

State Office of Administrative Hearings



Lesli G. Ginn
Chief Administrative Law Judge

June 3, 2016

Tucker Royall, General Counsel
Texas Commission on Environmental Quality
P.O. Box 13087
Austin Texas 78711-3087

**Re: SOAH Docket No. 582-10-4184; TCEQ Docket No. 2005-1490-WR;
Concerning the Application by the Brazos River Authority for Water Use
Permit No. 5851 and Related Filings**

Dear Mr. Royall:

Enclosed are copies of the Supplement to the Proposal for Decision on Remand and Proposed Order that have been recommended to the Commission for approval. Any party may file exceptions or briefs by filing the documents with the Chief Clerk of the Texas Commission on Environmental Quality no later than **June 23, 2016**. Any replies to exceptions or briefs must be filed in the same manner no later than **July 5, 2016**.

This matter has been designated **TCEQ Docket No. 2005-1490-WR; SOAH Docket No. 582-10-4184**. All documents to be filed must clearly reference these assigned docket numbers. All exceptions, briefs and replies along with certification of service to the above parties shall be filed with the Chief Clerk of the TCEQ electronically at <http://www14.tceq.state.tx.us/epic/efilings/> or by filing an original and seven copies with the Chief Clerk of the TCEQ. Failure to provide copies may be grounds for withholding consideration of the pleadings.

The above-referenced matter will be considered by the Texas Commission on Environmental Quality on a date and time to be determined by the Chief Clerk's Office in Room 201S of Building E, 12118 N. Interstate 35, Austin, Texas.

Sincerely,

A handwritten signature in black ink that reads "William G. Newchurch".

William G. Newchurch
Administrative Law Judge

A handwritten signature in black ink that reads "Hunter Burkhalter".

Hunter Burkhalter
Administrative Law Judge

Enclosures
cc: Mailing List

STATE OFFICE OF ADMINISTRATIVE HEARINGS

AUSTIN OFFICE
300 West 15th Street Suite 502
Austin, Texas 78701
Phone: (512) 475-4993
Fax: (512) 322-2061

SERVICE LIST

AGENCY: Environmental Quality, Texas Commission on (TCEQ)
STYLE/CASE: BRAZOS RIVER AUTHORITY
SOAH DOCKET NUMBER: 582-10-4184
REFERRING AGENCY CASE: 2005-1490-WR

STATE OFFICE OF ADMINISTRATIVE
HEARINGS

ADMINISTRATIVE LAW JUDGE
ALJ WILLIAM G. NEWCHURCH

REPRESENTATIVE / ADDRESS

PARTIES

MOLLY CAGLE
ATTORNEY
PARTNER, BAKER BOTTS, L.L.P.
1500 SAN JACINTO CENTER
98 SAN JACINTO BLVD.
AUSTIN, TX 78701
(512) 322-2532 (PH)
(512) 322-2501 (FAX)
molly.cagle@bakerbotts.com

GULF COAST WATER AUTHORITY (GCWA)

RICHARD LOWERRE
ATTORNEY
LOWERRE, FREDERICK, PERALES, ALLMON &
ROCKWELL
707 RIO GRANDE, SUITE 200
AUSTIN, TX 78701
(512) 469-6000 (PH)
(512) 482-9346 (FAX)
rl@LF-LawFirm.com

FRIENDS OF THE BRAZOS RIVER

BRAZOS RIVER ALLIANCE

FRED B WERKENTHIN, JR.
BOOTH, AHRENS & WERKENTHIN, P.C.
206 EAST 9TH ST., STE. 1501
AUSTIN, TX 7870
(512) 472-3263 (PH)
fbw@baw.com

DOW CHEMICAL COMPANY

KEN RAMIREZ
ATTORNEY AT LAW
LAW OFFICES OF KEN RAMIREZ, PLLC
BARTON OAKS PLAZA ONE
901 MOPAC EXPRESSWAY SOUTH, STE. 300
AUSTIN, TX 78746
(512) 329-2722 (PH)
(512) 329-2707 (FAX)
ken@kenramirezlaw.com

CITY OF GRANBURY

DOUG G. CAROOM
ATTORNEY
BICKERSTAFF HEATH DELGADO ACOSTA, LLP
3711 S. MOPAC EXPRESSWAY, BUILDING ONE, SUITE
300
AUSTIN, TX 78746
(512) 472-8021 (PH)
(512) 201-4515 (FAX)
dcaroom@bickerstaff.com

BRAZOS RIVER AUTHORITY

BRAD CASTLEBERRY
LLOYD GOSSELINK ROCHELLE & TOWNSEND, P.C.
816 CONGRESS AVENUE, SUITE 1900
AUSTIN, TX 78701-2478
(512) 322-5800 (PH)
(512) 472-0532 (FAX)
bcastleberry@lglawfirm.com

CITY OF LUBBOCK

TEXAS WESTMORELAND COAL COMPANY

MARISA PERALES
ATTORNEY AT LAW
LOWERRE, FREDERICK, PERALES, ALLMON &
ROCKWELL
707 RIO GRANDE, SUITE 200
AUSTIN, TX 78701
(512) 469-6000 (PH)
(512) 482-9346 (FAX)
marisa@lf-lawfirm.com

KEN HACKETT

BRAZOS RIVER ALLIANCE

FRIENDS OF THE BRAZOS RIVER

JOE FREELAND
ATTORNEY AT LAW
MATHEWS & FREELAND, L.L.P.
8140 N. MOPAC EXPWY., WESTPARK II, SUITE 260
AUSTIN, TX 78759-8884
(512) 404-7800 (PH)
(512) 703-2785 (FAX)
jfreeland@mandf.com

NRG TEXAS POWER LLC

SHANA HORTON
ATTORNEY
LAW OFFICES OF KEN RAMIREZ, PLLC
111 CONGRESS AVE., STE. 400
AUSTIN, TX 78701
(512) 573-3670 (PH)
(512) 394-7145 (FAX)
shana@kenramirezlaw.com

LAKE GRANBURY COALITION

GWENDOLYN HILL WEBB
WEBB & WEBB
P. O. BOX 1329
AUSTIN, TX 78767
(512) 472-9990 (PH)
(512) 472-3183 (FAX)
g.hill.webb@webbwebblaw.com

WILLIAM & GLADYS GAVAROVIC

COMANCHE COUNTY GROWERS (CCG)

MONICA JACOBS
KELLY, HART & HALLMAN, P.C.
303 COLORADO, SUITE 2000
AUSTIN, TX 78701-2944
(512) 495-6405 (PH)
(512) 495-6401 (FAX)
monica.jacobs@kellyhart.com

CHISHOLM TRAIL VENTURES, L.P.

