ATTACHMENT A

LCRA APPLICATION FOR EMERGENCY REDUCTION OF INSTREAM FLOW REQUIREMENTS UNDER ITS WATER MANAGEMENT PLAN FOR LAKES BUCHANAN AND TRAVIS (PERMIT 5838)

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I. SUMMARY OF REQUEST

This application seeks an emergency order from the Texas Commission on Environmental Quality (TCEQ) pursuant to Texas Water Code §§ 5.506, 11.139, or 11.148, as the Commission deems appropriate, to reduce, but not eliminate, the Lower Colorado River Authority's (LCRA) obligation to release water to maintain instream flows for the benefit of the state-threatened Blue Sucker fish in the spring of 2015. **The requested relief is identical to that obtained from the TCEQ in the Spring of 2014**,[1] and as discussed below, is supported by facts that are at least as compelling as those under which the 2014 order was issued.

For 2015, LCRA requests the Executive Director issue an emergency order granting LCRA's request on or before March 1, but preferably no earlier than February 17th (*i.e.* 15 days before the TCEQ's March 4, 2015 agenda), so that the order may be timely reviewed by the Commission in accordance with Texas Water Code § 11.148 and also provide LCRA with the full potential benefit of the order during the time period for which LCRA is otherwise obligated to supply water for the Blue Sucker.

Unfortunately, from a water supply standpoint, not much has changed in central Texas since LCRA sought the same relief in the Spring of 2014. The extraordinary drought gripping central Texas, with record-low inflows to central Texas' primary water supply reservoirs (lakes Buchanan and Travis), has created an unrelenting emergency water supply condition. For the fourth year in a row, in addition to this relief, LCRA is seeking permission to once again suspend nearly all water releases for agricultural irrigation and sits on the verge of implementing mandatory curtailment of water use by firm customers (mainly municipalities and industries, including power plants). As with 2014, this request does not reduce LCRA's overall firm commitment of water for instream flows included in LCRA's 2010 WMP. That commitment, which provides for multiyear caps, would remain in effect and be subject to curtailment like other firm commitments, should LCRA declare a Drought Worse than Drought of Record.

[1] *See* Attachment B – TEX. COMM'N ENVTL. QUAL., Docket No. 2014-0438-WR, Order affirming, with modification, an order issued to the Lower Colorado River Authority partially suspending releases of stored water for instream flows for the Blue Sucker under its Water Management Plan, Permit No. 5838, pursuant to Sections 5.506 and 11.148 of the Texas Water Code (May 8, 2014) (hereinafter "2014 Blue Sucker Emergency Order").

Water supply conditions, however, are worse than in December 2011, 2012, or 2013, with combined storage as of December 1 at about 691,000 acre-feet. If storage drops below 600,000 acre-feet, the LCRA Board will declare a Drought Worse than Drought of Record. Such a declaration is based on indicator criteria (described in Section IV, below) including drought duration, drought intensity, and combined storage levels that suggest the basin may be experiencing a drought worse than the 1950s. At such time, LCRA will require firm customers to cut back their water use by 20 percent and further curtail its commitment to environmental flows by 20 percent. LCRA currently projects this could happen as early as March 2015. As the Commission has previously recognized, these conditions pose an imminent threat to human health and safety. Accordingly, the Board has once again concluded that the drought conditions require the continued extraordinary action of reducing the potential amount of stored water releases from lakes Buchanan and Travis in Spring 2015 for specific instream flow purposes related to the state-threatened Blue Sucker so that this water may instead be preserved to ensure LCRA can continue to meet critical needs should this extraordinary drought persist.

LCRA estimates that, in 2014, identical emergency relief related to Blue Sucker allowed LCRA to save 17,000 acre-feet of stored water. As discussed in more detail below, without emergency relief in effect from March 1 through May 1, 2015, LCRA could be required to release as much as 21,000 acre-feet of previously stored water by the end of May 2015, depending on downstream flow conditions and releases for downstream customers.

II. COPY OF PERMIT AND RESERVOIR OPERATING PROCEDURES (30 TEX. ADMIN. CODE §§ 35.101(c)(1), 35.101(c)(7))

LCRA's 2010 WMP is available on LCRA's website at: http://www.lcra.org/water/water-supply/water-management-plan-for-lower-colorado-river-basin/Documents/lcra_wmp_june2010.pdf. The relevant excerpts related to LCRA's obligations to provide water for environmental flows are included in Attachment C.

III. CONTACT INFORMATION (30 TEX. ADMIN. CODE § 35.24(c)(1))

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IV. DESCRIPTION OF LCRA's WATER MANAGEMENT PLAN & INSTREAM FLOW REQUIREMENTS AND AREA AFFECTED BY REQUESTED ORDER (30 TEX. ADMIN. CODE §§ 35.24(c)(2), 35.24(c)(4))

LCRA provides raw water to over 60 retail and wholesale potable water suppliers that together serve over one million people throughout the lower Colorado River basin and LCRA's water service area. LCRA's municipal raw water customers include, but are not limited to, Austin, Cedar Park, Leander, Burnet, Marble Falls, Pflugerville, Lakeway, Bee Cave, Horseshoe Bay, other Highland Lakes municipalities; water supply corporations; special districts; and investor-owned utilities. In addition, LCRA provides water to several electric utilities—LCRA, Bastrop Energy Partners, Austin Energy, Gen-Tex Corporation, and South Texas Project Nuclear Operating Company—from the firm water supply of lakes Buchanan and Travis. These utilities provide power into the electrical grid in Texas operated by the Electric Reliability Council of Texas (ERCOT) to meet the electrical needs of customers in Texas. LCRA also provides firm raw water to several industries located downstream, including Oxea Chemical and Underground Services Markham. *See* Affidavit of David Wheelock (Attachment D).

