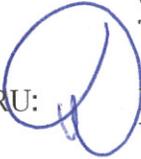


TCEQ Interoffice Memorandum

TO: Office of the Chief Clerk
Texas Commission on Environmental Quality

THRU:  Aliana Delgado, Team Leader
Water Rights Permitting Team

FROM: Sarah Henderson, Project Manager
Water Rights Permitting Team

DATE: August 19, 2016

SUBJECT: TCEQ Docket No. 2016-0531-WR
Lower Colorado River Authority
ADJ 5434; CN600253637, RN104090089
Application No. 14-5434E to Amend Certificate of Adjudication No. 14-5434
Texas Water Code §11.122, Requiring Limited Mailed Notice
Colorado River, Colorado River Basin
Bastrop, Fayette, Wharton, Matagorda, Travis, and Colorado Counties

The Executive Director received an application from Lower Colorado River Authority seeking a Water Use Amendment pursuant to Texas Water Code § 11.122 and Texas Commission on Environmental Quality Rules Title 30 Texas Administrative Code §§ 295.1, *et seq.*

The application was received on August 29, 2002. The application was declared administratively complete and filed with the Office of the Chief Clerk on February 5, 2003. Notice of the application was mailed on May 22, 2003 to the downstream water right holders in the Colorado River Basin. Six requests for a contested case hearing were received.

Because this application was declared administratively complete after September 1, 1999, the rules in Chapter 55, Subchapter G, Section 55.250 - 55.256 apply. The Chief Clerk shall mail notice to the applicant, executive director, public interest counsel, and timely hearing requestors not later than 35 days prior to the agenda setting. Applicants, the public interest counsel, and the executive director shall file a response no later than 23 days before agenda, and the hearing requestors shall reply no later than nine days before agenda.

The application is now technically complete and the staff has recommended that the application be granted based on the analysis in the technical review memos.

Below is the caption for this application:

Consideration of an application to amend Certificate of Adjudication No. 14-5434 by the Lower Colorado River Authority (LCRA) to add additional diversion points both upstream and downstream of the existing diversion point authorized in Certificate of Adjudication No. 14-5434 on the Colorado River. These additional diversion points are: two diversion points in Bastrop County on the Colorado River and Spicer Creek

authorized in Certificate of Adjudication No. 14-5473; two diversion points in Fayette County on the Colorado River and Cedar Creek authorized in Certificate of Adjudication No. 14-5474; three diversion points authorized from reservoirs on the Colorado River in Wharton and Matagorda County in Certificate of Adjudication No. 14-5476; two diversion points (one from a reservoir) in Colorado County and on the Colorado River authorized in Certificate of Adjudication No. 14-5475; one diversion point located in Wharton County on the Colorado River authorized by Certificate of Adjudication No. 14-5477; and one diversion point in Matagorda County on the Colorado River authorized by Certificate of Adjudication No. 14-5437.

LCRA also seeks to divert and use the water from anywhere on the perimeter of Lady Bird Lake (formerly known as Town Lake) and Lake Austin, authorized by Certificate of Adjudication No. 14-5471, and Lake Travis, authorized by Certificate of Adjudication 14-5482. Water diverted from reservoirs will not be diverted from storage in the reservoirs. LCRA currently owns a portion of Certificate of Adjudication No. 14-5434, which authorizes the Owner to maintain an overflow type structure and a reservoir on the Colorado River, Colorado River Basin, and temporarily impound therein not to exceed 86 acre-feet of water in Colorado County. The Certificate also authorizes the LCRA to divert and use not to exceed 133,000 acre-feet of water per year from a point on the Colorado River for municipal, industrial, and agricultural purposes in Colorado, Wharton, Travis, Bastrop, Fayette, and Matagorda Counties within the Colorado River Basin, Lavaca River Basin, Guadalupe River Basin, Colorado-Lavaca Coastal Basin, and the Brazos-Colorado Coastal Basin at a maximum rate of 600.00 cfs. The Commission will consider the application and timely hearing requests and responses. (Henderson, Smith)



Sarah Henderson, Project Manager
Water Rights Permitting Team

Lower Colorado River Authority (Garwood)

▲ Proposed Application No.14-5434E

▲ Existing Water Right No.14-5434

Protestants with Water Rights

◆ City of Austin

◆ STP Nuclear Operating Co.

◆ Colorado River MWD

Protestant without Water Rights

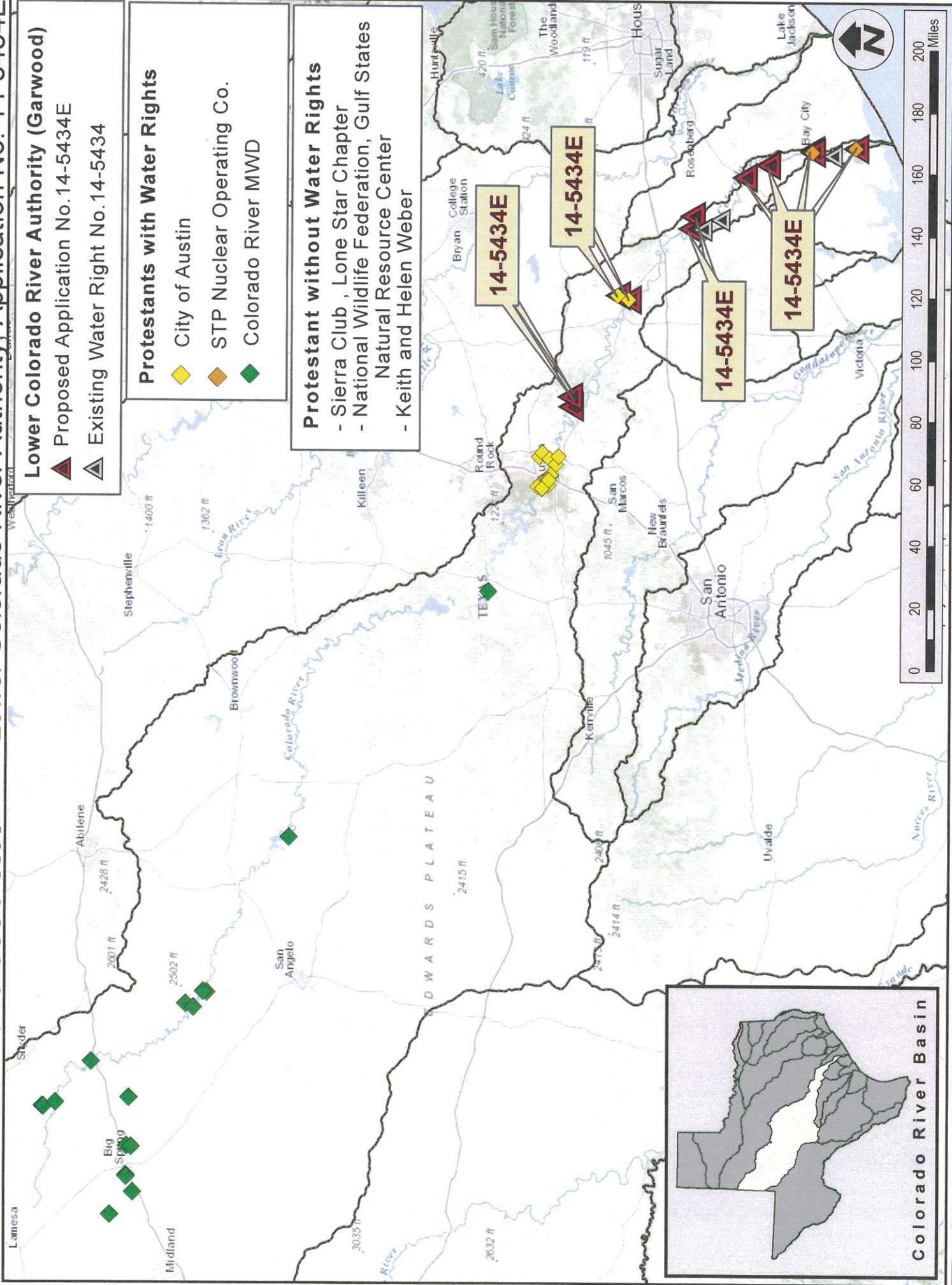
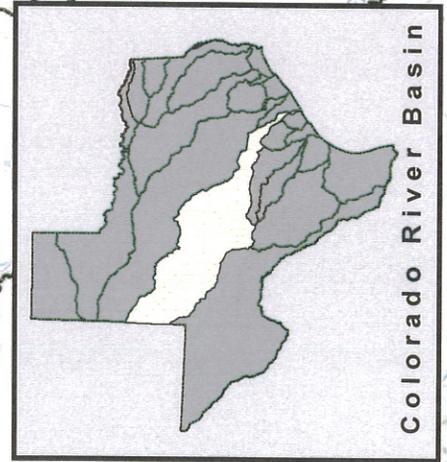
- Sierra Club, Lone Star Chapter
- National Wildlife Federation, Gulf States Natural Resource Center
- Keith and Helen Weber

14-5434E

14-5434E

14-5434E

14-5434E



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



NOTICE OF AN APPLICATION TO AMEND A CERTIFICATE OF ADJUDICATION

APPLICATION NO. 14-5434E

Lower Colorado River Authority has applied for an amendment to their Certificate of Adjudication No. 14-5434, as amended, to add additional diversion points on the Colorado River and diversion from anywhere on the perimeter of Town Lake, Lake Austin, and Lake Travis in the Colorado River Basin. More information on the application and how to participate in the permitting process is given below.

APPLICATION. Lower Colorado River Authority (LCRA), P.O. Box 220, Austin, Texas 78767-0220, applicant, seeks an amendment to Certificate of Adjudication No. 14-5434, as amended, pursuant to §11.122, Texas Water Code and Texas Commission on Environmental Quality Rules 30 TAC §§295.1, et seq. Notice is being mailed pursuant to 30TAC §295.158(c)(2)(E) and TWC §11.132 (a) to the water right holders of record downstream of Lake Buchanan in the Colorado River Basin.

Certificate of Adjudication No. 14-5434, as amended, authorizes LCRA to maintain an overflow type structure and a reservoir on the Colorado River, Colorado River Basin, and temporarily impound therein not to exceed 86 acre-feet of water in Colorado County. Owner is also authorized to divert and use not to exceed 133,000 acre-feet of water per annum from a point on the Colorado river for municipal, industrial, and agricultural purposes in Colorado, Wharton, Travis, Bastrop, Fayette, and Matagorda Counties within the Colorado River Basin, Lavaca River Basin, Guadalupe River Basin, Colorado-Lavaca Coastal Basin, and Brazos-Colorado Coastal Basin at a maximum rate of 600.00 cfs (269,400 gpm).

Applicant seeks to amend Certificate of Adjudication No. 14-5434, as amended, to add additional diversion points both upstream and downstream of the existing diversion point. Said additional points are currently authorized in other Certificates owned by LCRA. LCRA requests that the time priority remain November 1, 1900, at the additional diversion points.

The additional diversion points are described as follows:

- The diversion points (2) authorized in Certificate of Adjudication No. 14-5473:
 - A. At a point on the Colorado River in the Isaac Harris Grant, Abstract 38, Bastrop County, Texas. Located at 30.15240°N Latitude, 97.34650°W Longitude.
 - B. On the perimeter of Lake Bastrop on Spicey Creek, tributary of the Colorado River, in Bastrop County, Texas. Located at 30.15475 °N Latitude, 97.29339 °W Longitude.

RECEIVED

MAY 23 2003

WATER RIGHTS TEAM

The diversion points (2) authorized in Certificate of Adjudication No. 14- 5474:

- A. At a point on the east bank of the Colorado River in the J. M. Hensley Survey, Abstract 54, Fayette County, Texas. Located at 29.86770°N Latitude, 96.77560°W Longitude.
- B. On the perimeter of Cedar Creek Reservoir on Cedar Creek, tributary of the Colorado River Basin in the J. M. Hensley Survey, Abstract 54, Fayette County, Texas. Located at 29.91920°N Latitude, 96.75110°W Longitude.

The diversion points (3) authorized in Certificate of Adjudication No. 14-5476, as amended:

- A. At a point on the east bank of a reservoir, known as Lane City Dam, on the Colorado River in the Sylvanus Castleman Grant, Abstract 11, Wharton County, Texas. Located at 29.1936°N Latitude, 96.07210°W Longitude.
- B. At a point on the east bank of a reservoir, known as Bay City Dam, on the Colorado River in John F. Bowman and Henry Williams Grant, Abstract 9, Matagorda County, Texas. Located at 28.98400°N Latitude, 96.00020°W Longitude.
- C. At a point on the west bank of a reservoir, known as Bay City Dam, on the Colorado River located in Thomas Cayce Grant, Abstract 14, Matagorda County, Texas. Located at 28.98060°N Latitude, 96.01150°W Longitude.

The diversion points (2) authorized in Certificate of Adjudication No. 14-5475, as amended:

- A. At a point on the east bank of the Colorado River in the A. W. McLain and James McNair Grant, Abstract 33, Colorado County. Located at 29.56990°N Latitude, 96.40200°W Longitude.
- B. At a point located on the perimeter of Eagle Lake on Moores Branch of the Colorado River in Colorado County, Texas. Located at 29.55830°N Latitude, 96.33410°W Longitude.

The diversion point authorized in Certificate of Adjudication No. 14-5477, as amended, which is at a point on the south bank of the Colorado River located in the Robert Kuykendall Grant, Abstract 39, Wharton County, Texas. Located at 29.30727°N Latitude, 96.13401°W Longitude.

The diversion point authorized in Certificate of Adjudication No. 14-5437, which is at a point on the west bank of the Colorado River in the Cornelius H. Vanderveer Grant, Abstract 95, Matagorda County, Texas and also being 28.77580°N Latitude, 95.99700°W Longitude.

Applicant also seeks to divert and use the water from anywhere on the perimeter of Town Lake, Lake Austin, and Lake Travis authorized by Certificates of Adjudication Nos. 14-5471, as amended, and 14-5482, as amended. Water diverted from these will not be diverted from storage in the reservoirs.

Applicant is not requesting an increase in the maximum rate of diversion or the maximum annual quantity of water authorized in Certificate of Adjudication No. 14-5434, as amended.

Pursuant to 30 TAC §297.45 granting an application for an amendment to a water right shall not cause an adverse impact to an existing water right.