COLETTE BARRON BRADSBY
TEXAS PARKS AND WILDLIFE DEPARTMENT
LEGAL DIVISION
4200 SMITH SCHOOL ROAD
AUSTIN, TX 78744
(512) 389-8899 (PH)
(512) 389-4482 (FAX)
colette.barron@tpwd.state.tx.us

TEXAS PARKS AND WILDLIFE DEPARTMENT

ELI MARTINEZ
PUBLIC INTEREST COUNSEL
TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
12100 PARK 35 CIRCLE, MC-103, BUILDING F
AUSTIN, TX 78753
(512) 239-3974 (PH)
(512) 239-6377 (FAX)
elmartin@tceq.state.tx.us

OFFICE OF PUBLIC INTEREST COUNSEL

SUSAN M. MAXWELL
ATTORNEY AT LAW
BICKERSTAFF HEATH DELGADO ACOSTA, LLP
3711 S. MOPAC EXPRESSWAY, BUILDING ONE, SUITE
300
AUSTIN, TX 78746
(512) 472-8021 (PH)
(512) 201-4515 (FAX)
smaxwell@bickerstaff.com

BRAZOS RIVER AUTHORITY

ROBIN SMITH
STAFF ATTORNEY
TCEQ
LITIGATION DIVISION
P O BOX 13087, MC 173
AUSTIN, TX 78711
(512) 239-0463 (PH)
(512) 239-3434 (FAX)
rsmith@tceq.state.tx.us

EXECUTIVE DIRECTOR

JASON HILL
LLOYD, GOSSELINK, ROCHELLE & TOWNSEND, P.C.
816 CONGRESS AVENUE, SUITE 1900
AUSTIN, TX 78701
(512) 322-5855 (PH)
(512) 874-3955 (FAX)
jhill@lglawfirm.com

CITY OF LUBBOCK

CITY OF COLLEGE STATION

STEPHEN P. WEBB
WEBB & WEBB ATTORNEYS AT LAW
P.O. BOX 1329
AUSTIN, TX 78767
(512) 472-9990 (PH)
(512) 472-3183 (FAX)
s.p.webb@webbwebblaw.com

WILLIAM & GLADYS GAVAROVIC

COMANCHE COUNTY GROWERS (CCG)

BRADLEY B. WARE

RUTH TAKEDA
STAFF ATTORNEY
TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
ENVIRONMENTAL LAW DIVISION
P.O. BOX 13087 P.O. BOX 13087
AUSTIN, TX 78711-3087
(512) 239-6635 (PH)
(512) 239-0606 (FAX)
ruth.takeda@tceq.texas.gov

TCEQ EXECUTIVE DIRECTOR

EMILY ROGERS
BICKERSTAFF HEATH DELGADO ACOSTA, LLP
3711 S. MOPAC EXPRESSWAY, BUILDING ONE, STE. 300
AUSTIN, TX 78746
(512) 472-8021 (PH)
(512) 320-5638 (FAX)
erogers@bickerstaff.com

BRAZOS RIVER AUTHORITY

JEFF CIVINS
ATTORNEY
HAYNES & BOONE, LLP
600 CONGRESS AVENUE, SUITE 1300
AUSTIN, TX 78701
(512) 867-8477 (PH)
(512) 867-8691 (FAX)
jeff.civins@haynesboone.com

LAKE GRANBURY COALITION

JIM MATHEWS
ATTORNEY AT LAW
MATHEWS & FREELAND, L.L.P.
P. O. BOX 1568
AUSTIN, TX 78767-1568
(512) 404-7800 (PH)
(512) 703-2785 (FAX)
jmathews@mandf.com

CITY OF BRYAN

MIKE BINGHAM
1251 C.R. 184
COMANCHE, TX 76442
(254) 842-5899 (PH)

MIKE BINGHAM

MYRON HESS
44 EAST AVENUE, SUITE 200
AUSTIN, TX 78701
(512) 610-7754 (PH)
(512) 476-9810 (FAX)
hess@nwf.org

NATIONAL WILDLIFE FEDERATION

RON FREEMAN
ATTORNEY
8500 BLUFFSTONE COVE, SUITE B.104
AUSTIN, TX 78759
(512) 451-6689 (PH)
(512) 453-0865 (FAX)
rfreeman@freemanandcorbett.com

GULF COAST WATER AUTHORITY

STEVE SHEETS
ATTORNEY
309 E. MAIN STREET
ROUND ROCK, TX 78664
(512) 255-8877 (PH)
(512) 255-8986 (FAX)
slsheets@sheets-crossfield.com

CITY OF ROUND ROCK

PAULINA WILLIAMS
BAKER BOTTS LLP
98 JACINTO BLVD, SUITE 1500
AUSTIN, TX 78701-4078
(512) 322-2543 (PH)
(512) 322-3643 (FAX)
paulina.williams@bakerbotts.com

GULF COAST WATER AUTHORITY (GCWA)

JOHN TURNER
HAYNES AND BOONE, L.L.P.
2323 VICTORY AVE.
DALLAS, TX 75202
(214) 651-5671 (PH)
(214) 200-0780 (FAX)
john.turner@haynesboone.com

LAKE GRANBURY COALITION

ED MCCARTHY
JACKSON, SJOBERG, MCCARTHY & TOWNSEND, LLP
711 W. 7TH STREET
AUSTIN, TX 78701
(512) 472-7600 (PH)
(512) 225-5565 (FAX)
emc@jacksonsjoberg.com

CITY OF HOUSTON

CHAD RICHWINE
KELLY HART & HALLMAN, LLP
201 MAIN STREET, SUITE 2500
FORT WORTH, TX 76102
(817) 878-9366 (PH)
(817) 878-9871 (FAX)

CHISHOLM TRAIL VENTURES, L.P.

CHARLES PERRY
SENATOR
DISTRICT 28
CAPITOL STATION PO BOX 12068
AUSTIN, TX 78711
(512) 463-0128 (PH)
scott.hutchinson@senate.state.tx.us

COURTESY COPY

JOHN J. VAY
ATTORNEY
ENOCH KEVER PLLC
ONE AMERICAN CENTER
600 CONGRESS AVENUE, SUITE 2800
AUSTIN, TX 78701
(512) 615-1231 (PH)
(512) 615-1198 (FAX)
jvay@enochkever.com

POSSUM KINGDOM LAKE ASSOCIATION

ANNIE E. KELLOUGH
ATTORNEY
NATIONAL WILDLIFE FEDERATION
44 EAST AVE, SUITE 200
AUSTIN, TX 78758
(512) 610-7751 (PH)
(512) 476-9810 (FAX)
kellougha@nwf.org

NATIONAL WILDLIFE FEDERATION

**SOAH DOCKET NO. 582-10-4184
TCEQ DOCKET NO. 2005-1490-WR**

CONCERNING THE APPLICATION	§	BEFORE THE STATE OFFICE
BY THE BRAZOS RIVER	§	
AUTHORITY FOR WATER USE	§	OF
PERMIT NO. 5851 AND RELATED	§	
FILINGS	§	ADMINISTRATIVE HEARINGS

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**SOAH DOCKET NO. 582-10-4184
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**SUPPLEMENT TO THE
PROPOSAL FOR DECISION ON REMAND**

I. BACKGROUND

In this matter, the Brazos River Authority (BRA) has filed an amended application (Application) seeking issuance of a new System Operation water right permit (“Proposed Permit” or “SysOp Permit”) and approval of its related water management plan (WMP). On July 17, 2015, the undersigned Administrative Law Judges (ALJs) submitted to the Texas Commission on Environmental Quality (Commission or TCEQ) the Proposal for Decision on Remand (PFDR). Shortly thereafter, a number of parties filed exceptions to the PFDR. On September 23, 2015, the ALJs submitted a letter responding to exceptions (the ALJs’ Response to Exceptions Letter).