To meet its water supply obligations, LCRA relies on several water rights, including the water rights for lakes Buchanan and Travis under Certificates of Adjudication 14-5478 and 14-5482, which are further subject to the conditions and criteria set forth in the 2010 WMP. The original Water Management Plan was required by court order[2] and is incorporated into LCRA's Certificates of Adjudication 14-5478 and 14-5482.[3] The Certificates of Adjudication and the TCEQ-approved WMP govern LCRA's operation of lakes Buchanan and Travis and dictate how LCRA makes water available from these lakes to help meet firm water[4] customer needs, downstream interruptible irrigation demands, and environmental flow needs of the lower Colorado River and Matagorda Bay. The WMP further describes how LCRA will manage and curtail supplies from the lakes during times of drought including through a repeat of the Drought of Record.[5] The WMP also sets forth criteria for declaring a Drought Worse than the Drought of Record (DWDR).[6]

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[2] *In re The Exceptions of the Lower Colorado River Authority and the City of Austin to the Adjudication of Water Rights in the Lower Colorado River Segment of the Colorado River Basin*, No. 115, 414-A-1 (264th Dist. Ct., Bell County, Tex. April 20, 1988), Lake Buchanan Conclusion of Law 4 and Lake Travis Conclusion of Law 6.

[3] *See* Attachment E, Certificate of Adjudication 14-5478 at p.4 (2.B.(7)); and Certificate of Adjudication 14-5482 at p.4 (2.B.(7)).

[4] Firm water refers to the amount of water that LCRA has determined would be available on a consistent or firm basis through a Drought of Record water availability analysis after honoring all senior water rights.

[5] Drought of Record refers to the worst hydrologic drought that has occurred since detailed records have been kept for the lower Colorado River basin. The WMP identifies the Drought of Record for the Highland Lakes as the period from 1947 to 1957. *See* Attachment C – 2010 WMP at 4-20.

[6] *Id*. at 4-34.

To manage the supply, the 2010 WMP imposes several trigger points keyed to the total combined storage capacity of lakes Buchanan and Travis that are intended to ensure there is sufficient firm water supply to meet firm demands through a repeat of the 1950s Drought of Record.[7] LCRA's environmental flow obligations contained in the WMP reflect a balance between the competing needs of water within the basin. Similar to how LCRA provides water for interruptible agricultural uses, LCRA's commitment to provide water for environmental needs under the WMP is generally tied to the amount of water LCRA has in storage on January 1 each year. Thus, LCRA's environmental flow obligations are curtailed to some extent in drier years and are higher in years when storage is higher. For purposes of this application, the most relevant trigger points are set out in Table 1.

Table 1. Triggers in 2010 WMP[8]

Combined Storage of lakes Buchanan and Travis	Date on Which Trigger is Decided	Action Taken
1.7 MAF	On Jan. 1	Environmental releases for bay and estuary inflows reduced to meet intermediate needs for the following year.
1.4 MAF	At any time	Request firm customers to implement voluntary drought response measures.
1.4 MAF	On Jan. 1	Environmental releases for instream flows reduced to meet critical needs for ecosystems for following year. Begin gradual curtailment of interruptible supply to four major irrigation operations.
1.1 MAF	On Jan. 1	Environmental releases for bay and estuary inflows reduced to meet critical needs for the following year.
900,000 acre-feet	At any time	Request firm customers to implement mandatory water restrictions; develop firm customer curtailment plan.
600,000 acre-feet	At any time	If criteria indicates a drought worse than the Drought of Record, then cease interruptible supply and begin curtailment of firm supply.

The 2010 WMP also includes conditions under which the LCRA Board of Directors will declare a Drought Worse than the Drought of Record (DWDR). To declare a DWDR, the Board must find that the following three conditions are simultaneously met:

[7] *Id*. at 4-5.

[8] Emergency relief from the WMP in 2012, 2013, and 2014 amended criteria for cutoff of interruptible stored water to farmers in the Gulf Coast, Lakeside, and Pierce Ranch irrigation operations.

1. Duration of drought is more than 24 months, which is determined by counting the number of consecutive months since both lakes Buchanan and Travis were last full;[9]
2. Inflows to the lakes are less than inflows during the Drought of Record;[10] and
3. Lakes Buchanan and Travis combined storage has less than 600,000 acre-feet of water.[11]

Under the 2010 WMP, once a drought has lasted more than 36 months and a DWDR has been declared, interruptible stored water would be fully and immediately curtailed – making no stored water available for agricultural irrigation or other interruptible uses until lake levels recover or the inflows into the lakes increase substantially.[12] Moreover, LCRA will implement pro rata curtailment of its firm water users once a DWDR is declared and after interruptible stored water (agriculture) uses have been cut off.[13] Under a DWDR declaration, water for instream flows and bay inflows is subject to a pro rata reduction along with other firm users of water.[14]

LCRA has reserved 33,400 acre-feet of firm supply to meet its instream flow and bay inflow obligations under the WMP. For purposes of this application, unless combined storage exceeds 1.4 million acre-feet on January 1, 2015, LCRA will be obligated under the WMP to maintain critical instream flows (i.e. flow in the Colorado River).[15] *See* Affidavit of Ryan Rowney (Attachment F). These obligations include a requirement to maintain a minimum continuous instream flow of 120 cubic feet per second (cfs) from Bastrop to Eagle Lake[16] at all times and a minimum flow of 500 cfs for a continuous six-week period in between March and May to provide higher flows to support habitat for Blue Sucker spawning. If flows in the river downstream and/or releases LCRA is making to meet other downstream demands are insufficient to meet these instream flow requirements, the 2010 WMP calls for the release of stored[17] water.