The application was received on August 29, 2002. Additional information for the application was received on November 7, 2002, December 18, 2002, and January 29, 2003. The application was accepted for filing and declared administratively complete on February 5, 2003.

PUBLIC COMMENT / PUBLIC MEETING. Written public comments and requests for a public meeting should be submitted to the Office of the Chief Clerk, at the address provided in the information section below by **June 23, 2003**. A public meeting is intended for the taking of public comment, and is not a contested case hearing. A public meeting will be held if the Executive Director determines that there is a significant degree of public interest in the application.

CONTESTED CASE HEARING. The TCEQ may grant a contested case hearing on this application if a written hearing request is filed by **June 23, 2003**. The Executive Director can consider an approval of the application unless a written request for a contested case hearing is filed by **June 23, 2003**.

To request a contested case hearing, you must submit the following: (1) your name (or for a group or association, an official representative), mailing address, daytime phone number, and fax number, if any; (2) applicant's name and permit number; (3) the statement "[I/we] request a contested case hearing;" and (4) a brief and specific description of how you would be affected by the application in a way not common to the general public. You may also submit any proposed conditions to the requested amendment which would satisfy your concerns. Requests for a contested case hearing must be submitted in writing to the TCEQ Office of the Chief Clerk at the address provided in the information section below.

If a hearing request is filed, the Executive Director will not issue the requested amendment and may forward the application and hearing request to the TCEQ Commissioners for their consideration at a scheduled Commission meeting.

INFORMATION. Written hearing requests, public comments or requests for a public meeting should be submitted to the Office of the Chief Clerk, MC 105, TCEQ, P.O. Box 13087, Austin, TX 78711-3087. For information concerning the hearing process, please contact the Public Interest Counsel, MC 103 at the same address. For additional information, individual members of the general public may contact the Office of Public Assistance at 1-800-687-4040. General information regarding the TCEQ can be found at our web site at www.tceq.state.tx.us.

Issued this 22nd day of May, 2003.

AMENDMENT TO A
CERTIFICATE OF ADJUDICATION

CERTIFICATE NO. 14-5434E

TYPE: S 11.122

Owner: Lower Colorado River Authority Address: P.O. Box 220
Austin, Texas 78767-0220

Filed: February 5, 2003

Granted:

Purpose: Municipal, Industrial, and
Agricultural

Counties: Colorado, Wharton, Travis
Bastrop, Fayette and
Matagorda

Watercourse: Spicer Creek, tributary of the
Colorado River; Cedar Creek,
tributary of the Colorado River,
Moore's Branch of the Colorado
River, tributary of the Colorado
and the Colorado River

Watershed: Colorado River Basin,
Lavaca River Basin,
Guadalupe River Basin,
Colorado-Lavaca Coastal
Basin, and Brazos- River
Colorado Coastal Basin

WHEREAS, The Lower Colorado River Authority (LCRA) owns a portion of Certificate of Adjudication No. 14-5434 which authorizes the Owner to maintain an overflow type structure and a reservoir on the Colorado River, Colorado River Basin, and temporarily impound therein not to exceed 86 acre-feet of water in Colorado County; and

WHEREAS, Certificate of Adjudication No. 14-5434 also authorizes the LCRA to divert and use not to exceed 133,000 acre-feet of water per year from a point on the Colorado River for municipal, industrial, and agricultural purposes in Colorado, Wharton, Travis, Bastrop, Fayette, and Matagorda Counties within the Colorado River Basin, Lavaca River Basin, Guadalupe River Basin, Colorado-Lavaca Coastal Basin, and the Brazos-Colorado Coastal Basin at a maximum rate of 600.00 cfs (269,400 gpm); and

WHEREAS, multiple special conditions apply; and

WHEREAS, the time priority of the Owner's right is November 1, 1900; and

WHEREAS, an application was received from LCRA to amend Certificate of Adjudication No. 14-5434 to add additional diversion points both upstream and downstream of the existing diversion point on the Colorado River and described as follows:

- Two diversion points authorized in Certificate of Adjudication No. 14-5473:
 - A. At a point on the Colorado River in the Isaac Harris Grant, Abstract 38, Bastrop County, Texas, and located at 30.15240° N Latitude, 97.34650° W Longitude.
 - B. On the perimeter of Lake Bastrop on Spicer Creek, tributary of the Colorado River, in Bastrop County, Texas, and located at 30.15475° N Latitude, 97.29339° W Longitude.

- Two diversion points authorized in Certificate of Adjudication No. 14-5474:
 - A. At a point on the east bank of the Colorado River in the J.M. Hensley Survey, Abstract 54, Fayette County, Texas, and located at 29.86770° N Latitude, 96.77560° W Longitude.
 - B. On the perimeter of Cedar Creek Reservoir on Cedar Creek, tributary of the Colorado River in the J.M. Hensley Survey, Abstract 54, Fayette County, Texas, and located at 29.91920° N Latitude, 96.75110° W Longitude.

- Three diversion points authorized in Certificate of Adjudication No. 14-5476:
 - A. At a point on the east bank of a reservoir (known as Lane City Dam), on the Colorado River in the Sylvanus Castleman Grant, Abstract 11, Wharton County, Texas, and located at 29.1936° N Latitude, 96.07210° W Longitude.
 - B. At a point on the east bank of a reservoir (known as Bay City Dam), on the Colorado River in the John F. Bowman and Henry Williams Grant, Abstract 9, Matagorda County, Texas, and located at 28.98400° N Latitude, 96.00020° W Longitude.
 - C. At a point on the west bank of a reservoir (known as Bay City Dam), on the Colorado River located in Thomas Cayce Grant, Abstract 14, Matagorda County, Texas, and located at 28.98060° N Latitude, 96.01150° W Longitude.

- Two diversion points authorized in Certificate of Adjudication No. 14-5475:
 - A. At a point on the east bank of the Colorado River in the A.W. McLain and James McNair Grant, Abstract 33, Colorado County, and located at 29.56990° N Latitude, 96.40200° W Longitude.
 - B. At a point located on the perimeter of Eagle Lake on Moores Branch of the Colorado River in Colorado County, Texas, and located at 29.55830° N Latitude, 96.33410° W Longitude.

- Diversion point authorized in Certificate of Adjudication No. 14-5477, on the south bank of the Colorado River, in the Robert Kuykendall Grant, Abstract 39, Wharton County, Texas, and located at 29.30727° N Latitude, 96.13401° W Longitude.
- Diversion point authorized in Certificate of Adjudication No. 14-5437, on the west bank of the Colorado River, in the Cornelius H. Vanderveer Grant, Abstract 95, Matagorda County, Texas, located at 28.77580° N Latitude, 95.99700° W Longitude; and

WHEREAS, the LCRA also seeks to divert and use the water from anywhere on the perimeter of Lady Bird Lake (formerly known as Town Lake) and Lake Austin, authorized by Certificate of Adjudication No. 14-5471, and Lake Travis, authorized by Certificate of Adjudication 14-5482. Water diverted from these reservoirs will not be diverted from storage in the reservoirs; and

WHEREAS, the amendment the applicant is requesting does not represent a new appropriation of water nor an increase in the amount of water authorized to be stored, taken, or diverted; therefore, Texas Water Code § 11.1471(d) does not apply to this application; and

WHEREAS, the Texas Commission on Environmental Quality finds that jurisdiction over the application is established; and

WHEREAS, the Executive Director recommends special conditions be included; and

WHEREAS, the Commission has complied with the requirements of the Texas Water Code and Rules of the Texas Commission on Environmental Quality in issuing this amendment;

NOW, THEREFORE, this amendment to Certificate of Adjudication No. 14-5434, designated Certificate of Adjudication No. 14-5434E, is issued to the Lower Colorado River Authority, subject to the following terms and conditions:

1. DIVERSION

In addition to the previous authorization, Owner is also authorized to divert:

- From any point on the perimeter of Lake Travis, authorized by Certificate of Adjudication 14-5482.
- From any point on the perimeter of Lady Bird Lake (formerly known as Town Lake) and Lake Austin, authorized by Certificate of Adjudication No. 14-5471.
- Two diversion points authorized in Certificate of Adjudication No. 14-5473:

1. At a point on the Colorado River, Colorado River Basin in the Isaac Harris Grant, Abstract 38, Bastrop County, Texas, located at 30.15240° N Latitude, 97.34650° W Longitude.
 2. On the perimeter of Lake Bastrop on Spicer Creek, tributary of the Colorado River, in Bastrop County, Texas, located at 30.15475° N Latitude, 97.29339° W Longitude.
- D. Two diversion points authorized in Certificate of Adjudication No. 14-5474:
1. At a point on the east bank of the Colorado River in the J.M. Hensley Survey, Abstract 54, Fayette County, Texas, located at 29.86770° N Latitude, 96.77560° W Longitude.
 2. On the perimeter of Cedar Creek Reservoir on Cedar Creek, tributary of the Colorado River in the J.M. Hensley Survey, Abstract 54, Fayette County, Texas, located at 29.91920° N Latitude, 96.75110° W Longitude.
- E. Three diversion points authorized in Certificate of Adjudication No. 14-5476:
1. At a point on the east bank of a reservoir, known as Lane City Dam, on the Colorado River in the Sylvanus Castleman Grant, Abstract 11, Wharton County, Texas, located at 29.1936° N Latitude, 96.07210° W Longitude.
 2. At a point on the east bank of a reservoir, known as Bay City Dam, on the Colorado River in John F. Bowman and Henry Williams Grant, Abstract 9, Matagorda County, Texas, located at 28.98400° N Latitude, 96.00020° W Longitude.
 3. At a point on the west bank of a reservoir, known as Bay City Dam, on the Colorado River located in Thomas Cayce Grant, Abstract 14, Matagorda County, Texas, located at 28.98060° N Latitude, 96.01150° W Longitude.
- F. Two diversion points authorized in Certificate of Adjudication No. 14-5475:
1. At a point on the east bank of the Colorado River in the A.W. McLain and James McNair Grant, Abstract 33, Colorado County, Texas, located at 29.56990° N Latitude, 96.40200° W Longitude.
 2. At a point located on the perimeter of Eagle Lake on Moores Branch of the Colorado River in Colorado County, Texas, located at

29.55830° N Latitude, 96.33410° W Longitude.

- G. The diversion point authorized in Certificate of Adjudication No. 14-5477, which is at a point on the south bank of the Colorado River located in the Robert Kuykendall Grant, Abstract 39, Wharton County, Texas, located at 29.30727° N Latitude, 96.13401° W Longitude.
- H. The diversion point authorized in Certificate of Adjudication No. 14-5437, which is at a point on the west bank of the Colorado River in the Cornelius H. Vanderveer Grant, Abstract 95, Matagorda County, Texas and located at 28.77580° N Latitude, 95.99700° W Longitude.
- I. At a maximum combined diversion rate of 600 cfs (269,400 gpm) for water authorized by this certificate.

2. PRIORITY DATE

The time priority of the Owner's right under this Certificate of Adjudication No. 14-5434E is November 1, 1900.

3. CONSERVATION

Owner shall implement water conservation plans that continue to provide for the utilization of those practices, techniques, and technologies that reduce or maintain the consumption of water, prevent or reduce the loss or waste of water, maintain or improve the efficiency in the use of water, increase the recycling and reuse of water or prevent the pollution of water, so that a water supply is made available for future or alternative uses. Such plans shall continue to include a requirement that in every wholesale water contract entered into, on or after the effective date of this amendment, including any contract extension or renewal, that each successive wholesale customer develop and implement conservation measures. If the customer intends to resell the water, then the contract for resale of the water must have water conservation requirements so that each successive wholesale customer in the resale of the water be required to implement water conservation measures.

4. SPECIAL CONDITIONS

- A. Diversion of water from the perimeter of Lake Travis, Lake Austin, and Lady Bird Lake (formerly known as Town Lake) shall not reduce the flow of water below 50 cfs in the Austin reach of the Lower Colorado River below the Longhorn Dam and upstream of USGS Gage No. 08158000, Colorado River at Austin, Texas.

B. Diversions of water under this permit from the Colorado River downstream of Lady Bird Lake and upstream of the existing diversion points authorized under Certificate of Adjudication No. 14-5434 shall not reduce streamflow below the applicable instream flow requirements at the gage immediately downstream of the diversion, as set forth in paragraphs (C)-(F) below, which shall apply at such times as such requirements are in effect under Permit No. 5838, as amended.

C. Diversion of water in the Bastrop reach, between USGS Gage No. 08158000, Colorado River at Austin, Texas and USGS Gage No. 08159200, Colorado River at Bastrop, Texas, shall not reduce streamflow in the Bastrop reach below the following values as measured at USGS Gage No. 08159200, Colorado River at Bastrop, Texas:

cfs	JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
Subsistence	208	274	274	184	275	202	137	123	123	127	180	186
Base-Dry	313	317	274	287	579	418	347	194	236	245	283	311
Base-Average	433	497	497	635	824	733	610	381	423	433	424	450

D. Diversion of water in the Columbus (Eagle Lake) reach, between USGS Gage No. 08159200, Colorado River at Bastrop, Texas and USGS Gage No. 08161000, Colorado River at Columbus, Texas, shall not reduce streamflow in the Columbus reach below the following values as measured at USGS Gage No. 08161000, Colorado River at Columbus, Texas:

cfs	JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
Subsistence	340	375	375	299	425	534	342	190	279	190	202	301
Base-Dry	487	590	525	554	966	967	570	310	405	356	480	464
Base-Average	828	895	1,020	977	1,316	1,440	895	516	610	741	755	737

E. Diversion of water in the Wharton (Egypt) reach, between USGS Gage No. 08161000, Colorado River at Columbus, Texas and USGS Gage No. 08162000, Colorado River at Wharton, Texas, shall not reduce streamflow in the Wharton reach below the following values as measured at USGS Gage No. 08162000, Colorado River at Wharton, Texas:

cfs	JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
Subsistence	315	303	204	270	304	371	212	107	188	147	173	202
Base-Dry	492	597	531	561	985	984	577	314	410	360	486	470
Base-Average	838	906	1,036	1,011	1,397	1,512	906	522	617	749	764	746

- F. Diversion of water under this amendment from Lake Bastrop, Cedar Creek Reservoir, or Eagle Lake as set forth in this amendment, which is diverted from natural inflows into these reservoirs from the Spicer Creek, Cedar Creek, or Eagle Lake watersheds, shall be subject to the appropriate instream flow requirements for the corresponding main stem reach.
- G. If Owner makes significant modifications to an existing intake structure at diversion points that authorize diversion of water under this amendment, Owner shall implement reasonable measures to minimize potential adverse impacts due to entrainment and impingement of fishery resources. This requirement shall not apply to routine maintenance or replacement of existing intake facilities that do not result in any increase in the diversion rates of the existing facilities.