On January 20, 2016, the Commission considered the PFDR in an open meeting. After considerable discussion, the Commission concluded that it agreed with the PFDR on all but two topics. On January 29, 2016, the Commission issued an Interim Order in which the Commission returned the case to the ALJs for the purpose of a limited remand, in order to allow the parties and ALJs to implement the Commission’s decisions on: (1) reservoir capacity/sedimentation, and (2) return flows in the Special Conditions and WMP portions of the SysOp Permit recommended by the ALJs. The Commission further directed that the evidentiary record was not to be reopened during the remand.

Consistent with the Interim Order, the ALJs directed the parties to file briefing on the two topics—reservoir capacities/sedimentation, and return flows. Such briefing was filed during the

months of March and April 2016. The briefing consisted of three rounds of filings: the parties first filed their proposed lists of stipulations and disputed issues (Proposed Stipulations); then their initial briefs (Initial Briefs); and then their reply briefs (Reply Briefs). Briefing was filed by: BRA; the Executive Director (ED) of the TCEQ; Dow Chemical Company (Dow); Friends of the Brazos River, Brazos River Alliance, Helen Jane Vaughn, Lawrence Wilson, Mary Lee Lilly, and Ken W. Hackett (collectively, FBR); National Wildlife Federation (NWF); Texas Parks and Wildlife Department (TPWD); City of College Station and City of Lubbock (Cities); George Bingham, Robert Starks, Frasier Clark, William D. and Mary Carroll, William and Gladys Gavranovic, and Bradley B. Ware; and the City of Bryan (Bryan).

Some parties attempt to raise issues outside the scope of the limited remand. For example, FBR attempts to reopen consideration of environmental flow requirements if BRA is to be given a bed and banks authorization for its own return flows but not an appropriative right for those flows.¹ The ALJs do not address issues like these because they are outside the scope of the remand.²

Because they arguably affect the analysis of the reservoir capacity issues, the return flow issues will be addressed first.

II. RETURN FLOWS

A. Background

In the Interim Order, the Commission agreed with the determinations in the PFDR that, as to the groundwater-based return flows of others and surface water-based return flows of others, BRA met its burden to prove its entitlement to those amounts. As to BRA's own groundwater-based return flows and surface water-based returns flows, the Commission agreed with the concept, set out in the PFDR, that BRA may seek to obtain the right to indirectly reuse

¹ FBR Initial Brief at 10-12.

² Moreover, the issue FBR attempts to raise was addressed in the PFDR at 123-25.

those waters only by obtaining a bed and banks authorization pursuant to Texas Water Code § 11.042(b) and (c). However, the Commission noted, correctly, that the BRA Application appears to treat all return flows the same, whether they be BRA's return flows or others' return flows. For this reason, the Commission concluded that "further investigation of the record is necessary in order to only include the amounts of the groundwater-based effluent flows of others and surface water-based surplus water return flows of others as a new appropriation."

The Commission directed the ALJs to:

- Determine if the existing record includes persuasive evidence that BRA has requested and sought to obtain a bed and banks authorization to use its own groundwater-based and surface water-based return flows;³
- If so, determine whether BRA proved it meets the requirements for a bed and banks authorization for its own return flows. Moreover, if BRA's own return flows are part of the appropriation amount sought by BRA, then they should be removed from the appropriation amount set out in the SysOp Permit;⁴
- Require sufficient accounting to protect BRA from diverting more than others' return flows;⁵ and
- Include redrafted Special Conditions in section 5.A. that reduce or terminate BRA's appropriative rights in the return flows of others once another discharger directly reuses or obtains an indirect reuse bed and banks authorization under Texas Water Code § 11.042(b) or (c) that lessens the availability of the proportionate return flows of others.⁶

³ Interim Order at 3, (5)(i).

⁴ Interim Order at 3, (5)(ii).

⁵ Interim Order at 4, (6)(i).

⁶ Interim Order at 4, (6)(ii).

B. Discussion

Each return flow question posed in the Interim Order will be analyzed in turn.

- 1. Interim Order Issue (5)(i): In the Application, did BRA request bed and banks authorization to use: (1) its own groundwater-based return flows; and (2) its own surface water-based return flows?**

FBR and NWF both dispute the contention that BRA requested, in the Application, bed and banks authorization for its own return flows.⁷ NWF does, however, “acknowledge that BRA sought an appropriation” for an amount that includes BRA’s own return flows, and also sought “a bed and banks authorization for its requested appropriation.”⁸

The only parties actively involved in the return flows issues in the prior hearing on remand, BRA, the ED, and TPWD, agree that BRA requested bed and banks authorization for its own return flows.⁹

The ALJs conclude that there is persuasive evidence in the existing record proving that BRA requested and sought to obtain bed and banks authorization to use its own groundwater-based and surface water-based return flows. In the BRA Application, under the heading “Bed and Banks Authorization,” BRA requested the following:

In order to utilize *its existing water rights*, the appropriation requested by this application and *other potential sources of supply* as a system, the Authority requests authorization to use the bed and banks of the Brazos River . . . for the conveyance, storage, and subsequent diversion of (i) water that the Authority seeks to appropriate under this application; . . . (iv) *in-basin surface water and*

⁷ NWF Proposed Stipulations at 1; FBR Response to Order No. 36 at 1 and 3; FBR Initial Brief at 9; FBR Reply Brief at 9.

⁸ NWF Proposed Stipulations at 2.

⁹ BRA Proposed Stipulations at 1; BRA Initial Brief at 6-7; ED Proposed Stipulations at 1; TPWD Proposed Stipulations at 2.

groundwater subject to the Authority's control; and (v) waters developed from future Authority projects.¹⁰

It is true that BRA had hoped that its own groundwater and surface water-based return flows would be included in the appropriation amount for the SysOp Permit. The fact that the Commission has concluded that these waters should not be a part of the appropriation amount in the SysOp Permit does not, however, cloud the fact that BRA has always intended and asked that the bed and banks authorization be granted for *all* waters addressed in the application, including BRA's own groundwater and surface water-based return flows.¹¹

2. Interim Order Issue (5)(ii)(subpart 1): If BRA requested bed and banks authorization to use its own groundwater and surface water-based return flows, did BRA prove it is entitled to such authorization?

FBR contends that BRA failed to prove its entitlement to a bed and banks authorization for its own groundwater-based and surface water-based return flows.¹² TPWD, on the other hand, expressly concedes that BRA proved its entitlement to the authorization.¹³

Rather than focusing on whether BRA met its burden of proof, FBR and TWPD argue that BRA's right to reuse its own return flows (via a bed and banks authorization) ought to be treated as a new appropriation and, therefore, subject to the Senate Bill 3 (SB 3) rules related to environmental flows. FBR worries that if BRA's own return flows are not treated as a new appropriation subject to the SB 3 rules, then BRA could divert and reuse those waters without regard to the instream flow needs in the river basin.¹⁴

¹⁰ BRA Ex. 7, 7-A-1 at 16 (emphasis added).

¹¹ *See, e.g.*, BRA Ex. 113 at 6-7, 51-52, 2-19, 2-50, Apps. H-1 and H-2.

¹² FBR Response to Order No. 36 at 3; FBR Initial Brief at 9.

¹³ TPWD Proposed Stipulations at 2.

¹⁴ FBR Initial Brief at 9-12.