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[9] *Id.* at 4-34. For purposes of the WMP, the duration of a drought is the time period since both Lakes Buchanan and Travis were at their maximum allowable water conservation storage levels.

[10] The cumulative inflow deficit since the beginning of the drought must exceed the envelope curve for cumulative inflow deficits by at least 5 percent for six consecutive months. *Id*. at 4-34.

[11] *Id.*

[12] *Id.*

[13] *Id.*

[14] *Id.* at P-10.

[15] For purposes of freshwater inflows, unless storage on January 1, 2015 exceeds 1.4 million acre-feet, LCRA will continue to be obligated to provide storable inflows to help maintain critical freshwater inflows of 15,000 acre-feet/month, subject to annual and multiyear caps in the 2010 WMP.

[16] Eagle Lake is just downstream of the USGS gauge at Columbus.

[17] LCRA's obligation to provide critical instream flows is met using storable inflows into lakes Buchanan and Travis as well as previously stored water. LCRA's obligation for the higher target flows, and for bay and estuary inflows is limited to storable inflows—the actual daily inflows to the reservoirs minus the daily pass throughs to meet downstream senior water rights. *See* Attachment C – 2010 WMP at P-12, 4-12, 4-14.

In 2014, LCRA operated under emergency orders that modified the total amount of water supplied from lakes Buchanan and Travis for irrigated agriculture in the lower basin, as well as an emergency order reducing LCRA's obligation to provide stored water for the Blue Sucker. LCRA's provisional data indicates that total water use in 2014 was about the same as 2013, with the exception of reduced releases for the Blue Sucker. From January through November 2014, LCRA has released about 4,600 acre-feet of water from lakes Buchanan and Travis for environmental flow needs. This includes about 4,400 acre-feet to meet instream flow obligations and about 200 acre-feet to meet bay and estuary inflow obligations. The amount released for instream flow obligations was all released to meet the 300 cfs requirement. If the requirement had been 500 cfs, about 17,000 acre-feet of additional water would have been released. *See* Affidavit of Ryan Rowney (Attachment F). In comparison, in 2012 and 2013, LCRA operated under similar emergency orders related to water supply for irrigated agriculture in the lower basin, but did not have emergency relief related to the Blue Sucker. LCRA supplied 22,991 acre-feet in 2012 and 15,678 acre-feet in 2013 to meet the 500 cfs Blue Sucker requirement. *See* Affidavit of Ryan Rowney (Attachment F). If the requirement in 2014 had remained at 500 cfs, LCRA estimates that about 17,000 acre-feet of additional water would have had to have been released. *See* Affidavit of Ryan Rowney (Attachment F). Thus, the potential for considerable water savings by a reduction in the Blue Sucker flow requirement from 500 cfs to 300 cfs is obvious.

V. THE EMERGENCY CONDITIONS JUSTIFY ISSUANCE OF ORDER (30 TEX. ADMIN. CODE §§ 35.24(c)(3)-(4), 35.101(a), (c)(2), (k), (o) & 295.91(1))

LCRA requests the Commission act on its request to address the exceptional drought that has persisted in the areas that contribute inflows to lakes Buchanan and Travis and preserve water to meet the essential needs of LCRA's municipal and industrial customers if the drought continues. This drought is unprecedented in many respects, particularly with regard to inflows into lakes Buchanan and Travis, the primary water supply for this region. At times, this drought has been more intense than the region's Drought of Record that occurred between 1947 and 1957. Annual inflows in 2011 to 2013 were all among the ten lowest on record—and if 2014 inflows follow the year-to-date trend, 2011, 2013 and 2014 will represent the three lowest inflow years on record.

The Governor's Emergency Disaster Proclamation, most recently re-issued on December 22, 2014, has consistently included the watershed contributing inflows to lakes Buchanan and Travis since July 2011, recognizing that "significantly low rainfall has resulted in declining reservoir and aquifer levels, threatening water supplies and delivery systems in many parts of the state" and that the "drought conditions have reached historic levels and continue to pose an imminent threat to public health, property, and the economy."[18] As discussed further herein, the facts of this drought clearly support a conclusion that an emergency condition exists.

A. Inflows into lakes Buchanan and Travis are at record lows.

By almost every measure, the inflows to the Highland Lakes are at record lows. At times, the

[18] Attachment J, *available at*: http://www.tceq.texas.gov/assets/public/response/drought/proclamation.pdf (last visited Dec. 22, 2014). Counties included in the Governor's declaration that contribute flows into or contain LCRA's Highland lakes include: Burnet, Edwards, Gillespie, Kendall, Kerr, Llano, Real, and Travis.

deficit has been as much as 90% more than the inflow deficit for a similar period of inflows experienced during the historic Drought of Record for the lower Colorado River basin, which occurred from 1947 to 1957. *See* Affidavit of Ron Anderson (Attachment G, Tab 2).

Annual inflows into lakes Buchanan and Travis in five of the last six years are among the ten lowest years of inflow on record. *See* Table 3. By contrast, only one year during the historic 1950s Drought of Record makes the list of ten lowest annual inflows. Inflows in 2011 were the lowest on record; inflows in 2012 were the fifth lowest on record; and inflows in 2013 were the second lowest on record. Inflows for 2014 through November are on track to be among the three lowest inflow years. *See* Affidavit of Ryan Rowney (Attachment F).