If new intake facilities at the authorized diversion points below Longhorn Dam are to be constructed by Owner for purposes of diverting water authorized under this amendment, Owner shall seek and obtain an amendment to this permit prior to commencing construction of such facilities for the purpose of establishing special conditions, if any, needed to address any specific adverse impacts due to entrainment and impingement of fishery resources from the proposed new intake facilities.

H. DIVERSION LIMITS

- (1) Except as set forth in subparagraphs (2) & (3), the total amount of water available for diversion at the additional points authorized in Paragraph 1. DIVERSION is as follows:

Location	Maximum Annual Diversion Amount (ac-ft)
DIVERSION Paragraph 1.A.	79,733
DIVERSION Paragraph 1.B.	91,925
DIVERSION Paragraph 1.C.	104,776
DIVERSION Paragraph 1. D.	128,241
DIVERSION Paragraphs 1. E., F., G. and H.	133,000

- (2) In addition, at the additional points authorized in Paragraph 1. DIVERSION 1.A. through 1.D. of this Amendment, Owner may divert amounts in excess of those amounts specified in subparagraph (1), up to a maximum amount of 133,000 acre-feet per year at each additional point of diversion to the extent that such water is available at these additional diversion points without the Owner exercising a priority call on upstream junior water rights to pass streamflows to these downstream additional diversion locations.
- (3) Nothing in subparagraphs (1) or (2) allows Owner to divert water that would reduce the availability of water under a water right with

authorized diversion point(s) between the point authorized under Certificate of Adjudication No. 14-5434C and the additional points of diversion authorized under this amendment in Paragraph 1. DIVERSION 1.A. through 1.D., including water for meeting instream flow requirements under these water rights, beyond that which would have otherwise existed with the full, legal exercise of these water rights before the changes authorized in this amendment.

- I. To the extent that diversions occur at upstream point(s) of diversion, the amount available at downstream points is reduced accordingly based on run of the river flows at those locations. Owner shall document diversions of water authorized by Certificate of Adjudication 14-5434 at each diversion point and include the volume of water diverted at each point in Owner's annual Water Use Report.
- J. This amendment does not authorize the storage of water appropriated under this certificate in any reservoirs, including Lake Travis, Lake Austin, Lady Bird Lake (formerly known as Town Lake), Lake Bastrop, Cedar Creek Reservoir, Lane City Dam, Bay City Dam, or Eagle Lake, except to the extent that storage of this water is reflected in the individual authorizations for these reservoirs.
- K. Diversion of water appropriated under this certificate at Lake Travis is limited to Lake Travis inflows.
- L. Diversion of water appropriated under this certificate in the reach downstream of Lake Travis and upstream of USGS Gage No. 08158000, Colorado River at Austin, Texas is limited to run of the river flows.
- M. Owner shall only divert and use water pursuant to this amended certificate in accordance with the most recent approved *Accounting Procedures Water Rights Application No. 14-5434E*. Owner shall maintain the accounting plan and supporting information in electronic format and make the data available to the Executive Director and the public upon request. If Owner seeks to modify its accounting plan, Owner shall submit a request to the Executive Director for a determination of whether such modification requires a permit amendment, along with copies of the appropriate documents reflecting such a modification. Any modifications to *Accounting Procedures Water Rights Application No. 14-5434E* that the Executive Director determines would change the certificate terms must be submitted in the form of an application to amend the certificate. If an amendment is required, Owner shall not make any diversions pursuant to the modified accounting plan until an amendment is issued. Should Owner fail to maintain the accounting plan or timely notify the Executive Director of any modifications to the accounting plan, Owners shall immediately cease diversion pursuant to Paragraph 1. DIVERSION, and either apply to amend the certificate or forfeit the additional diversion points. If Owner fails to amend the

certificate or forfeit the additional diversion points, then TCEQ may begin proceedings to cancel authorization to use the point. Owner shall immediately notify the Commission upon modification of the accounting plan and provide copies of the appropriate documents effectuating such changes.

This amendment is issued subject to all terms, conditions and provisions contained in Certificate No. 14-5434, as amended, except as specifically amended herein.

This amendment is issued subject to all superior and senior water rights in the Colorado River Basin.

Certificate owner agrees to be bound by the terms, conditions, and provisions contained herein and such agreement is a condition precedent to the granting of this amendment.

All other matters requested in the application which are not specifically granted by this amendment are denied.

This amendment is issued subject to the Rules of the Texas Commission on Environmental Quality and to the right of continuing supervision of State water resources exercised by the Commission.

For the Commission

Date Issued:

Texas Commission on Environmental Quality

INTEROFFICE MEMORANDUM

To: Sarah Henderson
Water Rights Permitting Team
Water Rights Permitting & Availability Section

Date: January 7, 2016

From: Kathy Alexander, Ph.D.
Technical Specialist
Water Availability Division

Subject: Lower Colorado River Authority
CN600253637
ADJ 5434
Colorado River, Colorado River Basin
Colorado, Wharton, Travis, Bastrop, Fayette and Matagorda
Counties

WATER AVAILABILITY REVIEW ADDENDUM

On October 23, 2015 staff recalculated and revised the maximum annual diversion amounts in its July 6, 2015 memorandum, which are included in Paragraph 4.H.1. of the September 16, 2015 draft permit. On November 23, 2015 Lower Colorado River Authority (LCRA) submitted an update to its accounting plan to reflect the revised maximum annual diversion amounts.

Review and Conclusion

Staff's recalculated and revised maximum annual diversion amounts are as follows:

Location	Maximum Annual Diversion Amount (ac-ft)
DIVERSION Paragraph 1.A.	79,733
DIVERSION Paragraph 1.B.	91,925
DIVERSION Paragraph 1.C.	104,776
DIVERSION Paragraph 1. D.	128,241
DIVERSION Paragraphs 1. E., F., G. and H.	133,000

Staff reviewed the updated accounting plan and determined that maintenance of the data in the accounting plan and supporting records on a daily basis would protect senior water rights and demonstrate compliance with the Resource Protection staff's streamflow recommendations.

In its July 6, 2015 memorandum, staff recommended that the draft permit include

interim combined storage level triggers to engage LCRA's instream flow requirements until such time as LCRA's 2014 Water Management Plan (WMP) was approved. On November 18, 2015, the Texas Commission on Environmental Quality (TCEQ) approved LCRA's 2014 WMP application.

Based on this review, staff recommends changes to the September 16, 2015 draft permit as follows:

Paragraph 4.B.

Diversions of water under this permit from the Colorado River downstream of Lady Bird Lake and upstream of the existing diversion points authorized under Certificate of Adjudication No. 14-5434 shall not reduce streamflow below the applicable instream flow requirements at the gage immediately downstream of the diversion, as set forth in paragraphs (C)-(F) below, which shall apply at such times as such requirements are in effect under Permit No. 5838, as amended

Paragraph 4.H.

- (1) Except as set forth in subparagraphs (2) & (3), the total amount of water available for diversion at the additional points authorized in Paragraph 1. DIVERSION is as follows:

Location	Maximum Annual Diversion Amount (ac-ft)
DIVERSION Paragraph 1.A.	79,733
DIVERSION Paragraph 1.B.	91,925
DIVERSION Paragraph 1.C:	104,776
DIVERSION Paragraph 1. D.	128,241
DIVERSION Paragraphs 1. E., F., G. and H.	133,000

Texas Commission on Environmental Quality

INTEROFFICE MEMORANDUM

To: Sarah Henderson
Water Rights Permitting Team
Water Rights Permitting & Availability Section

Date: July 8, 2015

From: Kathy Alexander, Ph.D.
Technical Specialist
Water Availability Division

Subject: Lower Colorado River Authority
CN600253637
ADJ 5434
Colorado River, Colorado River Basin
Colorado, Wharton, Travis, Bastrop, Fayette and Matagorda
Counties

WATER AVAILABILITY REVIEW ADDENDUM

In its February 23, 2009 environmental analysis memorandum, Resource Protection staff recommended that diversions at certain points be subject to specific instream flow requirements. On August 8, 2012, the Texas Commission on Environmental Quality (TCEQ) adopted environmental flow standards for the Colorado and Lavaca Rivers, their associated tributaries and Matagorda and Lavaca Bays. By rule, these environmental flow standards are considered adequate to support a sound ecological environment. The subsistence, base-dry, and base-average flow values in 30 Texas Administrative Code (TAC) §298 Subchapter D (Colorado and Lavaca River and Matagorda and Lavaca Bays) are the same values that LCRA requested to apply to diversions under this amendment. In addition, these are the same values that are included in LCRA's pending request to amend its Water Management Plan (WMP). In order to provide consistency in water rights administration in the lower Colorado River below Lake Travis, Resource Protection staff recommends revising the previous recommendations as outlined in its July 8, 2015 addendum.

In addition, at LCRA's request, Hydrology staff considered additional information regarding whether diversions under the amended certificate would affect other water rights during times of high flows. Staff originally recommended that diversions be limited to certain values at specific points. (See Hydrology Memorandum dated February 25, 2009)

Based on review of LCRA's submittals on August 24, 2009, April 1, 2010, June 3, 2011, and May 3, 2012, and December 12, 2013, Staff determined that it could consider LCRA's request to re-evaluate how diversions during high flow conditions could affect other water rights, provided LCRA submitted an accounting plan that tracked diversions

under the amendment, demonstrated that other water rights would be protected, and demonstrated that any streamflow restrictions are fully satisfied prior to diversions. In addition to the accounting plan, LCRA indicated that it would not exercise a priority call on upstream junior water rights to pass streamflows to these additional downstream diversion locations and requested that this requirement be included in the amendment.

On August 9, 2010, LCRA submitted an accounting plan which was subsequently modified on June 3, 2011, May 1, 2012, and finally on May 14, 2015. The accounting plan now includes a compliance verification worksheet. The updated accounting plan also includes information on travel times below Mansfield Dam. Travel times can change based on flow conditions downstream; therefore, staff recommends that LCRA maintain the supporting information used in the accounting plan as well as the plan itself. Staff reviewed the accounting plan and determined that maintenance of the data in the accounting plan and supporting records on a daily basis would protect senior water rights and demonstrate compliance with the Resource Protection staff's streamflow recommendations.

Regarding whether LCRA's requested changes would affect other water rights, the analysis in the February 25, 2009 Hydrology memorandum was based on LCRA's ability to make a priority call on all upstream junior water rights in the Colorado River watershed. Because LCRA indicates it will not exercise a priority call on upstream junior water rights to pass streamflows to its new diversion locations, Resource Protection staff's modified flow requirements will not affect other water rights to any greater extent than those water rights would be affected by LCRA's diversions under its Certificate of Adjudication No. 14-5434C pursuant to its terms and conditions. In addition, LCRA's accounting plan specifically calculates and defines adverse impacts to other water rights as being when run-of-river water that is available to that water right while Garwood is actually operated as authorized by the proposed amended Certificate of Adjudication No. 14-5434E is less than run-of-river water that is available to that water right while Garwood is fully operated as authorized by the original Certificate of Adjudication No. 14-5434C.

The application does not request either a new appropriation of water or an increase in the amount of water authorized to be stored, taken, or diverted; therefore, Texas Water Code § 11.1471(d) does not apply to this application. Staff recognizes that LCRA's 2010 WMP requires different instream flow requirements and different combined storage levels at which those requirements are engaged. LCRA's 2014 amendment to its WMP does include specific combined storage levels to engage its instream flow requirements; however the 2014 WMP has not been approved. Therefore, staff recommends that the following combined storage levels, based on 30 TAC §298.320(c), be used until such time as the 2014 WMP is approved:

COMBINED STORAGE OF LAKES BUCHANAN & TRAVIS on Jan. 1 or June 1 (acre-feet)	MINIMUM FLOW VALUES
less than 1,103,700	<u>Subsistence Flows</u>
1,103,700 - 1,737,460	<u>Base-Dry</u>
greater than 1,737,460	<u>Base-Average</u>

Review and Conclusion

Based on this review, staff recommends that the draft permit include: a paragraph specifying the priority date; a new Special Condition 4.B to set out interim hydrologic conditions; a renumbered and modified Special Condition 3.G.; a modification to Special Conditions 3.J. and K. to remove the specific diversion limits; and, a new Special Condition requiring LCRA to maintain its accounting plan and supporting information.

Paragraph 4.B.

Diversions of water under this permit from the Colorado River downstream of Lady Bird Lake and upstream of the existing diversion points authorized under Certificate of Adjudication No. 14-5434 shall not reduce streamflow below the applicable instream flow requirements at the gage immediately downstream of the diversion, as set forth in paragraphs (C)-(F) below, as follows:

- i. From the date of issuance of this amendment, until such time as the Commission approves amendments to the Owner's Commission-approved Water Management Plan (Permit No. 5838, as amended), the applicable instream flow requirements shall apply seasonally based on combined storage of Lakes Buchanan and Travis as follows:

COMBINED STORAGE OF LAKES BUCHANAN & TRAVIS on Jan. 1 or June 1 (acre-feet)	MINIMUM FLOW VALUES
less than 1,103,700	<u>Subsistence Flows</u>
1,103,700 - 1,737,460	<u>Base-Dry</u>
greater than 1,737,460	<u>Base-Average</u>

- ii. From and after the date the Commission approves any amendments to the Owner's Commission-approved Water Management Plan (Permit No. 5838, as amended), the applicable instream flow requirements as set forth below shall apply at such times as such requirements are in effect under Permit No. 5838, as amended.

Paragraph 4.G.