TPWD argues that the law as to surface water-based return flows is different than the law as to groundwater-based return flows. As to BRA's own groundwater-based return flows, TPWD concedes that BRA need only obtain a bed and banks authorization in order to reuse that water. On the other hand, as to BRA's own surface water-based return flows, TPWD argues that BRA must obtain: (1) not only a bed and banks authorization to reuse those return flows, but also (2) either a new appropriative right or an amendment to its underlying water rights which enabled BRA's initial use of the surface water.¹⁵ In this regard, TPWD "respectfully disagrees" with the Commission's Interim Order.¹⁶ TPWD contends that "BRA met its burden to appropriate its [surface water-based] return flows and to transport the newly appropriated water through a bed and banks authorization."¹⁷ With TPWD's approach, BRA's right to use its own surface water-based return flows would be considered a new appropriation and subject to the SB 3 rules, while BRA's right to use its own groundwater-based return flows would not be considered a new appropriation and not subject to the SB 3 rules.¹⁸

The ED and BRA contend that the argument raised by TPWD (and, to some extent, FBR) goes beyond the scope of the remand authorized by the Interim Order.¹⁹ The ALJs agree. In the Interim Order, the Commission expressly stated that "BRA can obtain an indirect reuse authorization of its own [groundwater-based return flows and surface water-based return flows] only via a bed and banks authorization under TWC § 11.042(b) & (c)."²⁰ As to BRA's own return flows, the Commission remanded the case solely to determine whether BRA had asked for and proved its entitlement to a bed and banks authorization.²¹ The concept that the discharger of return flows can only obtain a bed and banks authorization, but not an appropriative right, to reuse those return flows is further fleshed out in pages 226-29 of the PFDR. The Commission

¹⁵ TPWD Initial Brief at 2-3.

¹⁶ TPWD Initial Brief at 6.

¹⁷ TPWD Reply Brief at 2-3.

¹⁸ TPWD Reply Brief at 6.

¹⁹ ED Initial Brief at 2; ED Reply Brief at 2-3; BRA Reply Brief at 8-9.

²⁰ Interim Order at 3.

²¹ Interim Order at 3.

has already indicated, via the Interim Order, that it agrees with the PFDR's analysis. Because TWPD's (and FBR's) arguments on this point challenge the Commission's ruling on return flows, they are outside the scope of the remanded issues now before the ALJs.

Bryan also contends that BRA did not prove it is entitled to a bed and banks authorization for its own return flows.²² Dow concedes that BRA presented sufficient evidence in the WMP to identify the *amount* of BRA's own return flows that are available for bed and banks authorization, but argues that BRA still failed to provide all the information necessary to obtain the bed and banks authorization. Dow argues that BRA should be obligated to provide the record cites to the information satisfying each of the provisions required to obtain a bed and banks authorization found in the TCEQ's rules, 30 Texas Administrative Code §§ 295.112(b) and 295.113(b).²³ Dow argues, "the Interim Order requires more than simply a few citations to the record where BRA essentially says, 'we want a bed and banks authorization.'"²⁴ Rather, Dow contends that the specific requirements set out in TCEQ's bed and banks rules must be shown by BRA. The only specific requirement that Dow contends BRA failed to prove is the requirement to identify "the estimated amount of water that will be lost to transportation, evaporation, seepage, channel or other associated carriage losses from the point of discharge to the point of diversion."²⁵

BRA, TPWD, and the ED all agree that BRA proved it qualified for a bed and banks authorization for its own groundwater-based and surface water-based return flows.²⁶ BRA argues that no "legitimate question" exists on this point. BRA notes, correctly, that in the first and second evidentiary hearing, BRA, the ED, and TPWD all agreed that BRA had proved

²² Bryan Proposed Stipulations at 1.

²³ Dow Proposed Stipulations at 2-3, 8-10; Dow Initial Brief at 16-17.

²⁴ Dow Reply Brief at 18.

²⁵ Dow Reply Brief at 18, citing 30 Tex. Admin. Code § 295.113(b)(7).

²⁶ BRA Reply Brief at 7; BRA Proposed Stipulations at 1; TPWD Proposed Stipulations at 2; TPWD Initial Brief at 1; ED Proposed Stipulations at 1.

compliance with the statutory and regulatory requirements for obtaining a bed and banks authorization for all water addressed in the SysOp Permit, and no party contended otherwise.²⁷

In the PFDR, the ALJs stated the following:

Special conditions in the SysOp Permit address the use of the bed and banks of the Brazos River and its tributaries to transport water in a manner that satisfies the requirements of Texas Water Code § 11.042. The permit authorizes the use of the bed and banks, subject to identification of specific losses and various other conditions, including a requirement that BRA maintain an accounting/delivery plan to estimate daily deliveries of water that considers losses and travel time.²⁸ Special Condition 5.B.1 specifies that use of the bed and banks of Allens Creek below [Allens Creek Reservoir or ACR] requires an amendment of the ACR Permit.²⁹ Special Condition 5.B.2 identifies the specific stream reaches to which the bed and banks authorization applies.³⁰ The WMP lays out specific information on loss rates and accounting methods for bed and banks delivery of water under the permit, and includes the Accounting Plan that will be used to track bed and banks delivery.³¹

The evidence introduced at the hearing demonstrates that there should not be any effect on water quality in the Brazos River Basin as a result of the bed and banks authorization. The water to be transferred in the bed and banks of the Brazos River and its tributaries originates in the basin and will have water quality consistent with the natural water quality of the Brazos River. While there could be changes in timing and magnitude of existing flows which could affect water quality by changing river velocities or depths and concentration of constituents in the water, the SysOp Permit places restrictions on the exercise of the water right so that river conditions are maintained within the range of historically occurring conditions.³²

. . . The ALJs find that BRA's requested bed and banks authorization should be approved.³³

²⁷ BRA Initial Brief at 8.

²⁸ BRA Ex. 132B at 8.

²⁹ BRA Ex. 132B at 7.

³⁰ BRA Ex. 132B at 7-8.

³¹ BRA Ex. 127 at 8; BRA Ex. 119 at 100; BRA Ex. 47 at 47-48; BRA Ex. 113.

³² BRA Ex. 15 at 95-96; BRA Ex. 29 at 41-42.

³³ PFDR at 245-46.

The ED also believes all the information required by 30 Texas Administrative Code §§ 295.112(b) and 295.113(b) was provided by BRA and is in the record.³⁴ Paraphrasing the ED:

- The original application identified the specific discharges, the source of the water, the TPDES permit number, and historical discharge data;³⁵
- Additional details about the return flows are provided in an appendix to the WMP Technical Report;³⁶
- Information on channel losses is provided in the WMP Technical Report;³⁷ and
- BRA's return flows are made subject to environmental flow requirements and BRA has provided an accounting plan that explains, among other things, how BRA return flows will be accounted for.³⁸

Pursuant to the TCEQ rule dealing with bed and banks authorizations for surface water-based return flows, BRA must show “the estimated amount of water that will be lost to transportation, evaporation, seepage, channel or other associated carriage losses from the point of discharge to the point of diversion.”³⁹ Table 4.7 in the Technical Report to the WMP identifies, for each of 35 reaches of the river from Possum Kingdom Lake to the Gulf of Mexico, the distance (in miles), travel time (in days), and estimated water losses (by percentage) under average conditions. Dow complains that Table 4.7 is insufficiently specific because it: (1) states only a percent of loss, not specific amounts in acre-feet; and (2) provides only the losses expected to occur for each reach, not the amount of losses from specific points of discharge to specific points of diversion.⁴⁰

³⁴ ED Initial Brief at 3-4.