Table 3. Ten Lowest Annual Inflows into the Highland Lakes (acre-feet per calendar year)

Year	Amount
2014 (Jan.-Nov.)	197,339
2011	127,802
2013	215,138
2008	284,462
2006	285,229
1963	392,589
2012	393,163
1983	433,312
1999	448,162
2009	499,732
1950	501,926
Average (1942-2013)	1.23 million

Monthly inflows have been below average in 54 of the past 55 months. *See id.* Table 4. Additionally, inflows into lakes Buchanan and Travis in the current drought include the lowest inflows over a various time period ranging from 12 months to 84 months, lower than for any similar time periods in the historic record, including the 1950s. *See id.* Table 5. When inflows are adjusted to account for the fact that O.H. Ivie Reservoir was not in place in the 1950s, the comparison of the current drought to the Drought of Record still shows the recent inflows are dramatically lower than the 1950s Drought of Record, with inflows since 2008 at about half of the inflows for the first six years of the Drought of Record. *See* Affidavit of Ron Anderson (Attachment G, Tab 3).

Rain events in the contributing watershed of lakes Buchanan and Travis 2014 failed to provide any significant inflows. A rain event in early November 2014 included rain totals averaging two to three inches about the Highland Lakes but produced only about 4,000 acre-feet of inflow to the lakes; another event later in November with rain totals averaging one to three inches yielded about 17,000 acre-feet of inflow. *See* Affidavit of Bob Rose (Attachment H); Affidavit of Ryan Rowney (Attachment F). While these events lacked prolonged, heavy rainfall intensity, the limited amount of inflows are indicative of the severity of the ongoing drought and the dry soil conditions that have yet to be overcome. By comparison, an event in March 2007 with similar rainfall totals (but more

intensity) produced almost 100,000 acre-feet of inflows to lakes Buchanan and Travis. *See* Affidavit of Ryan Rowney (Attachment F). Similar rain events in 2013 were equally as unproductive from a water supply standpoint. *See id.*

The inflow conditions experienced in the last several years present an extreme drought situation that was not contemplated when the special conditions related to environmental flows were incorporated into the 2010 WMP.[19] Although the 2010 WMP already contains provisions for the staged reduction in instream flows, these extraordinary conditions continue to represent new and changed conditions that support further and different relief consistent with this request for emergency relief. *See* 30 TEX. ADMIN. CODE § 35.101(o). The 2010 WMP was developed using simulations of a repetition of the hydrologic period from 1940 to 1965.[20] While that period includes the 1950s Drought of Record, the recent severe low inflows of 2011, 2013, and 2014 to date are less than half of the lowest annual inflow in the 1950s and the multi-year inflows are also worse than any that were simulated during the development of the WMP. *See* Table 3 and Affidavit of Ron Anderson (Attachment G).

B. High temperatures and sporadic rainfall have contributed to the low inflows and low lake levels.

Extraordinary drought conditions have gripped much of Texas, including the lower Colorado River basin for over four years, dating back to October 2010. The Texas State Climatologist, Dr. John Nielsen-Gammon, has recognized the period from October 2010 to September 2011 as the worst one-year statewide drought on record dating back to 1895. *See* Affidavit of Bob Rose (Attachment H). Although the last three years (2012-2014) have included some periods with near-normal or normal rainfall totals, rainfall has been very sporadic, often with several weeks of dry weather between significant rainfall events such that the soils have not remained saturated enough to allow runoff to occur in any substantial amount. The rain event in November 2014 discussed above is the most recent example of this pattern. *See* Affidavit of Bob Rose (Attachment H); Affidavit of Ryan Rowney (Attachment F).

High temperatures in 2011, 2012 and 2013 were unprecedented and, while the summer of 2014 brought milder temperatures for Austin by comparison, the high temperatures of these prior years exacerbated the water supply situation. For Texas, the summer of 2011 was the hottest summer ever recorded in Texas and the hottest summer on record for Austin. Statewide, calendar year 2011 was the third hottest year ever recorded and the hottest year on record for Austin. The summer of 2012 was the 10th hottest summer on record statewide and the 11th hottest summer on record for Austin. Statewide, 2012 tied with 1921 as the hottest year on record. Summer temperatures for Austin in 2013 were the 5th hottest on record. *See* Affidavit of Bob Rose (Attachment H).

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[19] *See* Attachment B -- 2014 Blue Sucker Emergency Order, Exhibit A, Finding of Fact No. 22; Attachment I, TEX. COMM'N ENVTL. QUAL., Docket No. 2014-1044-WR , Order affirming an Order issued by the Executive Director that grants an Emergency order requested by the Lower Colorado River Authority (Aug. 15, 2014) (herein "August 2014 Emergency Order"), Exhibit A, Finding of Fact No. 24.

[20] *See* Attachment C – 2010 WMP at 4-37.

These conditions have created a circumstance where the lakes have been unable to recover in any significant manner, even with an emergency cutoff of nearly all water supply for downstream irrigation in 2012, 2013, and 2014, as well as the emergency relief for Blue Sucker in the Spring of 2014. As noted above, by many measures, the recent low inflows are already as bad as or worse than the 1950s.

C. Recent forecasts lack clear signs pointing to significant recovery.

Recent weather forecasts do not include any signs of meaningful relief. As of December 2014, the sea surface temperatures in the tropical Pacific were above the threshold for El Niño. An El Niño condition has not been declared because the ocean has yet to fully couple with and influence the atmosphere. However, forecasters do expect El Niño to develop this winter and persist into early spring. For that period, a pattern of above normal rainfall is expected in Central and South Texas. *See* Affidavit of Bob Rose (Attachment H). Beyond that period, the forecast is uncertain. *See* Affidavit of Bob Rose. However, even if normal to above normal rainfall materializes, the likelihood of significant drought improvement is slight. *See* Affidavit of Ron Anderson (Attachment G). As noted above, by many measures, the recent low inflows are already as bad as or worse than the 1950s. Affidavit of Ryan Rowney (Attachment F).

D. Combined storage in lakes Buchanan and Travis is approaching record low levels and LCRA may declare a Drought Worse than Drought of Record as early as March 2015.