- (1) Except as set forth in subparagraphs (2) & (3), the total amount of water available for diversion at the additional points authorized in Paragraph 1. DIVERSION is as follows:

Location	Maximum Annual Diversion Amount (ac-ft)
DIVERSION Paragraph 1.A.	80,558
DIVERSION Paragraph 1.B.	92,220
DIVERSION Paragraph 1.C.	104,979
DIVERSION Paragraph 1. D.	128,275
DIVERSION Paragraphs 1. E., F., G. and H.	133,000

- (2) In addition, at the additional points authorized in Paragraph 1. DIVERSION 1.A. through 1.D. in this Amendment, Owner may divert amounts in excess of those amounts specified in subparagraph (1), up to a total maximum amount of 133,000 acre-feet per year from all diversion points, at each additional point of diversion to the extent that such water is available at these additional diversion points without the Owner exercising a priority call on upstream junior water rights to pass streamflows to these downstream additional diversion locations.
- (3) Nothing in subparagraphs (1) or (2) allows Owner to divert water that would reduce the availability of water under a water right with authorized diversion point(s) between the point authorized under Certificate of Adjudication No. 14-5434C and the additional points of diversion authorized under this amendment in Paragraph 1. DIVERSION 1.A. through 1.D. including water for meeting instream flow requirements under these water rights, beyond that which would have otherwise existed with the full, legal exercise of these water rights before the changes authorized in this amendment.

Paragraph 4.K.

Diversion of water appropriated under this certificate at Lake Travis is limited to Lake Travis inflows.

Paragraph 4.L.

Diversion of water appropriated under this certificate in the reach downstream of Lake Travis and upstream of USGS Gage No. 08158000, Colorado River at Austin, Texas is limited to run of the river flows.

Paragraph 4.M.

Owner shall only divert and use water pursuant to this amended certificate in accordance with the most recent approved *Accounting Procedures Water Rights Application No. 14-5434E*. Owner shall maintain the accounting plan and supporting information in electronic format and make the data available to the Executive Director and the public upon request. If Owner seeks to modify its accounting plan, Owner shall submit a request to the Executive Director for a determination of whether such modification requires a permit amendment, along with copies of the appropriate documents reflecting such a modification. Any modifications to *Accounting Procedures Water Rights Application No. 14-5434E* that the Executive Director determines would change the certificate terms must be submitted in the form of an application to amend the certificate. If an amendment is required, Owner shall not make any diversions pursuant to the modified accounting plan until an amendment is issued. Should Owner fail to maintain the accounting plan or timely notify the Executive Director of any modifications to the accounting plan, Owner shall immediately cease diversion pursuant to Paragraph 1. DIVERSION, and either apply to amend the certificate or forfeit the additional diversion points. If Owner fails to amend the certificate or forfeit the additional diversion points, then TCEQ may begin proceedings to cancel authorization to use the points. Owner shall immediately notify the Commission upon modification of the accounting plan and provide copies of the appropriate documents effectuating such changes.

Texas Commission on Environmental Quality

INTEROFFICE MEMORANDUM

To: Sarah Henderson, Project Manager **Date:** July 7, 2015
Water Rights Permits Team
Water Rights Permitting & Availability Section

Through: *[Signature]* Chris Loft, Team Leader
Resource Protection Team
Water Rights Permitting & Availability Section

From: *[Signature]* Robert Hansen, Senior Aquatic Scientist
Resource Protection Team
Water Rights Permitting & Availability Section

Subject: Lower Colorado River Authority
CN600253637
ADJ 5434
Application No. 14-5434E to Amend Certificate of Adjudication No. 14-5434
Colorado River, Colorado River Basin
Colorado, Wharton, Travis, Bastrop, Fayette and Matagorda Counties

Environmental reviews of water right applications are conducted in accordance with §11.042, §11.147, §11.1491, §11.150, and §11.152 of the Texas Water Code (TWC) and with Texas Commission on Environmental Quality (TCEQ) administrative rules which include 30 Texas Administrative Code (TAC) §297.53 through §297.56. These statutes and rules require the TCEQ to consider the possible impacts of the granting of a water right on fish and wildlife habitat, water quality, and instream uses associated with the affected body of water. Possible impacts to bays and estuaries are also addressed.

APPLICATION SUMMARY

Certificate of Adjudication No. 14-5434, authorizes the Lower Colorado River Authority (LCRA), Owner and Applicant, to maintain an overflow-type structure and a reservoir on the Colorado River, Colorado River Basin, and temporarily impound therein not to exceed 86 acre-feet of water in Colorado County. Owner is also authorized to divert and use not to exceed 133,000 acre feet of water per annum from a point on the Colorado River for municipal, industrial, and agricultural purposes in Colorado, Wharton, Travis, Bastrop, Fayette, and Matagorda Counties within the Colorado River Basin, Lavaca River Basin, Guadalupe River Basin, Colorado-Lavaca Coastal Basin, and Brazos-Colorado Coastal Basin at a maximum rate of 600 cfs (269,400 gpm).

Applicant seeks to amend Certificate of Adjudication No. 14-5434, as amended, to add additional diversion points both upstream and downstream of the existing diversion point. The additional points are currently authorized in other Certificates owned by LCRA and

include points along the Colorado River as well as on the perimeter of Lady Bird Lake, Lake Austin, and Lake Travis. Water diverted from Lakes Buchanan and Travis, authorized by Certificate of Adjudication Nos. 14-5471 and 14-5482, as amended, will not be diverted from storage in these reservoirs. Applicant is not requesting an increase in the maximum rate of diversion or the maximum annual quantity of water authorized in Certificate of Adjudication No. 14-5434.

ENVIRONMENTAL ANALYSIS ADDENDUM

In the February 23, 2009 environmental analysis memo, Resource Protection staff recommended that diversions at certain points be subject to instream flow requirements. On August 8, 2012, TCEQ adopted environmental flow standards for the Colorado and Lavaca Rivers, their associated tributaries and Matagorda and Lavaca Bays. By rule, these environmental flow standards are considered adequate to support a sound ecological environment. In order to provide consistency in water rights administration in the lower Colorado River below Lake Travis, Resource Protection staff recommends revising the previous recommendations as described below. The determination of hydrologic conditions will be addressed in the water availability review for the proposed amendment.

In lieu of Special Conditions 3.A. – 3.G.:

- 1. Diversion of water from the perimeter of Lake Travis, Lake Austin, and Lady Bird Lake (formerly known as Town Lake) shall not reduce the flow of water below 50 cfs in the Austin reach of the Lower Colorado River below the Loughorn Dam and upstream of USGS Gage No. 08158000, Colorado River at Austin, Texas.**
- 2. Diversions of water under this permit from the Colorado River downstream of Lady Bird Lake and upstream of the existing diversion points authorized under Certificate of Adjudication No. 14-5434 shall not reduce streamflow below the applicable instream flow requirements at the gage immediately downstream of the diversion, as set forth in paragraphs (C)-(F) below.**
- 3. Diversion of water in the Bastrop reach, between USGS Gage No. 08158000, Colorado River at Austin, Texas and USGS Gage No. 08159200, Colorado River at Bastrop, Texas, shall not reduce streamflow in the Bastrop reach below the following values as measured at USGS Gage No. 08159200, Colorado River at Bastrop, Texas:**

Season	Month	Hydrologic Condition	Subsistence	Base
Winter	December	Severe	186 cfs	311 cfs
	December	Dry		311 cfs
	December	Average		450 cfs
	January	Severe	208 cfs	313 cfs
	January	Dry		313 cfs
	January	Average		433 cfs

	February	Severe	274 cfs	317 cfs
	February	Dry		317 cfs
	February	Average		497 cfs
Spring	March	Severe	274 cfs	274 cfs
	March	Dry		274 cfs
	March	Average		497 cfs
	April	Severe	184 cfs	287 cfs
	April	Dry		287 cfs
	April	Average		635 cfs
	May	Severe	275 cfs	579 cfs
	May	Dry		579 cfs
	May	Average		824 cfs
	June	Severe	202 cfs	418 cfs
	June	Dry		418 cfs
	June	Average		733 cfs
Summer	July	Severe	137 cfs	347 cfs
	July	Dry		347 cfs
	July	Average		610 cfs
	August	Severe	123 cfs	194 cfs
	August	Dry		194 cfs
	August	Average		381 cfs
Fall	September	Severe	123 cfs	236 cfs
	September	Dry		236 cfs
	September	Average		423 cfs
	October	Severe	127 cfs	245 cfs
	October	Dry		245 cfs
	October	Average		433 cfs
	November	Severe	180 cfs	283 cfs
	November	Dry		283 cfs
November	Average		424 cfs	

cfs = cubic feet per second

4. Diversion of water in the Columbus (Eagle Lake) reach, between USGS Gage No. 08159200, Colorado River at Bastrop, Texas and USGS Gage No. 08161000, Colorado River at Columbus, Texas, shall not reduce streamflow in the Columbus reach below the following values as measured at USGS Gage No. 08161000, Colorado River at Columbus, Texas:

Season	Month	Hydrologic Condition	Subsistence	Base
Winter	December	Severe	301 cfs	464 cfs
	December	Dry		464 cfs
	December	Average		737 cfs
	January	Severe	340 cfs	487 cfs
	January	Dry		487 cfs
	January	Average		828 cfs
	February	Severe	375 cfs	590 cfs
	February	Dry		590 cfs
	February	Average		895 cfs
Spring	March	Severe	375 cfs	525 cfs
	March	Dry		525 cfs

	March	Average		1,020 cfs	
	April	Severe	299 cfs	554 cfs	
	April	Dry		554 cfs	
	April	Average		977 cfs	
	May	Severe	425 cfs	966 cfs	
	May	Dry		966 cfs	
	May	Average		1,316 cfs	
	June	Severe	534 cfs	967 cfs	
	June	Dry		967 cfs	
	June	Average		1,440 cfs	
	Summer	July	Severe	342 cfs	570 cfs
		July	Dry		570 cfs
July		Average		895 cfs	
August		Severe	190 cfs	310 cfs	
August		Dry		310 cfs	
August		Average		516 cfs	
Fall	September	Severe	279 cfs	405 cfs	
	September	Dry		405 cfs	
	September	Average		610 cfs	
	October	Severe	190 cfs	356 cfs	
	October	Dry		356 cfs	
	October	Average		741 cfs	
	November	Severe	202 cfs	480 cfs	
	November	Dry		480 cfs	
	November	Average		755 cfs	

cfs = cubic feet per second

5. Diversion of water in the Wharton (Egypt) reach, between USGS Gage No. 08161000, Colorado River at Columbus, Texas and USGS Gage No. 08162000, Colorado River at Wharton, Texas, shall not reduce streamflow in the Wharton reach below the following values as measured at USGS Gage No. 08162000, Colorado River at Wharton, Texas:

Season	Month	Hydrologic Condition	Subsistence	Base
Winter	December	Severe	202 cfs	470 cfs
	December	Dry		470 cfs
	December	Average		746 cfs
	January	Severe	315 cfs	492 cfs
	January	Dry		492 cfs
	January	Average		838 cfs
	February	Severe	303 cfs	597 cfs
	February	Dry		597 cfs
	February	Average		906 cfs
Spring	March	Severe	204 cfs	531 cfs
	March	Dry		531 cfs
	March	Average		1,036 cfs
	April	Severe	270 cfs	561 cfs
	April	Dry		561 cfs
	April	Average		1,011 cfs
	May	Severe	304 cfs	985 cfs

	May	Dry		985 cfs
	May	Average		1,397 cfs
	June	Severe	371 cfs	984 cfs
	June	Dry		984 cfs
	June	Average		1,512 cfs
Summer	July	Severe	212 cfs	577 cfs
	July	Dry		577 cfs
	July	Average		906 cfs
	August	Severe	107 cfs	314 cfs
	August	Dry		314 cfs
Fall	August	Average		522 cfs
	September	Severe	188 cfs	410 cfs
	September	Dry		410 cfs
	September	Average		617 cfs
	October	Severe	147 cfs	360 cfs
	October	Dry		360 cfs
	October	Average		749 cfs
	November	Severe	173 cfs	486 cfs
	November	Dry		486 cfs
November	Average		764 cfs	

cfs = cubic feet per second

6. Diversion of water from Lake Bastrop, Cedar Creek Reservoir, or Eagle Lake as set forth in this amendment, which are diverted from natural inflows into these reservoirs from the Spicey Creek, Cedar Creek, or Eagle Lake watersheds, shall be subject to the appropriate instream flow requirements for the corresponding mainstem reach.

7. If Owner makes significant modifications to an existing intake structure at diversion points that authorize diversion of water under this amendment, Owner shall implement reasonable measures to minimize potential adverse impacts due to entrainment and impingement of fishery resources. This requirement shall not apply to routine maintenance or replacement of existing intake facilities that do not result in any increase in the diversion rates of the existing facilities.

If new intake facilities at the authorized diversion points below Longhorn Dam are to be constructed by Owner for purposes of diverting water authorized under this amendment, Owner shall seek and obtain an amendment to this permit prior to commencing construction of such facilities for the purpose of establishing special conditions, if any, needed to address any specific adverse impacts due to entrainment and impingement of fishery resources from the proposed new intake facilities.

All analyses in the February 23, 2009 environmental memorandum remain unchanged unless specifically addressed in this addendum.

Texas Commission on Environmental Quality

INTEROFFICE MEMORANDUM

To: Sarah Henderson, Project Manager
Water Rights Permits Team
Water Rights Permitting and Availability Section

Date: July 7, 2015

Thru: *CL* Chris Loft, Team Leader
7/7/15 Resource Protection Team
Water Rights Permitting and Availability Section

KW
7/7/2015 Kristin Wang, Senior Water Conservation Specialist
Resource Protection Team
Water Rights Permitting and Availability Section

From: Jennifer Allis, Senior Water Conservation Specialist
JA
7/7/15 Resource Protection Team
Water Rights Permitting and Availability Section

Subject: Lower Colorado River Authority
ADJ 5434
CN600253637
Application No. 14-5434E to amend Certificate of Adjudication 14-5434
Addendum to Water Conservation Review

Certificate of Adjudication No. 14-5434 authorizes the Lower Colorado River Authority (LCRA, Owner, or Applicant) to maintain an overflow-type structure and a reservoir on the Colorado River, Colorado River Basin, and temporarily impound therein not to exceed 86 acre-feet of water in Colorado County. Owner is also authorized to divert and use not to exceed 133,000 acre feet of water per annum from a point on the Colorado River for municipal, industrial, and agricultural purposes in Colorado, Wharton, Travis, Bastrop, Fayette, and Matagorda Counties within the Colorado River Basin, Lavaca River Basin, Guadalupe River Basin, Colorado-Lavaca Coastal Basin, and Brazos-Colorado Coastal Basin at a maximum rate of 600 cfs.