³⁵ BRA Ex. 7B.

³⁶ BRA Ex. 113, WMP Technical Report at App. G-2.

³⁷ BRA Ex. 113, WMP Technical Report at § 4.1.3.3 and Table 4.7.

³⁸ BRA Ex. 113, WMP Technical Report at App. H.

³⁹ 30 Tex. Admin. Code § 295.113(b)(7).

⁴⁰ Dow Reply Brief at 19-20.

The ALJs do not find Dow's arguments to be persuasive. The estimated amount of water lost can be stated by a percentage just as effectively as it can by a specific quantity of acre-feet. In fact, it is probably more effective to state losses as a percentage. The volume of return flows being conveyed down a watercourse will likely vary over time and common sense suggests that losses stated as a percentage will generally remain accurate as the volume of return flows in the watercourse varies, while a loss estimate stated in specific amount of acre feet will not. Moreover, Dow's concern about the uses of river reaches to estimate losses rather than estimating losses from specific points of discharge to points of diversion mirrors the concerns regarding points of diversion versus the use of river reaches that have already been decided in BRA's favor in the PFDR.⁴¹

For the foregoing reasons, the ALJs conclude that BRA proved it meets all the requirements for a bed and banks authorization for its own return flows (in addition to the bed and banks authorization it has already been found to be entitled to for the water appropriated under the Proposed Permit), and recommend that the Commission issue such an authorization.⁴² The ALJs recommend revising the Bed and Banks authorization in the Proposed Permit (paragraph 1.B) to specify that the authorization extends to BRA's own return flows. The exact wording proposed by the ALJs can be found in the Proposed Order attached hereto.

3. Interim Order Issue (5)(ii)(subpart 2): Are BRA's own groundwater and surface water-based return flows included as part of the appropriation amount set out in the proposed permit? If so, they should be removed from the appropriation amount.

a. What are the correct amounts of the return flows?

In order to evaluate the return flow issues, it is necessary to first discern whether the amounts of: (1) BRA's own return flows, and (2) others' return flows, are BRA determinable from the evidence in the record. BRA asserts that the evidence in the record proves that BRA's

⁴¹ See PFDR at 39-48.

⁴² The correct quantity of BRA's own return flows is discussed in the next section.

own return flows (groundwater-based and surface water-based) total 47,332 acre-feet, and others' return flows (groundwater-based and surface water-based) which BRA seeks to appropriate total 50,076 acre-feet. BRA derived these numbers from the following evidence that is in the record. In BRA Ex. 113, Table G.2.5 in Appendix G of the WMP Technical Report itemizes BRA's own return flows. BRA acknowledges that the itemized table erroneously includes a number of "others' return flows." However, once those "others' return flows" are subtracted out of the table, BRA's own return flows total 47,332 acre-feet.⁴³ Also in BRA Ex. 113, Table G.2.3 in Appendix G of the WMP Technical Report itemizes *all* return flows (BRA's plus others'). BRA subtracts the total of BRA's return flows in Table G.2.5 from the total of all return flows in Table G.2.3. From the remainder, BRA then subtracts the amount of bed and banks authorizations granted to the cities of Bryan, College Station, Abilene, Waco, and Cleburne to arrive at the amount of "others' return flows" which BRA seeks to appropriate: 50,076 acre-feet.⁴⁴ TPWD agrees with this approach.⁴⁵ The ED agrees with these numbers.⁴⁶ The ALJs have checked BRA's math and agree that BRA's return flows total 47,332 acre-feet, and others' return flows total 50,076 acre-feet.

Dow concedes that this method used by BRA accurately states the amounts of return flows that BRA is *seeking* to use in the SysOp Permit, and Dow does not appear to challenge the number for BRA's return flows. However, Dow does argue that the amount for others' return flows is derived from modeling that relied on faulty assumptions. According to Dow, when BRA performed its water availability modeling for the SysOp Permit demand level scenarios, it treated BRA's own return flows "just like the other water in the stream," that is, as if the water were available for appropriation by others. However, if the SysOp Permit is granted and it includes authorization for BRA to use the bed and banks to transport its own return flows, then BRA's own return flows will not be available for appropriation by others. Dow argues that, because BRA treated all water in the WMP and associated water availability models (WAMs)

⁴³ See BRA Initial Brief at 3, fn. 1, 8.

⁴⁴ See BRA Initial Brief at 3-4.

⁴⁵ TPWD Proposed Stipulations at 2.

⁴⁶ ED Initial Brief at 1, 3.

the same (i.e. assuming it was all available to meet the needs of senior water rights), the modeling associated with the Application overstates the amount of water available for BRA. As explained by Dow:

This is due to the fact that other water rights' demands were incorrectly satisfied [in the modeling] with BRA [return flows] in certain instances in the WMP and the WAMs, when they should have been restricted to only diverting natural streamflows . . . or others' . . . return flows.⁴⁷

The result, according to Dow, is that "it is impossible to calculate or extrapolate the true amount of others' return flows."⁴⁸

BRA accuses Dow of "flip-flopping" on this issue because Dow has never made this argument before. Moreover, BRA asserts that the Dow argument is simply wrong and lacks any evidentiary support. BRA clarifies that: (1) the modeling treated all return flows as being junior to existing water rights; and (2) the Proposed Permit will continue to treat all return flows as junior to existing water rights.⁴⁹ The ED agrees, noting that the priority date of the return flows requested by BRA are being given a new priority date, thereby protecting senior water rights. Thus, argues the ED, the modeling for the SysOp Permit is consistent with the terms of the Proposed Permit.⁵⁰

Bryan takes a slightly different approach in its argument why the amount of others' return cannot be accurately determined from the evidence in the record.⁵¹ As noted above, BRA Ex. 113, Table G.2.5 in Appendix G of the WMP Technical Report purports to itemize BRA's own return flows. Bryan points out, correctly, that there are substantial errors in Table G.2.5, in that it includes a large number of others' return flows. Bryan argues that this fact calls

⁴⁷ Dow Initial Brief at 7.

⁴⁸ Dow Initial Brief at 7.

⁴⁹ BRA Reply Brief at 2-3.

⁵⁰ ED Reply Brief at 4.

⁵¹ Bryan Proposed Stipulations at 2; Bryan Initial Brief at 2-4.

into question the accuracy and reliability of the modeling that was performed in reliance on the tables.⁵² Moreover, Bryan contends that if the amount of BRA's own return flows is incorrectly calculated, then the amount of others' return flows (which was calculated by subtracting "all return flows" from "BRA's return flows") is also incorrect. Bryan also argues that, because Table G.2.5 erroneously included much more than only BRA's own return flows, it must be assumed that the modeling that utilized Table G.2.5 was equally flawed. Due to these uncertainties, Bryan argues that the amount of others' return flows is unknowable.⁵³

The ED disagrees with Bryan. The ED concedes that Table G.2.5. erroneously included more than BRA's own return flows. The ED argues, however, that the modeling was not based upon the flawed table and only the accurate amount of BRA's own return flows was modeled.⁵⁴ BRA agrees, arguing: (1) the evidence in the record establishes that the modeling was based only upon the correct data regarding BRA's own return flows (i.e., not the flawed data in Table G.2.5); and (2) there is no evidence in the record to support the notion that the numbers used in the modeling were wrong.⁵⁵

The text of the WMP Technical Report states that BRA's own return flows were used in the modeling. In the same paragraph, it also states that BRA's own return flows are reflected in Table G.2.5, which turns out to be an inaccurate statement.⁵⁶ This could be read one of two ways:

- As argued by BRA, the modelling was performed using the correct amounts for BRA's own return flows, and only Table G.2.5. contained the error; or
- As argued by Bryan, the error contained in Table G.2.5. was repeated in the modeling.