Criteria prompting LCRA to make a Drought Worse than Drought of Record declaration[21] could be met in as soon as March 2015. *See* Affidavit of Ron Anderson (Attachment G). Two of the three criteria for such a declaration have already been met. The drought has lasted more than 24 months. *See* Affidavit of Ryan Rowney (Attachment F). The cumulative inflow deficit criterion has been met. *See* Affidavit of Ron Anderson (Attachment G). Only the combined storage criterion, with a 600,000 acre-foot trigger, remains to be met. The combined storage as of December 1, 2014 was about 691,000 acre-feet. *See* Affidavit of Ryan Rowney (Attachment F). Combined storage could reach the 600,000 acre-foot level as early as March 2015, triggering a declaration of Drought Worse than Drought of Record by the LCRA Board of Directors. *See* Affidavit of Ron Anderson (Attachment G).

E. Depending on conditions in the lower river, the 2010 WMP could require LCRA to release significant quantities of stored water for the Blue Sucker.

As noted above, the requirement of 2010 WMP that stored water be released to maintain minimum flows of 500 cubic feet per second (cfs) from Bastrop to Eagle Lake for a continuous six-week period between March and May resulted in the release of about 20,000 acre-feet of water from lakes Buchanan and Travis in a six week period in both 2012 and 2013. The released water was in addition to water that LCRA was already releasing from storage or passing though the Highland Lakes to meet downstream customers' demands, such as those at the Garwood Irrigation Division. In 2014, with emergency relief identical to that requested in this application, LCRA was able to reduce its releases for the Blue Sucker to about 4,400 acre-feet, for an

[21] Attachment C – 2010 WMP at 4-32.

estimated savings of 17,000 acre-feet of stored water. *See* Affidavit of Ryan Rowney (Attachment F).

As with last year, the proposed emergency relief would reduce the release requirement from 500 cfs to 300 cfs. Depending on conditions in the lower river and LCRA releases for customers, this could save substantial amounts of stored water from being released from lakes Buchanan and Travis while not having a substantial effect on the Blue Sucker habitat or water quality as discussed further below. *See* Affidavit of Ryan Rowney (Attachment F); Affidavit of Bryan Cook (Attachment K).

F. The emergency conditions present an imminent threat to the public health and safety.

The current conditions and outlook are similar or worse to those in place when the Commission issued emergency orders related to LCRA's Water Management Plan and Blue Sucker relief in 2014. In fact, the December 1, 2014 combined storage level of about 691,000 acre-feet is the lowest recorded storage on that date since the lakes were built. *See* Affidavit of Ryan Rowney (Attachment F). The facts once again support the conclusion that there is an imminent threat to firm customers served by LCRA.[22] This has occurred notwithstanding the actions of LCRA and its customers over the past three years in implementing drought contingency plans to reduce demands. In addition, LCRA has preserved supply in lakes Buchanan and Travis by obtaining emergency relief from its Water Management Plan and by obtaining authorizations to use its downstream water rights to meet firm customer demands. Those actions have delayed the timeframe for reaching a DWDR declaration.

This request, which is expected to have little to no adverse effect on the Blue Sucker, would help meet the clearly identified water needs of the LCRA's firm water customers and thus constitutes an undeniable benefit to the public welfare. Despite LCRA's efforts to reduce large demands on the lakes through these measures, the drought has persisted and lake levels have continued to fall. As discussed above, there is a chance that LCRA will declare a DWDR as soon as March 2015, thus prompting a call on firm customers to implement significant curtailments in their water use. A substantial release this spring for the Blue Sucker could contribute to the chance of

[22] *See* Attachment B – 2014 Blue Sucker Emergency Order, Exhibit A, Finding of Fact Nos. 15-20, 22, 26, 28-29, 32-34; Attachment I, August 2014 Emergency Order, Exhibit A, Finding of Fact Nos. 14-16, 20, 24-29, 32, 34-35, Conclusion of Law No. 2. *See also* TEX. COMM'N ENVTL. QUAL., Docket No. 2014-0124-WR, Order Affirming in Part, and Modifying in Part, the Executive Director's Emergency Order Authorizing the Lower Colorado River Authority to Amend its Water Management Plan (Feb. 27, 2014) (herein "February 2014 Emergency Order"), Finding of Fact Nos. 18-25, 28, 30, 31, 33-36, 45, 60, 61; TEX. COMM'N ENVTL. QUAL., Docket No. 2011-2096-WR, Order Affirming an Emergency Order Granted by the Executive Director to the Lower Colorado River Authority (Dec. 12, 2011) (herein "2011 Emergency Order") Finding of Fact Nos. 20-22, 25, 30-31; TEX. COMM'N ENVTL. QUAL., Docket No. 2013-0225-WR, Order Affirming, with Modification, an Emergency Order Granted by the Executive Director to the Lower Colorado River Authority (Feb. 19, 2013) (herein "2013 Emergency Order") Finding of Fact Nos. 18, 20, 22, 26-27, 31-33; TEX. COMM'N ENVTL. QUAL., Docket No. 2013-0225-WR, Order Affirming, with Modification, an Emergency Order Granted by the Executive Director to the Lower Colorado River Authority (June 10, 2013) (herein "2013 Emergency Order Extension") Finding of Fact Nos. 9, 10, 16, 17; TEX. COMM'N ENVTL. QUAL., Docket No. 2013-0225-WR, Order granting an emergency authorization to the Lower Colorado River Authority to amend its Water Management Plan, Permit No. 5838, pursuant to section 11.139 of the Texas Water Code (July 26, 2013) (herein "July 2013 Emergency Order") Finding of Fact Nos. 21, 23, 26, 28.

triggering DWDR if it has not already occurred prior to March 1. In that case, LCRA and its customers may need to acquire or develop large quantities of alternative water supplies to meet essential needs of their respective potable water systems. However, it takes many years to develop significant new water supplies. As the Commission has recognized in its emergency orders, the sheer length of time that it takes to develop or conserve significant quantities of water supply means that a water supply emergency arises well before a reservoir goes dry.[23] For the most part, although LCRA's firm customers are working on plans to implement curtailment and secure alternative supplies, most have not secured any readily available alternative sources of water supply that could substitute for their reliance on the Colorado River. *See* Affidavit of Ryan Rowney (Attachment F); Affidavit of David Wheelock (Attachment D).