Applicant seeks to amend Certificate of Adjudication No. 14-5434, as amended, to add additional diversion points both upstream and downstream of the existing diversion point. The additional points are currently authorized in other Certificates owned by LCRA and include points along the Colorado River as well as on the perimeter of Lady Bird Lake, Lake Austin, and Lake Travis. Water diverted from Lakes Buchanan and Travis, authorized by Certificate of Adjudication Nos. 14-5471 and 14-5482, as amended, will not be diverted from storage in these reservoirs. Applicant is not requesting an increase in the maximum rate of diversion or the maximum annual quantity of water authorized in Certificate of Adjudication No. 14-5434.

Staff completed a water conservation memorandum on September 6, 2002.

The application is consistent with the approved January 2011 Region K Water Plan and the approved 2012 State Water Plan because one of the water management strategies listed for the LCRA is to make amendments to Run-of-River (ROR) rights. As stated in the Region K Water Plan, LCRA would use part of its water rights to meet municipal and industrial shortages. The amendment to this specific water right would be for such purposes. LCRA proposes to use the balance of the authorized diversions under the Garwood right (about 75,000 acre-feet per year) to meet other needs within the Colorado River Basin such as the City of Austin's projected 2060 demand beyond its authorized water rights, the Fayette Power Plant backup demand for LCRA, and other municipal and industrial demands downstream or in the vicinity of Lake Travis.

The following water conservation language should be included in the amendment:

Owner shall implement water conservation plans that continue to provide for the utilization of those practices, techniques, and technologies that reduce or maintain the consumption of water, prevent or reduce the loss or waste of water, maintain or improve the efficiency in the use of water, increase the recycling and reuse of water, or prevent the pollution of water, so that a water supply is made available for future or alternative uses. Such plans shall continue to include a requirement that in every water supply contract entered into, on or after the effective date of this amendment, including any contract extension or renewal, that each successive wholesale customer develop and implement conservation measures. If the customer intends to resell the water, then the contract for resale of the water shall have water conservation requirements so that each successive customer in the resale of the water will be required to implement water conservation measures.

All other analyses and recommendations in the September 6, 2002 conservation memorandum remain unchanged unless specifically addressed in this addendum.

Texas Commission on Environmental Quality

INTEROFFICE MEMORANDUM

To: Steve Ramos, Project Manager
Water Rights Permitting Team
Water Supply Division **Date:** February 14, 2011

Thru: Chris Loft, Team Leader *CL 2/14/11*
Resource Protection Team
Water Supply Division

Thru: Kristin Wang, Senior Water Conservation Specialist *KW 2/14/2011*
Resource Protection Team
Water Supply Division

From: Scott Swanson, Water Conservation Specialist *ESS 2/14/11*
Resource Protection Team
Water Supply Division

Subject: LCRA
ADJ 5434
CN600253637
Application No. 14-5434E to amend Certificate of Adjudication 14-5434
Water Conservation Review

Certificate of Adjudication (COA) 14-5434C authorizes the owner, LCRA, to maintain an overflow type structure and a reservoir on the Colorado River, Colorado River Basin, and temporary impound therein not to exceed 86 acre-feet of water in Colorado County. Owner is also authorized to divert and use not to exceed 133,000 acre-feet of water per annum from a point on the Colorado River for municipal, industrial, and agricultural purposes in Colorado, Wharton, Travis, Bastrop, Fayette, and Matagorda Counties within the Colorado River Basin, Lavaca River Basin, Guadalupe River Basin, Colorado-Lavaca Coastal Basin and Brazos-Colorado Coastal Basin at a maximum rate of 600.00 cfs (269,400 gpm).

Applicant seeks to amend COA 14-5434 to add additional diversion points both upstream and downstream of the existing diversion point. Applicant also seeks to divert the water anywhere on the perimeter of the following reservoirs: Town Lake, Lake Austin, and Lake Travis.

Per 30 TAC Chapter 295.9(4), this application does not require a Water Conservation and Drought Contingency Plan submittal.

A further technical review is not required by the Water Conservation Staff of the Resource Protection Team because no additional diversion of state water or interbasin transfer was requested.

The application is consistent with the approved January 2011 Region K Water Plan and the approved 2007 State Water Plan because there is nothing in the state and regional water plans that conflicts with issuing this amendment.

The following water conservation language should be included in the amendment:

Owner shall implement water conservation plans that continue to provide for the utilization of those practices, techniques, and technologies that reduce or maintain the consumption of water, prevent or reduce the loss or waste of water, maintain or improve the efficiency in the use of water, increase the recycling and reuse of water, or prevent the pollution of water, so that a water supply is made available for future or alternative uses. Such plans shall continue to include a requirement that in every wholesale water contract entered into, on or after the effective date of this amendment, including any contract extension or renewal, that each successive wholesale customer develop and implement conservation measures. If the customer intends to resell the water, then the contract for resale of the water must have water conservation requirements so that each successive wholesale customer in the resale of the water be required to implement water conservation measures.

Texas Commission on Environmental Quality

INTEROFFICE MEMORANDUM

To: Steve Ramos, Application Manager
Water Rights Permitting Team
February 25, 2009

Through:  Lann Bookout, Team Leader
Surface Water Availability & Interstate Compacts Team

From: Kathy Alexander, Hydrologist
Surface Water Availability & Interstate Compacts Team

Subject: Lower Colorado River Authority
ADJ 5434
CN600253637
Colorado River, Colorado River Basin
Bastrop, Fayette, Wharton, Matagorda, Travis and Colorado Counties

WATER AVAILABILITY REVIEW

Application Summary

Certificate of Adjudication No. 14-5434 authorizes the Lower Colorado River Authority (LCRA) to maintain an overflow type structure and a reservoir on the Colorado River, Colorado River Basin, Colorado County, temporarily impounding not to exceed 86 acre-feet of water. LCRA is also authorized to divert and use not to exceed 133,000 acre feet of water per year from a point on the Colorado River for municipal, industrial, and agricultural purposes in Colorado, Wharton, Travis, Bastrop, Fayette, and Matagorda Counties within the Colorado River Basin, Lavaca River Basin, Guadalupe River Basin, Colorado-Lavaca Coastal Basin, and Brazos-Colorado Coastal Basin at a maximum rate of 600 cfs (269,400 gpm).

LCRA seeks to amend the certificate to add additional diversion points both upstream and downstream of the existing diversion point. These additional points are authorized in other Certificates owned by LCRA and include points along the Colorado River as well as on the perimeter on Lake Travis, Lake Austin, Town Lake, Lake Bastrop, Cedar Creek Reservoir, Lane City Dam, Eagle Lake and Bay City Dam. Water diverted from Lake Travis, Lake Austin and Town Lake will not be diverted from storage in these reservoirs. LCRA is not requesting an increase in the maximum rate of diversion or the maximum annual quantity of water authorized by Certificate 14-5434.

No Injury Analysis

The application does not request an additional appropriation of water; therefore a water availability analysis is not necessary. However, the application must be reviewed to ensure that the request does not affect other water rights. Resource Protection staff recommended that diversions in specific reaches be subject to instream flow requirements as follows:

1. Diversions of water from the perimeter of Lake Travis, Lake Austin, and Town Lake shall not reduce the flow of water below 96 cfs below the South Austin Regional Wastewater Treatment Plant.

2. Diversions of water in the Bastrop reach between the Austin gage (08158000) and Bastrop gage (08159200), shall not reduce the flow of water below the following values as measured at USGS gage 08159200 (Colorado River at Bastrop, TX):

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
cfs	370	430	560	600	1030	830	370	240	400	470	370	340

3. Diversions of water in the Columbus (Eagle Lake) reach between the Bastrop gage (08159200) and the Columbus gage (08161000), shall not reduce the flow of water below the following values as measured at the USGS gage 08161000 (Colorado River at Columbus, TX):

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
cfs	300	340	500	500	820	660	300	200	320	380	290	270

4. Except for diversions from the currently authorized diversion point, diversions of water in the Wharton (Egypt) reach between the Columbus gage (08161000) and the Wharton gage (08162000), shall not reduce the flow of water below the following values as measured at the USGS gage 08162000 (Colorado River at Wharton, TX):

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
cfs	240	280	360	390	670	540	240	160	260	310	240	220

5. Diversions of water from Lake Bastrop, Cedar Creek Reservoir, or Eagle Lake, which are a result of natural inflows, shall be subject to the appropriate instream flow requirements for their given reach. Water previously diverted from the main stem Colorado River and stored in Lake Bastrop, Cedar Creek Reservoir, or Eagle Lake for subsequent diversion, is not subject to additional instream flow requirements.

Staff modeled the application using the Full Authorization Simulation of the TCEQ Water Availability Model for the Colorado River Basin (Colorado WAM or WAM), which includes all water rights at their fully authorized amounts, provisions of the LCRA Water Management Plan (WMP) that affect water availability for basin rights and does not include return flows. The period of record for the Colorado WAM is 1940 to 1998. Using the Full Authorization Simulation of the Colorado WAM, staff created a base line simulation in which Certificate of Adjudication 14-5434 was modeled with a municipal distribution and was not backed up by stored water from the Highland Lakes. The WMP was also adjusted to account for this change.

Staff used the ratio of the total naturalized flows at the upstream points (Lake Travis, the Austin Gage, the Bastrop Gage and the Columbus Gage) to the total naturalized flows at the currently authorized diversion point, multiplied by the authorized diversion amount, to determine the maximum diversion amount that would be available to LCRA at each of the upstream points. Table 1. lists the maximum amount of water that would be available at each location¹:

¹ Note that the maximum diversion amount cannot exceed the authorized diversion amount.

Table.1 Maximum Annual Diversion at Each Diversion Location

Location	Maximum Annual Diversion Amount (ac-ft)
Lake Travis	80,213
Austin Gage	91,956
Bastrop Gage	105,496
Columbus Gage	128,642
Wharton Gage	133,000
Bay City Gage	133,000
Below Bay City Gage	133,000

The recommended instream flow requirement measured below the South Austin Regional Wastewater Treatment Plant assumes that 50 cfs of return flows contribute to the 96 cfs flow requirement. Because the Full Authorization Simulation does not include return flows, staff modeled diversions at Lake Travis and Town Lake constrained by an instream flow requirement of 46 cfs.

Staff compared the pre- and post-application volume reliabilities between the base line simulation and a series of simulations that included Certificate 14-5434 modeled at Lake Travis, the Austin gage, the Bastrop gage, the Columbus gage, the Wharton gage, the Bay City Gage and the most downstream requested diversion point (which is located below the Bay City Gage) with diversions limited by the instream flow recommendations for the respective reaches. Volume reliability is defined as the percentage of the total demand that is actually supplied. Table 2. indicates the results of these simulations.

Table 2. Summary of Impacts on Basin Water Rights

Diversion Location	Number of Water Rights Negatively Impacted	Average Negative Impact on All Water Rights	Number of Municipal Water Rights Impacted	Average Negative Impact on Municipal Rights	Number of Water Rights Negatively Impacted Below Lake Travis
Lake Travis	647	0.88%	26	0.99%	13
Austin Gage	219	0.4%	11	0.73%	10
Bastrop Gage	476	0.53%	24	1.01%	24
Columbus Gage	195	0.12%	2	0.31%	23
Wharton Gage	0	0	0	0	0
Bay City Gage	185	0.38%	7	0.62%	7
Below Bay City Gage	181	0.34%	7	0.42%	6

The average negative impact is calculated by summing the percentage difference between the volume reliabilities for each individual water right authorization for each simulation and calculating a basin average. Simulation results indicate that if 80,213 acre-feet of the water authorized by LCRA's portion of 14-5434 is diverted at Lake Travis, only one water right that was originally 100% reliable was reduced to below 100% and that water right belongs to the applicant. Sixteen water rights that originally were over 75% reliable were reduced to below 75%. The average percentage reduction in volume reliabilities for these water rights was 0.92%. For diversions from all reaches at or below the Austin Gage, no water rights that were 100% or 75%

reliable were reduced below those percentages.

The LCRA currently manages the flows in the Colorado River downstream of the Highland Lakes under the guidelines of the LCRA Water Management Plan (WMP or the Plan) for the Lower Colorado River Basin.² LCRA passes inflows through the Highland Lakes to meet the needs of downstream water rights when those rights cannot be satisfied by run of the river flows below the Highland Lakes. The WAM simulation assumes that the amount of flow needed to satisfy the modeled diversion amount at the additional upstream points would be equaled or exceeded by the flows at the existing downstream diversion point.

For irrigation use at the currently authorized diversion point, Certificate 14-5434 can pump from the river as it is available. During the irrigation season, run of the river flows may be insufficient to meet the irrigation demand and, in that case, LCRA may release water from storage to make up the shortage.³ The determination of when releases will be made is set out in the WMP. The WMP does not address storage and subsequent release of water to meet shortages for municipal uses at downstream points for water appropriated under this certificate.

The LCRA measures inflows to the Highland Lakes as they occur and applies the requirements of the WMP with respect to downstream water rights and environmental flow requirements. This application does not include a request to amend the WMP, either with respect to either passing water downstream for senior water rights, or accounting for other uses of Certificate 14-5434 at additional diversion points. Therefore, LCRA would still have to comply with the provisions of the WMP. Special conditions reflecting this can mitigate any effects on other basin water rights. Because of this, staff is of the opinion that the impacts on other water rights as indicated in the WAM simulations do not represent a practical impact on other basin water rights.

Conclusion

Based on the No Injury Analysis, staff can support granting the amendment provided the amendment include the recommended instream flow requirements, the following limitations on the amount of water available at the upstream points and additional special conditions:

Limitations on the Amount of Water Available at Upstream Points:

Location	Maximum Annual Diversion Amount (ac-ft)
Lake Travis	80,213
Austin Gage	91,956
Bastrop Gage	105,496
Columbus Gage	128,642

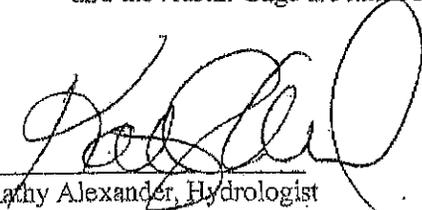
Diversions of water below the Columbus Gage are limited to the amount of water (133,000 acre-feet) authorized for appropriation in the certificate.

² LCRA Water Management Plan (WMP) as amended March 1, 1999.

³ LCRA WMP, 1999, p. 23.