⁵² Bryan Proposed Stipulations at 1-2.

⁵³ Bryan Initial Brief at 2-3; *see also* BRA Ex. 113, WMP at 10, Table 2; Bryan Reply Brief at 1-4.

⁵⁴ ED Reply Brief at 5.

⁵⁵ BRA Initial Brief at 10-11.

⁵⁶ BRA Ex. 113 at WMP Technical Report App. G-2 at 4.

Although it is a close issue, the ALJs conclude the reading that is best supported by the evidence is the first one. BRA argues, “the WMP does not say that the values in Table G.2.5 were used in the WMP modeling; it says that BRA return flows were used in modeling . . . and that Table G.2.5. shows those return flows. In making the former statement, the WMP was correct, regardless of the accuracy of Table G.2.5.”⁵⁷ The ALJs agree and conclude that the preponderance of the evidence in the record proves that BRA’s own return flows total 47,332 acre-feet, and the others’ return flows that BRA seeks to appropriate total 50,076 acre-feet.

b. How should the return flows be accounted for in the Proposed Permit?

The ALJs recommended (and the Commission agreed) that the SysOp Permit should specify four different appropriation amounts, only one of which would govern based upon the circumstances in effect at any given time. Thus, the ALJs recommended that paragraph 1.A of the Proposed Permit should specify the four appropriation amounts tied to the four Demand Levels. When the 14% reduction for reservoir capacity is added back in (as directed in the Interim Order), the four demand levels would be as follows:

- Demand Level A: 381,068 acre-feet per year (AFY);
- Demand Level B: 344,625 AFY;
- Demand Level C: 516,955 AFY; and
- Demand Level D: 482,035 AFY.⁵⁸

BRA now proposes that these corrected appropriation amounts should not change but that, below each amount, statements should be added identifying the portions of the total amount that are comprised of: (1) BRA’s own returns flows; and (2) others’ return flows. Thus, for

⁵⁷ BRA Reply Brief at 9.

⁵⁸ PFDR at 29; BRA Initial Brief at BRA Proposed, Revised Permit at 4-5. The amount for Demand Level A is slightly lower in the BRA Initial Brief (381,068 AFY) than it is in the PFDR (381,474 AFY). The ALJs will utilize the lower number stated in the BRA Initial Brief.

example, BRA would have the appropriation amount for Demand Level A read in the Proposed Permit as follows (BRA's proposed new language is underlined):

- (1) not to exceed 381,068 acre-feet per year at all times prior to: (1) an expansion of the Comanche Peak Nuclear Power Plant (CPNPP) in a manner that results in the plant needing at least 90,000 acre-feet per year of additional water; and (2) the point when the ports are closed on the dam impounding Allens Creek Reservoir,
 - (a) 47,332 acre-feet of the total amount is BRA's own return flows under Texas Water Code § 11.042(b) and (c).
 - (b) 50,076 acre-feet of the total amount is the return flows of others under Texas Water Code § 11.046(c) and § 11.121 and is subject to Special Condition 5.A.3.⁵⁹

Similar verbiage would be repeated for each of the three other Demand Level appropriation amounts. The ED agrees with BRA's approach, but would add a Subpart (c) which reads, "(c) 283,660 acre-feet of the total amount is the amount of the appropriation under Texas Water Code § 11.121 that does not include return flows."⁶⁰

Dow argues that BRA's proposed new permit verbiage runs counter to the directions from the Commission because BRA's own return flows are still expressly a part of the total appropriation amount. In its briefing, Dow proposes that BRA's own return flows should be subtracted from the appropriation amounts, and others' return flows should be separately itemized. Thus, Dow would have the appropriation amount for Demand Level A read in the Proposed Permit as follows (Dow's proposed new language is shown by the strikeouts and underlining):

- (1) ~~not to exceed 328,068 acre-feet per year~~ at all times prior to: (1) an expansion of the Comanche Peak Nuclear Power Plant (CPNPP) in a manner that results in the plant needing at least 90,000 acre-feet per year

⁵⁹ BRA Initial Brief at BRA Proposed, Revised Permit at 4-5.

⁶⁰ ED Initial Brief at 4-5.

of additional water; and (2) the point when the ports are closed on the dam impounding Allens Creek Reservoir, not to exceed:

- (a) 283,660 acre-feet/year from the unappropriated surface water of the Brazos River Basin under Texas Water Code § 11.121; and
- (b) up to 50,076 acre-feet/year of the return flows of others under Texas Water Code § 11.046(c) and § 11.121, subject to Special Condition 5.A.3 and reductions due to losses and appropriations by senior water rights as detailed in the WMP.⁶¹

Similar verbiage would be repeated for each of the three other Demand Level appropriation amounts. BRA's own return flows would be addressed only in the section of the Proposed Permit dealing with bed and banks authorizations, with the following language:

1.B.(2) Permittee is authorized to use the bed and banks of the Brazos River below Possum Kingdom Lake, the Brazos River tributaries, and Permittee's authorized reservoirs for the conveyance, storage, and subsequent diversion of 47,322 acre-feet of Permittee's own return flows under Texas Water Code § 11.042(b) and (c).⁶²

Dow further argues that BRA's maximum diversion by reach should likewise be reduced by carving BRA's own return flows out of each reach's maximum.⁶³

The ED disagrees with Dow's argument that BRA's own return flows ought to be removed from the appropriation amount in the Proposed Permit and moved to the bed and banks portion of the Proposed Permit, because "the 'bed and banks' Section in the . . . Permit relates only to BRA's bed and banks authorizations under Tex. Water Code § 11.042(a) . . . not to the reuse authorization under Sections 11.042(b) and (c)."⁶⁴ Dow counters that this argument does not make sense. As the statute's title makes clear, the entirety of § 11.042 deals with "delivering

⁶¹ Dow Initial Brief at 11 and at Dow Proposed, Revised Permit at 4-6.

⁶² Dow Reply Brief at 10.

⁶³ Dow Initial Brief at 11-12; *see also* Dow Reply Brief at 7-8.

⁶⁴ ED Initial Brief at 7.

water down banks and beds.” Thus, Dow does not understand why the ED thinks some of the bed and banks authorizations do not belong in the “bed and banks” section of the Proposed Permit but in the “appropriations” section.⁶⁵

BRA argues that, as compared to BRA’s approach, Dow’s approach (whereby BRA’s own return flows are not included in the appropriation section of the Proposed Permit) “*makes no difference whatsoever in the amount of water BRA is authorized to use.*”⁶⁶ The ED agrees with BRA, and argues that putting BRA’s own return flows in the bed and banks section would make the Proposed Permit difficult to read and interpret.⁶⁷

Bryan argues: (1) the amount of BRA’s own return flows must be removed from the appropriation amounts in the Proposed Permit because this was ordered by the Commission; and (2) the amount of others’ return flows must be removed from the appropriation amounts because, as discussed above, those amounts cannot be accurately determined from the evidence in the record.⁶⁸ In other words, Bryan contends that the four appropriation amounts should equal the amounts for the four Demand Scenarios that involve no return flows: (1) 354,081 AFY; (2) 304,793 AFY; (3) 477,774 AFY; and (4) 424,361 AFY.⁶⁹

Consistent with the directives from the Interim Order, the ALJs conclude that the appropriation amount in the SysOp Permit (paragraph 1.A) must include others’ return flows and exclude BRA’s own return flows. The exact wording proposed by the ALJs can be found in the Proposed Order attached hereto.