Moreover, as the lake levels drop, it becomes more difficult and expensive for the retail water suppliers to pump water from lakes Buchanan and Travis. LCRA has over 15 customers that actively take raw water for municipal purposes from Lake Travis. The lowest pumping elevations of the intakes range from about 545 feet mean sea level (msl) to 645 feet msl on Lake Travis. If the levels in Lake Travis or Lake Buchanan drop below the current lowest pumping elevations, LCRA's wholesale raw water customers must take action to either lower their pumping elevation or find alternative supplies. For smaller systems, the alternative is likely hauling water from a water utility with a viable source. For larger systems, temporary measures must be implemented to extend the intake capabilities to reach lower elevation water. Firm customers have indicated that they are actively spending or planning to spend funds to allow their intakes to operate at lower elevations or making plans to haul water. *See* Affidavit of Ryan Rowney (Attachment F). Overall, over 40 public water systems that rely on the Highland Lakes or that draw from the tributaries that typically contribute significant inflow to the Highland Lakes are already in some form of drought restriction and are at risk of water supply shortages.[24] If the lake levels drop more quickly than arrangements for alternative intakes or supplies can be implemented, the current drought presents an imminent threat to public health and safety for the water systems of those customers.

G. The emergency condition overrides the necessity to comply with the established procedures.

As documented above, the emergency condition presents an imminent threat to public health and safety. Because LCRA's WMP is required by, and incorporated into, LCRA's Certificates of Adjudication 14-5478 and 14-5482, the WMP may only be amended in the same manner and following the same procedures as one would amend any state-issued water right, which procedures for this type of amendment would require basin-wide 30-day public notice and significant staff review. Releases for the Blue Sucker in 2015 would start, at the earliest, on March 1, 2015. The decision-making window regarding those releases is not compatible with the

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[23] *See* Attachment B – 2014 Blue Sucker Emergency Order, Exhibit A, Finding of Fact No. 55; Attachment I, August 2014 Emergency Order, Finding of Fact No. 32, 34. *See also, e.g.*, February 2014 Emergency Order, Finding of Fact Nos. 45, 60, 61; July 2013 Emergency Order, Finding of Fact No. 28; 2013 Emergency Order Extension, Finding of Fact No. 16; 2011 Emergency Order, Finding of Fact Nos. 30-31.

[24] *See* Tex. Comm'n Envtl. Qual., *List of Texas PWSs Limiting Water Use to Avoid Shortages* at: http://www.tceq.texas.gov/drinkingwater/trot/droughtw.html (last updated on December 17, 2014) (last visited December 18, 2014).

WMP amendment process.[25] Thus, an emergency authorization is the only means by which LCRA can obtain timely approval of the requested relief and preserve water in storage.

VI. WATER QUALITY AND BLUE SUCKER SPAWNING HABITAT ARE NOT SUBSTANTIALLY AFFECTED BY THE REQUESTED RELIEF (30 TEX. ADMIN. CODE §§ 35.101(a)(1)(B), (m))

A. With the requested relief, water quality will be maintained.

The Colorado River between Bastrop and Eagle Lake includes three stream segments. The state has previously identified water quality standards for these segments. LCRA monitoring when flow levels have been near or below 300 cfs demonstrates that the water quality standards are consistently met with few exceptions. *See* Affidavit of Bryan Cook (Attachment K). Although the emergency conditions override the need to maintain a balance between protecting environmental flow needs and other public interests,[26] as demonstrated in this and the following subsections, environmental flow needs would nonetheless continue to be protected under the requested relief.

B. With the requested relief, the Blue Sucker will be protected, and impacts to its spawning habitat will be minimal.

The Blue Sucker (*Cycleptus elongatus*) is a state-listed threatened species in Texas which is uniquely adapted to life in swift current. Blue Suckers are known to undertake long spawning migrations, often covering hundreds of miles. When spawning, adults utilize high velocity flow areas over hard substrate such as bedrock outcrop, boulders, and cobble riffles. These habitat types are abundant between Bastrop and Eagle Lake. *See* Affidavit of Bryan Cook (Attachment K).

TCEQ rules provide when considering an application for emergency relief, flows necessary to protect a species of high interest may be required.[27] As with the Spring 2014 order regarding instream flows, the requested emergency relief will provide flows that protect the Blue Sucker and the relief is expected to have very little impact on Blue Sucker spawning habitat.[28] At 500 cfs, the flow provides for 93 to 100 percent of the maximum available spawning habitat; while at the proposed 300 cfs, at least 86 percent of the habitat would still be supported. *See* Affidavit of Bryan Cook (Attachment K).

Thus, the requested relief would still support significant Blue Sucker spawning habitat. The release of additional stored water from lakes Buchanan and Travis to maintain 500 cfs, if anything, would only provide a small incremental benefit to the Blue Sucker spawning habitat. In

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[25] *See* Attachment B -- 2014 Blue Sucker Emergency Order, Exhibit A, Finding of Fact No. 60; Attachment I, August 2014 Emergency Order, Finding of Fact No. 59-60; 2014 Emergency Order, Finding of Fact No. 70; 2013 Emergency Order, Finding of Fact Nos. 34-35; July 2013 Emergency Order, Finding of Fact No. 41; 2011 Emergency Order, Findings of Fact Nos. 32-33.