Additional Special Conditions:

1. To the extent that diversions occur at upstream point(s) of diversion, the amount available at downstream points is reduced accordingly based on run of the river flows at those locations. Owner shall document diversions of water authorized by Certificate 14-5434 at each diversion point and include the volume of water diverted at each point in Owner's annual water use report.
2. This amendment does not authorize the storage of water appropriated under this certificate in any reservoirs, including Lake Travis, Lake Austin, Town Lake, Lake Bastrop, Cedar Creek Reservoir, Lane City Dam, Bay City Dam, Eagle Lake except to the extent that storage of this water is reflected in the individual authorizations for these reservoirs.
3. Diversions of up to 80,213 acre-feet of water appropriated under this certificate at Lake Travis are limited to Lake Travis inflows.
4. Diversions of up to 91,956 acre-feet of water appropriated under this certificate between Lake Travis and the Austin Gage are limited to run of the river flows.



Kathy Alexander, Hydrologist

HYDROLOGY UNIT ANALYSIS FACT SHEET

Applicant: Lower Colorado River Authority
Water Right: Certificate 14-5434E
Stream: Colorado River

Basin: Colorado River Basin
Counties: Bastrop, Fayette, Wharton, Matagorda,
Travis and Colorado

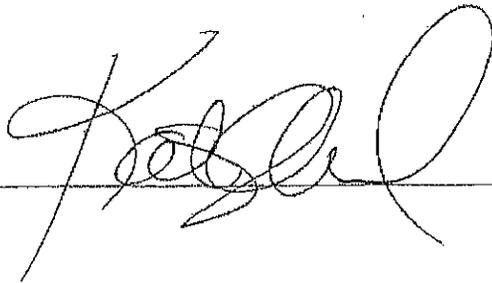
Changes to *.dat file Note that the input below indicates the modifications for each of the simulations.

** Below BAY CITY Gage				
WRM10020 133000	MUN19001101		61405434201RR	6140543465434201
** BAY CITY Gage				
WRK10000 133000	MUN19001101		61405434201RR	6140543465434201
** Wharton Gage				
IFK20000 235914	IFTW19001101	1IFTGW		
WRK20000 133000	MUN19001101		61405434201RR	6140543465434201
IFK20000 0	IFTW19001101	2IFTGW		
** Columbus Gage				
IFJ10000 294525	IFTC19001101	1IFTGC		
WRJ10000 128642	MUN19001101		61405434201RR	6140543465434201
IFJ10000 0	IFTC19001101	2IFTGC		
** Bastrop Gage				
IFJ30000 362618	IFTB19001101	1IFTGB		
WRJ30000 105496	MUN19001101		61405434201RR	6140543465434201
IFJ30000 0	IFTB19001101	2IFTGB		
** Austin Gage				
IFL10000 33317	19001101	1IFTGA		
WRI10000 91956	MUN19001101		61405434201RR	6140543465434201
IFL10000 0	19001101	2IFTGA		
** Lake Travis				
IFL10000 33317	19001101	1IFTGA		
WRI20000 80213	MUN19001101		61405434201RR	6140543465434201
IFL10000 0	19001101	2IFTGA		

Remarks: Resource Protection Staff recommended diversion limitations at the Austin, Bastrop, Columbus and Wharton Gages as discussed in the memo

Signature: _____

Date: _____



2/25/09

Texas Commission on Environmental Quality

INTEROFFICE MEMORANDUM

To: Steve Ramos, Project Manager
Water Rights Team
Water Rights Permitting & Availability Section
Date: February 23, 2009

Through: Chris Loft, Team Leader *✓ 2/23/09*
Resource Protection Team
Water Rights Permitting & Availability Section

Through: Dakus Geeslin, Aquatic Scientist
DB
2/23/09 Resource Protection Team
Water Rights Permitting & Availability Section

From: *JJD*
2-23-09 Justin Degrate, Aquatic Scientist
Resource Protection Team
Water Rights Permitting & Availability Section

Subject: Lower Colorado River Authority
ADJ 5434
CN600253637
Water Right Application No. 14-5434E
Colorado River, Colorado River Basin
Colorado, Wharton, Travis, Bastrop, Fayette and Matagorda Counties

Environmental reviews of water right applications are conducted in accordance with §11.042, §11.147, §11.1491, §11.150, and §11.152 of the Texas Water Code and with TCEQ administrative rules which include 30 TAC §297.53 through §297.56. These statutes and rules require the TCEQ to consider the possible impacts of the granting of a water right on fish and wildlife habitat, water quality, and instream uses associated with the affected body of water. Possible impacts to bays and estuaries are also addressed.

ENVIRONMENTAL ANALYSIS

Certificate of Adjudication No. 14-5434, as amended, authorizes the Lower Colorado River Authority (LCRA) to maintain an overflow type structure and a reservoir on the Colorado River, Colorado River Basin, and temporarily impound therein not to exceed 86 acre-feet of water in Colorado County. Owner is also authorized to divert and use not to exceed 133,000 acre feet of water per annum from a point on the Colorado River for municipal, industrial, and agricultural purposes in Colorado, Wharton, Travis, Bastrop, Fayette, and Matagorda Counties within the Colorado River Basin, Lavaca River Basin, Guadalupe River Basin, Colorado-Lavaca Coastal Basin, and Brazos-Colorado Coastal Basin at a maximum rate of 600 cfs (269,400 gpm).

Applicant seeks to amend CoA 14-5434, as amended, to add additional diversion points both upstream and downstream of the existing diversion point. Said additional points are currently authorized in other Certificates owned by LCRA and include points along the Colorado River as well as on the perimeter on

Town Lake, Lake Austin, and Lake Travis. Water diverted from lakes authorized by CoA Nos. 14-5471 and 14-5482, as amended, will not be diverted from storage in these reservoirs. Applicant is not requesting an increase in the maximum rate of diversion or the maximum annual quantity of water authorized in CoA 14-5434, as amended.

INSTREAM USES

Aquatic and Riparian Habitats:

According to the reference volume *The Rivers of North America* (Dahm et al., 2006):

The Colorado River just upstream of Lake Buchanan flows through high limestone bluffs over a bed of bedrock and gravel. Within the Pedernales and Llano rivers and smaller tributaries that enter the Colorado River below Lake Buchanan, white-water enthusiasts can experience reaches of white water as well as gently meandering streams. Below Austin the channel is wide and water moves slowly over a bed of sand and gravel. As it becomes a coastal river, it develops steeper banks and large sand bars that dissect the deep alluvial sediments...

The Colorado River is located within the East Texas Gulf freshwater ecoregion, an area stretching from the San Antonio/Guadalupe basin to the Sabine. In general, the biodiversity and ecology of the Colorado are not well studied, although the distribution of vertebrates, fishes in particular, is fairly well known...

Native vegetation includes plains grassland, desert shrub, mesquite savanna, juniper-oak-mesquite savanna, blackland prairie grasses, oak-hickory forest, oak savanna, and coastal prairie grasses...

Land use in the basin is 55% range, 30% agriculture, and 15% urban. Major crops include cotton and grains such as sorghum and rice, and livestock, dairy, and poultry are additional important agricultural activities...

There are 98 species of fishes in the Colorado River, of which 26 are nonnative... The blue sucker occurs in the larger river... [and is] listed as Texas species of concern...

The Colorado River basin is home to numerous bird species, including many threatened and endangered species associated with the river. There rare green kingfisher and more common belted kingfisher are found here. Wood ducks and shorebirds flock to reservoirs of the high plains during winter. Near the coast, Attwater's Prairie Chicken National Wildlife Refuge and Eagle Lake are home to thousands of ducks and geese during winter. Whooping cranes, white-faced ibis, reddish egrets, piping plovers, brown pelicans, wood storks, and 37 species of shorebirds can be viewed along the Matagorda Peninsula at the mouth of the Colorado River...

... 25 reservoirs now make it the most heavily dammed river in Texas... The Highland Lakes region of central Texas consists of seven reservoirs along 137 km of river northwest of Austin. The seven lakes from upstream to downstream are Lake Buchanan, Inks Lake, Lake LBJ, Lake Marble Falls, Lake Travis, Lake Austin, and Town Lake... Hydropower and flood-control influence discharge downstream of the Highland Lakes. Despite flood-control dams, flooding still occurs in the uplands following intense thunderstorms...

Flooding also occurs associated with hurricanes in the Coastal Plain. Flows are provided to irrigate cotton, sorghum, and rice fields and to augment municipal and industrial water supplies during dry periods. This is reflected in average monthly runoff increases in summer, as average monthly runoff increases in summer despite lower rainfall because dam releases satisfy water users downstream.

The LCRA currently manages the flows in the Colorado River downstream of the Highland Lakes under the guidelines of the LCRA Water Management Plan (WMP or the Plan) for the Lower Colorado River Basin.¹ The LCRA and the Texas Parks and Wildlife Department have studied the fish communities of this area and determined appropriate flows needed to maintain aquatic communities (Mosier and Ray 1992). Target Flows represent flows that provide sufficient habitat to support a well balanced, native fish community. Target Flows were determined by evaluating physical habitat availability for a suite of ten habitat groups representing a total of nineteen species of fish common in the Colorado River. A monthly distribution of the optimal flow conditions was implemented into the management plan for Bastrop, Eagle Lake (Columbus), and Egypt (Wharton). In addition, the WMP calls for a minimum flow of 46 cfs at Austin. That flow is augmented downstream by discharges from two large wastewater treatment plants. The Bastrop, Eagle Lake (Columbus), and Egypt (Wharton) instream flow recommendations are appropriate flow restrictions for this application (Table 1):

Month	Bastrop	Eagle Lake (Columbus)	Egypt (Wharton)
January	370	300	240
February	430	340	280
March	560	500*	360
April	600	500*	390
May	1030	820	670
June	830	660	540
July	370	300	240
August	240	200	160
September	400	320	260
October	470	380	310
November	370	290	240
December	340	270	220

*. Since target flows at Eagle Lake (based on overall community habitat availability) were insufficient to meet Blue Sucker (*Cyprinostomus elongatus*) spawning requirements during March and April, target flows were superseded by critical flow recommendations for this reach

¹ LCRA Water Management Plan as amended through March 1, 1999

Water Quality:

As part of the LSWP Water Quality study prepared for the Lower Colorado River Authority and the San Antonio Water System, a steady state QUAL-TX model was developed and calibrated from Longhorn Dam to the Bay City Dam. The results predicted the lowest dissolved oxygen concentrations would be attained in a limited area in the upper reaches of the river where the flows are the lowest (BJO-WEST, 2008). The seven-day two-year low flow, or 7Q2, used for determining wastewater treatment limits for discharge permits is 96 cfs at the Austin USGS gage 08158000 for the period 1977-2005. The WMP calls for a minimum of 46 cfs at the Austin gage and the two major City of Austin Wastewater Treatment Plants (Walnut Creek and the South Austin Regional) contribute on the order of 50 cfs in return flows. In order to protect water quality in the Austin stretch of the Lower Colorado River, diversions under this permit from Lake Travis, Lake Austin, and Town Lake should be allowed only when the combined flow of over Longhorn Dam and return flows from the wastewater treatment plants are adequate to meet the 7Q2 value of 96 cfs at the South Austin Regional WWTP.

Bay and Estuary Freshwater Inflows:

Freshwater inflows are critical for maintaining the historical productivity of bays and estuaries along the Gulf Coast. As the proposed additional diversion points are located along the length of lower Colorado River, some of them fall within a band that is within 200 river miles from the Gulf of Mexico. Hence, this application has the potential to affect Matagorda Bay. Freshwater inflows are currently protected under the Water Management Plan. This amendment will not change those requirements that ensure water flows to the bay.

SUMMARY

Applicant seeks to amend CoA 14-5434, as amended, to add additional diversion points both upstream and downstream of the existing diversion point. Said additional points are currently authorized in other Certificates owned by LCRA and include points along the Colorado River as well as on the perimeter on Town Lake, Lake Austin, and Lake Travis. Water diverted from lakes authorized by CoA Nos. 14-5471 and 14-5482, as amended, will not be diverted from storage in the these reservoirs. Applicant is not requesting an increase in the maximum rate of diversion or the maximum annual quantity of water authorized in CoA 14-5434, as amended.

Instream Uses staff recommend issuance of the permit if the following special conditions are adopted in the permit, if granted:

1. Diversions of water from the perimeter of Lake Travis, Lake Austin, and Town Lake shall not reduce the flow of water below 96 cfs in the Austin reach of the Lower Colorado River below the South Austin Regional Wastewater Treatment Plant.
2. Diversions of water from the Bastrop reach between the Austin gage (08158000) and Bastrop gage (08159200), shall not reduce the flow of the water in the Bastrop reach of the Lower Colorado River below the following values as measured at USGS gage 08159200 (Colorado River at Bastrop, TX):

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
cfs	370	430	560	600	1030	830	370	240	400	470	370	340

3. Diversions of water from the Columbus (Eagle Lake) reach between the Bastrop gage (08159200) and the Columbus gage (08161000), shall not reduce the flow of water in the Columbus reach of the Lower Colorado River below the following values as measured at the USGS gage 08161000 (Colorado River at Columbus, TX):

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
cfs	300	340	500	500	820	660	300	200	320	380	290	270

4. Diversions of water from the Wharton (Egypt) reach between the Columbus gage (08161000) and the Wharton gage (08162000), shall not reduce the flow of water in the Wharton reach of the Lower Colorado River below the following values as measured at the USGS gage 08162000 (Colorado River at Wharton, TX):

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
cfs	240	280	360	390	670	540	240	160	260	310	240	220

5. Diversions of water from Lake Bastrop, Cedar Creek Reservoir, or Eagle Lake as set forth in this amendment, which are a result of natural inflows, shall be subject to the appropriate instream flow requirements for their given reach. Water previously diverted from the main stem Colorado River and stored in Lake Bastrop, Cedar Creek Reservoir, or Eagle Lake for subsequent diversion, is not subject to additional instream flow requirements.
6. New or modified intake structures at diversion points authorized under this permit shall minimize potential adverse impacts due to entrainment and impingement of fishery resources by providing fish screen on the intake structures with a maximum through screen velocity of 0.5 feet per second.

This instream use assessment was conducted using current TCEQ operation procedures and policies and available data and information. Authorizations granted to the permittee by the water rights permit shall comply with all rules of the Texas Commission on Environmental Quality, and other applicable State and Federal authorizations.

LITERATURE CITED

BIO-WEST. 2008. Lower Colorado River, Texas Instream Flow Guidelines. Colorado River relationships to aquatic habitat and state threatened species: blue sucker. Prepared for Lower Colorado River Authority and San Antonio Water System. Round Rock, TX.