⁶⁵ Dow Reply Brief at 9-10.

⁶⁶ BRA Initial Brief at 5 (emphasis in original).

⁶⁷ ED Reply Brief at 1.

⁶⁸ Bryan Proposed Stipulations at 2; Bryan Initial Brief at 2-4.

⁶⁹ Bryan Initial Brief at 2-3; *see also* BRA Ex. 113, WMP at 10, Table 2; Bryan Reply Brief at 1-4.

4. Interim Order Issue (6)(i): What special conditions should be included in the Proposed Permit to require sufficient accounting to prevent BRA from diverting more “others’ return flows” than it is entitled to?

The special conditions relating to return flows are found in Proposed Permit paragraph 5.A. BRA proposes the following revisions to Proposed Permit paragraph 5.A(2) to address the Commission’s concerns:

- (2) ~~Permittee shall maintain a record of return flows as a part of its accounting plan required by Special Conditions 5.C and 5.D (return flow accounting plan). The return flow accounting plan must account, by source, for all return flows discharged. The return flow accounting plan shall include amounts discharged by outfall. Computation of the amount of additional water supply available due to return flows actually discharged is determined in the WMP, taking into account environmental flow conditions and demands of senior water rights. Permittee’s use of additional water supply attributable to the presence of return flows is limited to the amount shown to be available, based upon amounts discharged as determined in the WMP. The return flow accounting plan shall be included as part of Permittee’s accounting/delivery plan. Subject to approval by the Executive Director, Permittee shall revise the WMP Accounting Plan to account for return flows authorized under § 11.042(b) and (c) in accordance with the Brazos River Authority Accounting Plan, Executive Director’s Approach to Return Flows and to account for return flows authorized under §§ 11.046(c) and 11.121 in accordance with the Brazos River Authority Accounting Plan BRA Approach to Return Flows.~~⁷⁰

Dow and the ED agree that BRA’s language for Subpart 5.A.(2) is appropriate.⁷¹ The ALJs do as well, and recommend its adoption, as shown in the attached Proposed Order.

Bryan asks that the Proposed Permit include lists specifying which return flows are being appropriated by BRA, and which return flows are subject to BRA’s bed and banks authorization. Bryan contends that these lists would aid in the management and enforceability of the

⁷⁰ BRA Proposed Permit at 7-8.

⁷¹ Dow Proposed Revised Permit at 8; ED Proposed Stipulations at 2.

Proposed Permit in the future.⁷² The ED and BRA both contend that such a list is unnecessary.⁷³ Moreover, much the same argument was previously rejected in the PFDR and it is, therefore, beyond the scope of this remand.⁷⁴

5. Interim Order Issue (6)(ii): What special conditions should be included in the Proposed Permit in order to reduce or terminate BRA's appropriate right to another discharger's return flows if the discharger begins directly reusing the water or obtains a bed and banks authorization to reuse the water?

BRA proposes the following minor change to Proposed Permit paragraph 5.A(4):

- (4) Permittee's storage, diversion and use of groundwater based return flows is subject to interruption by direct reuse or indirect reuse or termination by indirect reuse upon issuance of a bed and banks authorization pursuant to Texas Water Code § 11.042(b) by the Commission to the discharging entity.⁷⁵

Subsection 5.A.(3) contains a "service area" limitation. That is, it provides that BRA's right to use return flows might terminate if the discharger of the return flows begins reusing that water within its "corporate limits, extraterritorial jurisdiction, or contiguous water certificate of convenience and necessity boundary." The ED contends that subsection 5.A.(3) should be deleted altogether because the service area limitation is contrary to the Interim Order.⁷⁶ Dow agrees.⁷⁷

The ED also argues that subsection (4) should be moved to subsection (3) and revised to read as follows:

⁷² Bryan Initial Brief at 5-6; Bryan Reply Brief at 5-6.

⁷³ ED Initial Brief at 5; BRA Reply Brief at 10-11.

⁷⁴ See PFDR at 236-38.

⁷⁵ BRA Proposed Permit at 7-8.

⁷⁶ ED Initial Brief at 1-2, 4; ED Reply Brief at 2.

⁷⁷ Dow Stipulations at 7; Dow Initial Brief at 13-15.

- (3) Permittee's storage, diversion and use of BRA's appropriative rights in the return flows of others ~~groundwater-based return flows~~ is subject to interruption by direct reuse or indirect reuse or termination by indirect reuse upon issuance of a bed and banks authorization pursuant to Texas Water Code § 11.042(b) or (c) by the Commission to the discharging entity.⁷⁸

Dow generally agrees. Bryan complains that when dischargers begin reusing their return flows, BRA's appropriative right should be reduced, rather than merely having the accounting plan revised.⁷⁹ Bryan further contends that BRA's right to a discharger's return flows ought to terminate not when the other discharger *obtains* a bed and banks authorization, but when it *applies* to obtain such an authorization.⁸⁰ The ALJs conclude that this argument runs counter to the Commission's directive in the Interim Order.

Cities argue that the phrase "is subject to interruption . . . or termination" is too ambiguous. Rather, Cities contends that the termination ought to be automatic. Moreover, Cities argue that the termination ought to be automatic when a discharger obtains a bed and banks permit, not when that discharger begins to divert and reuse the water.⁸¹ Cities also argue that the service area limitation runs contrary to the terms of the Interim Order. The Commission directive was to "reduce or terminate BRA's appropriative rights in the return flows of others once another discharger directly reuses or obtains an indirect reuse bed and banks authorization." Cities point out that there was no "service area" or other geographic limitation to this directive.⁸² Cities suggest that Subparts 5.A.(3) and (4) should read as follows:

- (3) Permittee's storage, diversion and use of that portion of the appropriation based on return flows is dependent upon potentially interruptible return flows. Permittee's storage, diversion and use of that portion of the appropriation based on surface water based return flows ~~will be~~ is

⁷⁸ ED Proposed Stipulations at 2-3.

⁷⁹ Bryan Initial Brief at 5.

⁸⁰ Bryan Initial Brief at 5.

⁸¹ Cities Proposed Stipulations at 1-2; Cities Initial Brief at 5.

⁸² Cities Proposed Stipulations at 3; Cities Initial Brief at 4.

~~interrupted by direct reuse or will be terminated by indirect reuse within the discharging entity's corporate limits, extraterritorial jurisdiction, or contiguous water certificate of convenience and necessity boundary, provided the discharging entity has applied for and been granted authorization to reuse the return flows and is terminated by indirect reuse upon the issuance of a bed and banks authorization pursuant to Texas Water Code § 11.042(c) by the Commission to the discharging entity.~~

- (4) Permittee's storage, diversion and use of groundwater based return flows is ~~subject to interruption~~ interrupted by direct reuse or indirect reuse and is terminated by indirect reuse upon issuance of a bed and banks authorization pursuant to Texas Water Code § 11.042(b) by the Commission to the discharging entity.⁸³

The ED and Dow agree that the Cities' language is acceptable.⁸⁴ With the exception of the elimination of the service area restriction, BRA finds Cities' language to be acceptable.⁸⁵ The ALJs find that the verbiage proposed by Cities best achieves the objectives specified in the Interim Order and adopt that verbiage, as shown in the attached Proposed Order.