[26] 30 TEX. ADMIN. CODE § 35.101(a)(1)(B).

[27] 30 *id*. § 35.101(m).

[28] *See* Attachment B -- 2014 Blue Sucker Emergency Order, Exhibit A, Finding of Fact Nos. 62, 68;

this exceptional drought with no clear end in sight, that additional water should remain in storage to help meet the critical needs of LCRA's firm water customers should this drought persist.

VII. LCRA IS FULLY IMPLEMENTING ITS WATER CONSERVATION PLAN AND DROUGHT CONTINGENCY PLAN (30 TEX. ADMIN. CODE §§ 35.101(c)(6), 295.91(3))

LCRA has been diligently implementing its Water Conservation and Drought Contingency Plans in an ongoing effort to reduce unnecessary water use. *See* Affidavit of Nora Mullarkey Miller (Attachment L).[29] In 2011, when combined storage in lakes Buchanan and Travis fell below 900,000 acre-feet, LCRA called on its firm water customers implement the mandatory restrictions in their drought contingency plans to reduce water use by 10 to 20 percent. As lake conditions continued to deteriorate, LCRA's firm customers stepped up their efforts to extend the water supply. Since that time, most of LCRA's municipal customers have stayed in or moved into some form of mandatory water restrictions, significantly limiting landscape irrigation. LCRA industrial customers, who consist of power plants and a few large industries along the Gulf Coast, have also worked to reduce non-essential water uses. *See* Affidavit of Nora Mullarkey Miller (Attachment L, Tab 2).

In response to the ongoing drought conditions, the LCRA Board amended the firm customer drought contingency plan in November 2013 to require that, if combined storage on March 1, 2014 was below 1.1 million acre-feet and interruptible stored water to the Gulf Coast, Lakeside and Pierce Ranch irrigation operations was cut off, LCRA's firm customers would be required to implement a landscape irrigation watering schedule of no more than once per week.[30] The Board reaffirmed this action in November 2014.[31] The criteria for this restriction to take effect have been met and the restriction will remain in effect until storage increases to above 1.1 million acre-feet or the supply of interruptible stored water to the Gulf Coast, Lakeside and Pierce Ranch irrigation operations resumes. While many customers were already implementing once or twice per week watering restrictions, the LCRA Board action applies this requirement to all LCRA customers.

LCRA has also adopted measures that would take effect in the event that combined storage falls below 600,000 acre-feet and is also preparing for possible further declines in storage. *See* Affidavit of Nora Mullarkey Miller (Attachment L).[32] Mandatory firm water use reductions will

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[29] The 2014 LCRA Raw Water Conservation Plan and relevant appendices include elements for LCRA as a wholesale water provider. LCRA's Raw Water Conservation Plan is on file with TCEQ and available at: http://www.lcra.org/water/save-water/Documents/2009_LCRA_Water_Conservation.pdf. The LCRA Drought Contingency Plan included within chapter 4 of the 2010 WMP applies to all LCRA raw water customers. *See* Attachment C – 2010 WMP, Chapter 4.

[30] *See* Attachment M, LCRA Board Resolution, November 2013.

[31] *See* Attachment N, Certification of LCRA Board Agenda Item 10: Authorization for LCRA Staff to Seek Emergency Relief (dated November 19, 2014).

[32] LCRA has also implemented significant improvements in irrigation water use efficiency. *See* Affidavit of Nora Mullarkey, Attachment L.

be implemented at that time, but benchmarking has indicated that such reductions will take up to a year to implement.[33] *See id.*.

VIII. THERE ARE NO FEASIBLE AND PRACTICABLE ALTERNATIVES TO THE REQUESTED RELIEF (30 TEX. ADMIN. CODE §§35.24(c)(4), 35.101(c)(3)-(4), 295.91(3))

There are no immediate feasible or practicable alternatives to the emergency authorization sought herein. Water released from the lakes cannot be recaptured. LCRA is currently evaluating a number of short and long-term alternatives to address the emergency conditions, but they will take time to implement. *See* Affidavit of David Wheelock (Attachment D). LCRA has already taken many steps to preserve its water supply in this drought, including: 1) the implementation of its drought contingency plan resulting in firm customers implementing mandatory watering restrictions; 2) emergency relief from the 2010 WMP in 2012, 2013, and 2014, resulting in the cutoff of interruptible stored water to most irrigation customers, with similar relief being sought for 2015; and 3) obtaining permits to use its downstream water rights at additional diversion points where its firm customers currently divert water. *See id.; see also* Affidavit of Nora Mullarkey Miller (Attachment L). In short, while LCRA has already preserved significant amounts of water supply, and is actively pursuing additional relief for 2015 to implement similar measures as it has done in prior years related to the suspension of most releases of interruptible supply and use of its run-of-river rights, there are no other readily available options that would immediately offset the irreversible impact of releasing substantial amounts of additional stored water to maintain a 500 cfs flow condition in the lower Colorado River, as currently required by the 2010 WMP.

IX. REQUESTED RELIEF, TRIGGERS, AND DATES (30 TEX. ADMIN. CODE §§ 35.24(c)(2), 35.24(c)(5)-(6), 35.101(c)(5), 35.101(c)(8), 295.91(2))

LCRA requests that it be allowed to reduce the instream flow requirement in effect for a continuous six-week period from March to May associated with the Blue Sucker under the 2010 WMP[34] from 500 cfs to 300 cfs. LCRA requests the Executive Director issue an emergency order granting this requested relief on or before March 1, but preferably no earlier than February 17th (*i.e.* 15 days before the TCEQ's March 4, 2015 agenda), so that the order may be timely reviewed by the Commission in accordance with Texas Water Code § 11.148 and also provide LCRA with the full potential benefit of the order during the time period for which LCRA is otherwise obligated to supply water for the Blue Sucker.

