmental flows be met during this critical period to ensure the system is capable of surviving.

(5) To be consistent with caps associated only with subsistance and threshold levels, the trigger for the use of caps should be adjusted to coincide with instituting subsistance and threshold environmental flows (probably around 1.4 MAF.