Dahm, C.N., R.J. Edwards and F.P. Gelwick. 2005. Gulf coast rivers of the southwestern United States. Pages 198-203 in Benke, A.C. and C.E. Cushing, eds. Rivers of North America. Amsterdam: Elsevier.



INTEROFFICE MEMORANDUM

DATE: September 6, 2002

TO: Kathy Hopkins, Application Manager
Water Rights Permitting Team
Water Rights Permitting & Availability Section

FROM: E. Scott Swanson, Water Conservation Specialist
Resource Protection Team
Water Rights Permitting & Availability Section

ESS 9/6/02

SUBJECT: Review of Water Conservation and Drought Contingency Plan for
Administrative Completeness
LCRA

Certificate of Adjudication no. 14-5434C authorizes the owner, LCRA, to maintain an overflow type structure and a reservoir on the Colorado river, Colorado river basin, and temporary impound therein not to exceed 86 acre-feet of water in Colorado county. Owner is also a to divert and use not to exceed 133,000 acre-feet of water per annum from a point on the Colorado river for municipal, industrial, and agricultural purposes in Colorado, Wharton, Travis, Bastrop, Fayette, and Matagorda counties within the Colorado river basin, Lavaca river basin, Guadalupe river basin, Colorado-Lavaca coastal, basin and Brazos-Colorado coastal basin at a maximum rate of 600.00 cfs (269,400 gpm).

Applicant seeks to amend COA N. 14-5434C, to add additional diversion points both upstream and downstream of the existing diversion point (which are currently authorized in other coa's). Applicant also seeks to divert the water anywhere on the perimeter of the following reservoirs: Town Lake, Lake Austin, and Lake Travis. LCRA request that the time priority remains the same, November 1, 1900, at the additional diversion points.

The Water Conservation and Drought Contingency Plan was reviewed by TNRCC staff in accordance with Senate Bill 1 requirements and was been found to be administratively complete per 30 TAC 288.2, 288.3, 288.4, 288.5, 288.20, & 288.22.

The request is not inconsistent with the approved 2002 State Water Plan and the December, 2000 Region K Water Plan.

The following standard water conservation language should be included in the permit:

"Owners shall implement water conservation plans that provide for the utilization of those practices, techniques, and technologies that reduce or maintain the consumption of water, prevent or reduce the loss or waste of water, maintain or improve the efficiency in the use of water, increase the recycling and reuse of water, or prevent the pollution of water, so that a water supply is made available for future or alternative uses."

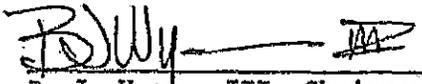
No further review is necessary from the Water Conservation Staff of the Resource Protection Team.

cc: Bill Billingsley, Resource Protection Team

Certificate of Adjudication 14-5434

This certificate of adjudication is issued subject to the Rules of the Texas Water Commission and its continuing right of supervision of State water resources consistent with the public policy of the State as set forth in the Texas Water Code.

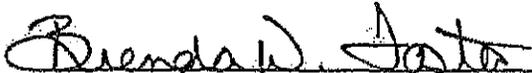
TEXAS WATER COMMISSION


B. J. Wynne, III, Chairman

DATE ISSUED:

JUN 28 1989

ATTEST:


Brenda W. Foster, Chief Clerk

TEXAS WATER COMMISSION



AMENDMENT TO CERTIFICATE OF ADJUDICATION

CERTIFICATE NO. 14-5434A . PRIORITY : November 1, 1900

Name : Garwood Irrigation Company Address : P.O. Box 428
Garwood, Texas 77442

Filed : October 26, 1992 Granted : March 3, 1993

Purpose : Irrigation, Municipal and Industrial Counties : Colorado and Wharton

Watercourse: Colorado River Watershed : Colorado River Basin

WHEREAS, Certificate of Adjudication No. 14-5434, as issued to Garwood Irrigation Company authorizes certificate owner the right to divert and use 168,000 acre-feet of water per annum from the Colorado River to irrigate 32,000 acres of land within the boundaries of Owner's service area in Colorado and Wharton Counties, Texas; and

WHEREAS, Garwood Irrigation Company is requesting additional authorization for municipal and industrial purposes for 35,000 acre-feet of water per annum out of the 168,000 acre-foot annual irrigation water right; and

$$\frac{32,000}{133,000} \text{ Acc. Ina. on } 5434$$

WHEREAS, the Texas Water Commission finds that jurisdiction over the application is established.

NOW THEREFORE, this Certificate No. 14-5434A is issued to Garwood Irrigation Company subject to the following terms and conditions:

1. USE

In addition to the authorization in Paragraph 2. USE, of Certificate No. 14-5434, certificate owner is authorized to divert and use not to exceed 35,000 acre-feet per annum from the Colorado River, out of the 168,000 acre-foot annual irrigation authorization, for municipal and industrial purposes within the boundaries of owner's service area in Colorado and Wharton Counties, Texas.

2. DIVERSION

Certificate owner is authorized to divert water for all purposes of use authorized by this Certificate No. 14-5434A at the point of diversion authorized in Certificate No. 14-5434.

3. WATER CONSERVATION

- a. Certificate owner shall utilize water conservation practices, techniques, and technologies that reduce or maintain the consumption of water, prevent or reduce the loss or waste of water, maintain or improve the efficiency in the use of water, increase the recycling and reuse of water, or prevent the pollution of water, so that a water supply is made available for future or alternative uses.
- b. Prior to the use or sale of any water for municipal or industrial use, certificate owner shall file a water conservation plan for such purpose of use with the Commission in accordance with Commission Rules and guidelines, and it shall obtain a Commission Order approving such plan or amending this Certificate.
- c. If Certificate owner does not file a water conservation plan for the sale or use of water for municipal and industrial uses, within 10 years after the date of issuance of this amendment, then the 35,000 acre-feet of water per year authorized to be used for such purposes shall, upon the expiration of such 10-year period and without the Commission taking any further action, thereafter be authorized for irrigation only.

4. SPECIAL CONDITIONS

Nothing herein shall be construed to be a determination by the Commission that it will grant any future application by certificate owner, or by any other water right holder, to amend any water right to change the place of use, purposes of use, point of diversion, annual diversion or rate of diversion authorized under the water right as it exists at that time. All issues that may be relevant to any such proposed amendment and the impact of such amendment on other water right holders, including priority dates, shall be considered by the Commission at that time. --Notice of any such application shall be given by the Commission to any affected person that gives the Commission a written request for such notices.

5. PRIORITY

The priority of this amendment is November 1, 1900.

This amendment is issued subject to all terms, conditions and provisions contained in Certificate No. 14-5434, except as specifically amended by this Certificate No. 14-5434A.

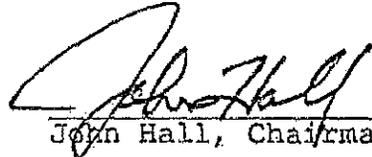
This amendment is issued subject to all superior and senior water rights in the Colorado River Basin.

Certificate owner agrees to be bound by the terms, conditions and provisions contained herein and such agreement is a condition precedent to the granting of this amendment.

All other matters requested in the application which are not specifically granted by this amendment are denied.

This amendment is issued subject to the Rules of the Texas Water Commission and to the right of continuing supervision of State water resources exercised by the Commission.

TEXAS WATER COMMISSION


John Hall, Chairman

Date Issued: MAR 18 1993

ATTEST:


Gloria A. Vasquez, Chief Clerk

irrigation, municipal and industrial purposes within the Garwood Service Area (which is located both within the Colorado River Basin and outside the Colorado River Basin) in addition to irrigation; and

WHEREAS, Certificate of Adjudication No. 14-5434, as amended, already authorizes an interbasin transfer of water out of the Colorado River Basin; and

WHEREAS, Certificate of Adjudication No. 14-5434, as amended by Certificate of Adjudication No. 14-5434A, is referred to as "Garwood's Right"; and

WHEREAS, by instrument entitled "Division of Water Right" dated as of January 30, 1997, Owner divided Garwood's Right into two separate and distinct portions, referred to as (1) "Corpus Christi's Right" and (2) "Garwood's Remaining Right"; and

WHEREAS, under Corpus Christi's Right, Owner is authorized to divert and use 35,000 acre-feet of water per year from the Colorado River for irrigation, municipal and industrial purposes, at a rate of diversion not to exceed 150 cubic feet per second; and

WHEREAS, under Garwood's Remaining Right, Owner is authorized to divert and use 133,000 acre-feet of water per year from the Colorado River for irrigation at a rate of diversion not to exceed 600 cubic feet per second, and to maintain the small dam and reservoir on the Colorado River; and

WHEREAS, pursuant to the aforesaid "Division of Water Right," Garwood submitted an application to the Commission on January 30, 1997, requesting that the Commission amend the "Corpus Christi's Right" portion of Certificate No. 14-5434, as amended, to the extent necessary, and that it grant such authorizations as may be necessary, pursuant to any provision of the Texas Water Code that may be applicable including, without limitation, Sections 11.122 and 11.085, so that the 35,000 acre-feet of water per annum authorized to be diverted from the Colorado River under "Corpus Christi's Right" is:

- a. authorized to be diverted anywhere on the west bank of the Colorado River within three different reaches referred to as Segments "A", "B" and "C" (which were identified in the notice for this application); and
- b. authorized to be diverted from the Colorado River Basin and transferred for use anywhere within the Lavaca, Guadalupe, San Antonio and Nueces River Basins and the Colorado-Lavaca, Lavaca-Guadalupe, San Antonio-Nueces, and Nueces-Rio Grande Coastal Basins.

WHEREAS, Garwood further requests that the Commission confirm that "Corpus Christi's Right", if so amended, would retain the November 1, 1900 priority date of Certificate No. 14-5434, but that it be subordinate in time priority and all other respects to Garwood's Remaining Right; and

WHEREAS, in order to facilitate the Commission's administration of water rights, Corpus Christi's Right, as amended, should be assigned a priority date of November 2, 1900; and

WHEREAS, assigning a priority date of November 2, 1900 to Corpus Christi's Right, as amended, would confirm both the early priority of Corpus Christi's Right, as amended, and the subordination of Corpus Christi's Right to Garwood's Remaining Right, as requested by Garwood; and

WHEREAS, subsequent to the filing of this application, Garwood withdrew its request to locate a diversion point within Segment "B", indicating that the diversion point would be either the existing point of diversion, or within Segment "A", or within Segment "C"; and

WHEREAS, Segment "A" is a small reach of the river in Colorado County just upstream of the Garwood low water dam, on the reservoir created by that dam, with the most upstream point, Point A-1, bearing N 66° 33' E, 6,595 feet from the southeast corner of the Joseph Grant Survey, Abstract No. 233, Colorado County, Texas, also being at Latitude 29.5161°N and Longitude 96.41°W and Point A-2, the most downstream point, bearing N 67° 16' E, 6,538 feet from the aforementioned survey corner, also being at Latitude 29.5161°N and Longitude 96.41°W; and

WHEREAS, Segment "C" is located downstream of the existing diversion point in Colorado, Wharton and Matagorda Counties with the most upstream point, Point C-1 bearing S 38° 14' E, 35,923 feet from the aforementioned survey corner, also being at Latitude 29.4297°N and Longitude 96.3603°W and Point C-2, the most downstream point, bearing S 31° 22' E, 256,196 feet from the aforementioned survey corner, also being at Latitude 28.89°N and Longitude 96.034°W. Point C-1 is 4 river miles downstream of the FM 950 bridge near Garwood, Texas and Point C-2 is approximately 8 miles south of Bay City, Texas; and

WHEREAS, with respect to all relevant hydrological issues, diversion from a point within Segment "A" would be essentially the same as diversion from the existing point of diversion; and

WHEREAS, the Executive Director has determined that any riparian impacts from the construction, operation or maintenance of any new diversion facilities that might be needed if a new point of diversion were located within either Segment "A" or Segment "C" would be adequately addressed, if necessary, through the authority of Section 401 of the federal Clean Water Act and other federal regulations and thus, identification of a specific fixed point within either Segment "A" or Segment "C" does not require further Commission approval; and

WHEREAS, the Executive Director has determined that there is a shortage of water in the area within which water is authorized to be used under either or both of the water rights for Lake Corpus Christi and Choke Canyon Reservoir (the "Nueces Water Rights Service Area"); and

WHEREAS, the Nueces Water Rights Service Area includes areas within the Nueces and San Antonio River Basins, and the Nueces-Rio Grande and San Antonio-Nueces Coastal Basins; and

WHEREAS, the Executive Director's Instream Uses technical review has indicated that potential impacts resulting from the additional authorizations requested include the possible introduction of exogenous species into areas outside the Colorado River Basin; and

WHEREAS, the Executive Director recommends that in order to minimize the potential of incidental transfer of exogenous organisms into areas outside the Colorado River Basin, the method of conveyance from the Colorado River Basin for use in areas outside the Colorado River Basin, other than for irrigation in areas within the Lavaca River Basin or the Brazos-Colorado or Colorado-Lavaca Coastal Basins, should be restricted to an enclosed pipeline or similar device from the diversion point on the Colorado River to the intended water treatment facilities, including any intermediate storage, pumping, or other transportation devices, isolated from natural drainage, or other similar conveyance system; and

WHEREAS, Owner has applied for amendments to both Corpus Christi's Right and Garwood's Remaining Right; and

WHEREAS, this Certificate of Adjudication No. 14-5434B is Corpus Christi's Right, amended as requested by Owner; and

WHEREAS, Certificate of Adjudication No. 14-5434C, issued contemporaneously with this Certificate, is Garwood's Remaining Right, amended as requested by Owner; and

WHEREAS, the Texas Natural Resource Conservation Commission finds that jurisdiction over the application is established.

NOW THEREFORE, this Certificate of Adjudication No. 14-5434B (Corpus Christi's Right, as amended) is issued to Garwood Irrigation Company, subject to the following terms and conditions:

1. USE AND PLACE OF USE

Under this Certificate No. 14-5434B, Owner is authorized to divert and use not to exceed 35,000 acre-feet of water per annum from the Colorado River for municipal, industrial and irrigation purposes anywhere within the Colorado, Lavaca, Guadalupe, San Antonio, and Nueces River Basins, and the Colorado-Lavaca, Lavaca-Guadalupe, San Antonio-Nueces, and Nueces-Rio Grande Coastal Basins.