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[33] *See* Attachment B – 2014 Blue Sucker Emergency Order, Exhibit A, Finding of Fact No. 58; Attachment I – August 2014 Emergency Order, Finding of Fact Nos. 31, 54; *See also* February 2014 Emergency Order, Finding of Fact No. 69; July 2013 Emergency Order, Finding of Fact No. 40; *see also* 2013 Emergency Order Finding of Fact No. 44; 2011 Emergency Order, Finding of Fact No. 39.

[34] LCRA acknowledges that its WMP already provides for some reductions in the amount of water provided for environmental flow needs, *see* 30 TEX. ADMIN. CODE § 35.101(n) & (o); however, it is evident that the emergency conditions presented by this unprecedented drought were not fully appreciated when these special requirements were incorporated into the WMP. Specifically, the inflow conditions in 2011 and in 2013 represent conditions that are worse than conditions in the Drought of Record.

As noted above, significant spawning habitat will continue to be supported at a 300 cfs flow level. Reducing the releases for the Blue Sucker results in an overall potential savings of as much as 17,000 acre-feet of stored water at a crucial time when the basin sits on the verge of triggering DWDR conditions. *See* Affidavits of Ryan Rowney (Attachment F), Ron Anderson (Attachment G); and Bryan Cook (Attachment K).

Based on the low inflows and resulting low storage levels in lakes Buchanan and Travis, significant amounts of water are necessary to alleviate the emergency conditions. *See* Affidavit of Ron Anderson (Attachment G). With combined storage as of December 1, 2014 at about 691,000 acre-feet, it would take well over one million acre-feet to refill lakes Buchanan and Travis. If storage drops below 600,000 acre-feet, firm customers will be forced into mandatory curtailment with cuts of 20 percent or more. The water which would be preserved as a result of the emergency relief sought by this application could avoid reaching that trigger level, and. more importantly, will be preserved to meet critical needs should the drought persist.

X. CONSISTENCY WITH THE REGIONAL WATER PLAN

The Region K Water Plan identifies lakes Buchanan and Travis as the source of supply for numerous water users in the lower Colorado River basin. The existing Water Management Plan for lakes Buchanan and Travis calls for a release from those reservoirs for environmental purposes in the lower Colorado River, thus removing such water from the supply available to meet firm customers' demands. Preserving this water to meet the needs of LCRA's firm water customers is consistent with meeting an identified demand in the regional plan.

XI. REQUIRED PUBLIC NOTICE (30 TEX. ADMIN. CODE § 35.101(h))

In response to LCRA's 2014 Blue Sucker emergency application, TCEQ mailed notice to all water rights holders in the basin. Further, LCRA published notice consistent with the agency's direction. The Commission's rule requires that notice be published in the "affected area," which is defined as "each county, in whole or in part, *downstream* of the diversion point or impoundment authorized under the affected water right." *Id.* 30 TEX. ADMIN. CODE § 35.101(h). However, TCEQ provided LCRA with a list of 23 counties for publication that spanned not only the counties within the watershed downstream of Lake Travis but also included upstream tributaries that contribute flow to the Highland Lakes. As a result, LCRA published notice in 20 separate newspapers at substantial expense. LCRA did not object last year because of the risk that doing so would delay action on LCRA's request; however, LCRA believes this level of notice was beyond that required by the Commission's own rules and that notice should only be required in the counties downstream of Lake Travis. Limiting notice to these counties makes sense; persons located upstream of Lake Travis or on contributing tributaries to the Highland lakes are affected no differently as a result of this request than they might otherwise be affected if LCRA's obligation to maintain 500 cfs in the lower river remained intact. With or without the relief, LCRA has the legal right to all the water it has legally stored in the lakes and no more or less water will flow in the tributaries that feed LCRA's reservoirs as a result of this request. Thus, interests upstream of Lake Travis are unaffected by the relief requested herein and neither published notice nor notice to upstream water rights holders should be required.

XII. APPLICATION FEES (30 TEX. ADMIN. CODE §§ 35.24(c)(8), 35.30)

Enclosed please find a check in the amount of $751.25 to cover filing and recording fees (based costs under LCRA's 2014 application).

XIII. LIST OF EXHIBITS

Attachment A – Supplemental Information Supporting LCRA's Application for Emergency Relief
Attachment B – TEX. COMM'N ENVTL. QUAL., Docket No. 2014-0438-WR, Order affirming, with modification, an order issued to the Lower Colorado River Authority partially suspending releases of stored water for instream flows for the Blue Sucker under its Water Management Plan, Permit No. 5838, pursuant to Sections 5.506 and 11.148 of the Texas Water Code (May 8, 2014).
Attachment C – Excerpts from 2010 Water Management Plan
Attachment D –Affidavit of David Wheelock
Attachment E – Certificates of Adjudication 14-5478, as amended, and 14-5482, as amended
Attachment F – Affidavit of Ryan Rowney
Attachment G –Affidavit of Ron Anderson
Attachment H – Affidavit of Bob Rose
Attachment I – TEX. COMM'N ENVTL. QUAL., Docket No. 2014-1044-WR , Order affirming an Order issued by the Executive Director that grants an Emergency order requested by the Lower Colorado River Authority (Aug. 15, 2014).
Attachment J – Governor's Drought Proclamation (dated December 22, 2014)
Attachment K – Affidavit of Bryan Cook
Attachment L – Affidavit of Nora Mullarkey Miller
Attachment M – Resolution of the LCRA Board of Directors, November 2013
Attachment N – Certification of LCRA Board Agenda Item 10: Authorization for LCRA Staff to Seek Emergency Relief (dated November 19, 2014)
Attachment O – LCRA Policies Re: Signature Authority