2. DIVERSION

a. Location:

- (1) If the Owner of this Certificate and the owner of Certificate of Adjudication No. 14-5434C so agree, then water under this Certificate may be diverted at the existing point of diversion

authorized under Certificate of Adjudication No. 14-5434C for the Garwood canal system.

- (2) Owner shall have the right under this Paragraph 2.a.(2) to designate one additional point of diversion on the west bank of the Colorado River, either:
- (a) at an undefined point of diversion within Segment "A" on the Colorado River, as such segment is defined in Owner's application, with the most upstream point of the segment bearing N 66° 33' E, 6,595 feet from the southeast corner of the Joseph Grant Survey, Abstract No. 233, Colorado County, Texas, also being at Latitude 29.5161°N and Longitude 96.41°W and the most downstream point of the segment bearing N 67° 16' E, 6,538 feet from the aforementioned survey corner, also being at Latitude 29.5161°N and Longitude 96.41°W; or
 - (b) at an undefined point of diversion within Segment "C" on the Colorado River, as such segment is defined in Owner's application, with the most upstream point of the segment bearing S 38° 14' E, 35,923 feet from the aforementioned survey corner, also being at Latitude 29.4297°N and Longitude 96.3603°W and the most downstream point of the segment bearing S 31° 22' E, 256,196 feet from the aforementioned survey corner, also being at Latitude 28.89°N and Longitude 96.034°W.

Certificate Owner shall have the right under this Paragraph 2.a.(2) to designate only one additional point of diversion, as set forth in this Paragraph 2.a.(2). Certificate Owner shall designate the additional point of diversion by giving the Executive Director written notice of such designation. After designation of the additional point of diversion, Owner may not move such point of diversion without first requesting and obtaining an amendment to this Certificate. Certificate Owner shall have the right at any time prior to designating the additional diversion point to eliminate one or more of the possible additional points of diversion, segments or portions of segments by giving the Executive Director written notice of such action.

b. Maximum diversion rate: 150 cfs (67,350 gpm). If water under this Certificate is diverted at both points of diversion in accordance with Paragraph 2.a., above, then the maximum combined rate of diversion at any time shall not exceed 150 cfs (67,350 gpm).

- c. Transport of water under this Certificate for use in areas outside the Colorado River Basin, other than for irrigation in areas within the Lavaca River Basin or the Brazos-Colorado or Colorado-Lavaca Coastal Basins, is restricted to an enclosed pipeline or similar device from the diversion point on the Colorado River to the intended water treatment facilities, including any intermediate storage, pumping, or other transportation devices, isolated from natural drainage.

3. PRIORITY

The time priority of Owner's right under this Certificate No. 14-5434B is November 2, 1900.

4. WATER CONSERVATION

- a. Certificate Owner shall maintain a water conservation plan that shall provide for the utilization of those practices, techniques and technologies that reduce or maintain the consumption of water, prevent or reduce the loss or waste of water, maintain or improve the efficiency in the use of water, increase the recycling and reuse of water or prevent the pollution of water, so that a water supply is made available for future or alternative uses. Such plan shall include a requirement in every wholesale water supply contract entered into, on or after the issue date of this amendment, including any contract extension or renewal, that each successive wholesale customer develop and implement water conservation measures. If the customer intends to resell the water, then the contract for the resale of the water must have water conservation requirements so that each successive wholesale customer in the resale of the water will be required to implement water conservation measures.
- b. Prior to the diversion of water for municipal or industrial use within the service area of the City of Corpus Christi, Owner shall provide to the Executive Director an updated water conservation plan by the City of Corpus Christi which addresses the issues identified in the Executive Director's technical review dated August 14, 1998.

5. ADDITIONAL SPECIAL CONDITIONS

- a. If Certificate Owner designates the additional point of diversion pursuant to paragraph 2.a.(2) of this Certificate to be a point within Segment "C" downstream of the existing point of diversion for Garwood's Right, then: (i) Owner shall have a right to divert at such downstream point of diversion with a November 2, 1900 priority date only that water which actually passes the existing point of diversion and which Owner would have had a right to divert

under this Certificate at the existing point of diversion; and (ii) Owner's right to divert water that originates below the existing point of diversion shall be subordinate to water rights located downstream of the existing point of diversion and amendments of each as of the filing of this application on September 23, 1997.

- b. Pursuant to the additional special conditions set forth in Certificate of Adjudication No. 14-5434C issued contemporaneously with this Certificate, if the owner of Certificate of Adjudication No. 14-5434C should ever determine that it is no longer necessary or desirable for that owner to continue to maintain the small dam on the Colorado River authorized under Certificate of Adjudication No. 14-5434C, then the owner of Certificate of Adjudication No. 14-5434C shall give notice of such determination to Certificate Owner. Certificate Owner will be authorized to maintain the dam at that time if, but only if: (i) Certificate Owner has the right at that time to divert water under this Certificate at a point on the reservoir created by the dam, and (ii) the Commission enters an order authorizing Certificate Owner to maintain the dam.

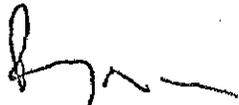
Owner agrees to be bound by the terms, conditions and provisions contained herein and such agreement is a condition precedent to the granting of this amendment.

All other matters requested in the application which are not specifically granted by this amendment are denied.

This amendment is issued subject to the Rules of the Texas Natural Resource Conservation Commission and to the right of continuing supervision of State water resources exercised by the Commission.

Date Issued: OCT 13 1998

TEXAS NATURAL RESOURCE
CONSERVATION COMMISSION



Barry R. McBee, Chairman

irrigation, municipal and industrial purposes within the Garwood Service Area (which is located both within the Colorado River Basin and outside the Colorado River Basin) in addition to irrigation; and

WHEREAS, Certificate of Adjudication No. 14-5434, as amended, already authorizes an interbasin transfer of water out of the Colorado River Basin; and

WHEREAS, Certificate of Adjudication No. 14-5434, as amended by Certificate of Adjudication No. 14-5434A, is referred to as "Garwood's Right"; and

WHEREAS, by instrument entitled "Division of Water Right" dated as of January 30, 1997, Owner divided Garwood's Right into two separate and distinct portions, referred to as (1) "Corpus Christi's Right" and (2) "Garwood's Remaining Right"; and

WHEREAS, under Corpus Christi's Right, Owner is authorized to divert and use 35,000 acre-feet of water per year from the Colorado River for irrigation, municipal and industrial purposes, at a rate of diversion not to exceed 150 cubic feet per second; and

WHEREAS, under Garwood's Remaining Right, Owner is authorized to divert and use 133,000 acre-feet of water per year from the Colorado River for irrigation at a rate of diversion not to exceed 600 cubic feet per second, and to maintain the small dam and reservoir on the Colorado River; and

WHEREAS, pursuant to the aforesaid "Division of Water Right," Garwood submitted an application to the Commission on July 22, 1998, requesting that the Commission amend the "Garwood's Remaining Right" portion of Certificate No. 14-5434, as amended, to the extent necessary, and that it grant such authorizations as may be necessary, pursuant to any provision of the Texas Water Code that may be applicable including, without limitation, Sections 11.122 and 11.085, so that the 133,000 acre-feet of water per annum authorized to be diverted from the Colorado River under "Garwood's Remaining Right":

- a. is also authorized to be used for municipal and industrial purposes in any year, but only to the extent that the water is not needed for irrigation within the Garwood Service Area in that year, in accordance with the special conditions set forth in the application; and
- b. is also authorized to be used outside Garwood's service area in any year, anywhere within Travis, Bastrop, Fayette, Colorado, Wharton and Matagorda Counties, but only to the extent that the water is not needed for irrigation within the Garwood Service Area in that year, in accordance with the special conditions set forth in the application; and

WHEREAS, Garwood further requests that the Commission confirm that "Garwood's Remaining Right," if so amended, would retain the November 1, 1900 priority date of Certificate No. 14-5434, but that "Corpus Christi's Right" be subordinate, in time priority and all other respects, to Garwood's Remaining Right; and

WHEREAS, in order to facilitate the Commission's administration of water rights, Corpus Christi's Right, as amended, should be assigned a priority date of November 2, 1900; and

WHEREAS, assigning a priority date of November 2, 1900 to Corpus Christi's Right, as amended, would confirm both the early priority of Corpus Christi's Right, as amended, and the subordination of Corpus Christi's Right to Garwood's Remaining Right, as requested by Garwood; and

WHEREAS, the Executive Director's Instream Uses technical review has indicated that potential impacts resulting from the additional authorizations requested include the possible introduction of exogenous species into areas outside the Colorado River Basin; and

WHEREAS, the Executive Director recommends that in order to minimize the potential of incidental transfer of exogenous organisms into areas outside the Colorado River Basin, the method of conveyance from the Colorado River Basin for use in areas outside the Colorado River Basin, other than for irrigation in areas within the Lavaca River Basin or the Brazos-Colorado or Colorado-Lavaca Coastal Basins, should be restricted to an enclosed pipeline or similar device from the diversion point on the Colorado River to the intended water treatment facilities, including any intermediate storage, pumping, or other transportation devices, isolated from natural drainage, or other similar conveyance system; and

WHEREAS, Garwood and the Lower Colorado River Authority ("LCRA") entered into an agreement, dated as of July 20, 1998 (the "LCRA Purchase Agreement"), whereby Garwood agrees to sell to LCRA, and LCRA agrees to purchase, certain of Garwood's assets, generally consisting of the Garwood Canal System and Garwood's Remaining Right; and

WHEREAS, as set forth in Section 7.08 of the LCRA Purchase Agreement, Garwood has conditioned its sale to LCRA upon LCRA making numerous commitments that protect the interests of landowners and irrigators within the Garwood Service Area; and

WHEREAS, the LCRA Purchase Agreement provides that, from and after transfer of this Certificate No. 14-5434C to LCRA, LCRA shall comply, and cause any other person that uses, supplies, or is supplied water under this Certificate to comply, with the conditions and commitments set forth in Section 7.08 of the LCRA Purchase Agreement; and

WHEREAS, Owner has applied for amendments to both Corpus Christi's Right and Garwood's Remaining Right; and

WHEREAS, this Certificate of Adjudication No. 14-5434C is Garwood's Remaining Right, amended as requested by Owner; and

WHEREAS, Certificate of Adjudication No. 14-5434B, issued contemporaneously with this Certificate, is Corpus Christi's Right, amended as requested by Owner; and

WHEREAS, the Texas Natural Resource Conservation Commission finds that jurisdiction over the application is established.

NOW THEREFORE, this Certificate of Adjudication No. 14-5434C (Garwood's Remaining Right, as amended) is issued to the Garwood Irrigation Company, subject to the following terms and conditions:

1. IMPOUNDMENT

Owner is authorized to maintain an overflow type structure (low water dam) and reservoir on the Colorado River and temporarily impound therein not to exceed 86 acre-feet of water. The dam is located adjacent to the Samuel Kennelly Grant, Abstract 30, Colorado County, Texas.

2. USE AND PLACE OF USE

- a. Under this Certificate No. 14-5434C, Owner is authorized to divert and use not to exceed 133,000 acre-feet of water per annum from the Colorado River for irrigation of up to 32,000 acres of land in any year within the boundaries of Owner's service area in Colorado and Wharton Counties, both in the Colorado River Basin and outside the Colorado River Basin, in the Lavaca River Basin (the "Garwood Service Area").
- b. Under this Certificate No. 14-5434C, Owner is also authorized to use the water authorized under Paragraph 2.a., above, for municipal and industrial purposes.
- c. Under this Certificate No. 14-5434C, Owner is also authorized to use the water authorized under Paragraph 2.a., above, outside the boundaries of the Garwood Service Area, anywhere within Travis, Bastrop, Fayette, Colorado, Wharton and Matagorda Counties.

3. DIVERSION

- a. Location: At a point on the west bank of the Colorado River in the Samuel Kennelly Grant, Abstract 30, Colorado County, Texas.
- b. Maximum rate: 600.00 cfs (269,400 gpm).
- c. Transport of water under this Certificate for use in areas outside the Colorado River Basin, other than for irrigation in areas within the Lavaca River Basin or the Brazos-Colorado or Colorado-Lavaca Coastal Basins, is restricted to an enclosed pipeline or similar device from the diversion point on the

Colorado River to the intended water treatment facilities, including any intermediate storage, pumping, or other transportation devices, isolated from natural drainage.

4. PRIORITY

The time priority of Owner's right under this Certificate No. 14-5434C is November 1, 1900.

5. WATER CONSERVATION

Certificate Owner shall maintain a water conservation plan that shall provide for the utilization of those practices, techniques and technologies that reduce or maintain the consumption of water, prevent or reduce the loss or waste of water, maintain or improve the efficiency in the use of water, increase the recycling and reuse of water or prevent the pollution of water, so that a water supply is made available for future or alternative uses. Such plan shall include a requirement in every wholesale water supply contract entered into, on or after the issue date of this amendment, including any contract extension or renewal, that each successive wholesale customer develop and implement water conservation measures. If the customer intends to resell the water, then the contract for the resale of the water must have water conservation requirements so that each successive wholesale customer in the resale of the water will be required to implement water conservation measures.

6. ADDITIONAL SPECIAL CONDITIONS

- a. Owner shall maintain a suitable outlet in the aforesaid small dam on the Colorado River authorized herein to allow the free passage of water that owner is not entitled to divert or impound.
- b. If the Owner of this Certificate of Adjudication No. 14-5434C should ever determine that it is no longer necessary or desirable for Certificate Owner to continue to maintain the small dam on the Colorado River authorized under this Certificate, then the owner of this Certificate shall give notice of such determination to the owner of Certificate of Adjudication No. 14-5434B. The owner of Certificate of Adjudication No. 14-5434B will be authorized to maintain the dam at that time if, but only if: (i) the owner of Certificate of Adjudication No. 14-5434B has the right at that time to divert water under that Certificate at a point on the reservoir created by the dam, and (ii) the Commission enters an order authorizing the owner of Certificate of Adjudication No. 14-5434B to maintain the dam.

Owner agrees to be bound by the terms, conditions and provisions contained herein and such agreement is a condition precedent to the granting of this amendment.

All other matters requested in the application which are not specifically granted by this amendment are denied.

This amendment is issued subject to the Rules of the Texas Natural Resource Conservation Commission and to the right of continuing supervision of State water resources exercised by the Commission.

Date Issued: **OCT 13 1998**

TEXAS NATURAL RESOURCE
CONSERVATION COMMISSION



Barry R. McBee, Chairman