III. RESERVOIR CAPACITIES

A. Background

In the Interim Order, the Commission agreed with the determination in the PFDR that, due to a loss of reservoir storage capacity caused by sedimentation, there should be a 14% reduction in the total amount of water available for use by BRA pursuant to the SysOp Permit. However, the Commission disagreed with the mechanism by which the ALJs implemented the 14% reduction. In the PFDR, the appropriation amounts under the four Demand Level Scenarios were each reduced by 14%. The Commission ordered that the appropriation amounts should not be reduced, but that the 14% use reduction should be implemented via a special permit condition.

⁸³ Cities Initial Brief at 7.

⁸⁴ ED Reply Brief at 3; Dow Reply Brief at 16.

⁸⁵ BRA Reply Brief at 13.

Specifically, the Commission provided the ALJs with the following instructions:

- i) recalculate the ALJs' proposed four Demand Scenarios for the Use Appropriations by adding back the 14% reductions to each level in [Permit] Provision 1.A; and
- ii) redraft [Permit] Special Condition(s) in 5.D. in a manner that:
 - 1) directs BRA's WMP to immediately reduce the authorized diversion and use of the maximum annual authorized appropriation by the ALJs' proposed 14% reduced appropriation levels under the four Demand Level scenarios due to sedimentation in the system reservoirs;
 - 2) authorizes BRA to submit a demonstration that it has additional sources of supply sufficient to offset the 14% initial reduction in its system reservoirs due to sedimentation; and
 - 3) should [BRA] demonstrate that such supplies are available in the future demonstration, the amount of water authorized for diversion and use may increase up to the appropriated maximum annual amounts in [Permit] Provision 1.A.

B. Discussion

1. **Interim Order Issue (4)(i): Recalculate the ALJs' proposed four Demand Scenarios for the Use Appropriations by adding back the 14% reductions to each level in [Permit] Paragraph 1.A.**

At first blush, this would appear to be a simple mathematical step. A number of parties, however, raise issues that must be addressed. In the PFDR, the ALJs recommended reducing each Demand Level by 14%, such that the four appropriation amounts in paragraph 1.A of the Proposed Permit would be as follows:

- Demand Level A: 328,068 AFY;
- Demand Level B: 296,378 AFY;
- Demand Level C: 443,853 AFY; and
- Demand Level D: 413,035 AFY.⁸⁶

BRA now proposes restoring the 14%, such that the appropriation amounts in paragraph 1.A would be:

- Demand Level A: 381,068 AFY;
- Demand Level B: 344,625 AFY;
- Demand Level C: 516,955 AFY; and
- Demand Level D: 482,035 AFY.⁸⁷

The ED agrees with the approach.⁸⁸

FBR argues that the approach taken in the PFDR, whereby each appropriation amount is reduced by 14% in paragraph 1.A, should remain in effect.⁸⁹ Because this is contrary to the terms of the Interim Order, the ALJs reject this argument.

As explained above, Dow takes the position that the amounts of BRA's own return flows and others' return flows cannot be calculated from the evidence in the record. Thus, Dow would use, for the four appropriation amounts in paragraph 1.A, the amounts shown for Demand Level Scenarios 1, 4, 7, and 10, which represent the appropriation amounts with no return flows:

⁸⁶ PFDR at 274.

⁸⁷ BRA Proposed Stipulations at 1 and Proposed Permit at 4-5; BRA Initial Brief at 2.

⁸⁸ ED Initial Brief at 1.

⁸⁹ FBR Initial Brief at 2-3, 5-7.

- Demand Level A: 354,081 AFY;
- Demand Level B: 304,793 AFY;
- Demand Level C: 477,774 AFY; and
- Demand Level D: 424,361 AFY.⁹⁰

Alternatively, Dow would subtract BRA's own return flows, and then have the remainder broken into two subparts: (1) the amount BRA may appropriate from surface waters, and (2) the amount BRA may appropriate from others' return flows. Thus, with the restoration of the 14%, the appropriation amounts in paragraph 1.A would be as follows, according to Dow:

- Demand Level A: 283,660 AFY from unappropriated surface water, plus 50,076 AFY from others' return flows;
- Demand Level B: 247,217 AFY from unappropriated surface water, plus 50,076 AFY from others' return flows;
- Demand Level C: 419,587 AFY from unappropriated surface water, plus 50,076 AFY from others' return flows; and
- Demand Level D: 384,627 AFY from unappropriated surface water, plus 50,076 AFY from others' return flows.⁹¹

As explained above, the ALJs have already concluded that the amounts of BRA's return flows and others' return flows can be determined from the evidence in the record. For this reason, the ALJs conclude that the best approach for achieving the Commission's directive in the Interim Order is to: (1) restore the 14% to each of the Demand Levels approved in the PFDR, and then (2) subtract the amount of BRA's own return flows (47,332 acre-feet) from each of those Demand Levels. The result would be the appropriation amount for each Demand Level. For the sake of clarity, the ALJs further recommend adding a statement identifying the portion of

⁹⁰ Dow Initial Brief at 29.

⁹¹ Dow Initial Brief at 12; Dow Proposed Permit at 4-6.

each appropriation amount that consists of others' return flows. Thus, the appropriation amount for each demand level would be as follows:

- Demand Level A: 333,736 AFY, of which 50,076 AFY is derived from others' return flows;
- Demand Level B: 297,293 AFY, of which 50,076 AFY is derived from others' return flows;
- Demand Level C: 469,623 AFY, of which 50,076 AFY is derived from others' return flows; and
- Demand Level D: 434,703 AFY, of which 50,076 AFY is derived from others' return flows.

The exact wording proposed by the ALJs can be found in the attached Proposed Order.

2. **Interim Order Issue (4)(ii)(1): Redraft [Permit] Special Condition(s) in 5.D. in a manner that directs BRA's WMP to immediately reduce the authorized diversion and use of the maximum annual authorized appropriation by the ALJs' proposed 14% reduced appropriation levels under the four Demand Level scenarios due to sedimentation in the system reservoirs.**

Because the 14% reduction is no longer accomplished in the appropriation section of the permit, it must be implemented elsewhere. BRA proposes adding the following as a new paragraph 5.D.5.a to the Proposed Permit:

- (a) Permittee's diversion and use under this permit and WMP shall be immediately reduced by fourteen percent of the amounts authorized in Paragraph 1.A. USE due to sedimentation in Permittee's reservoirs, as follows:
 - (1) not to exceed 327,718 acre-feet per year at all times prior to: (1) an expansion of the Comanche Peak Nuclear Power Plant (CPNPP) in a manner that results in the plant needing at least 90,000 acre-feet per year of additional water; and (2) the point when the ports are closed on the dam impounding Allens Creek Reservoir.

- (a) 47,332 acre-feet of the total amount is BRA's own return flows under Texas Water Code § 11.042(b) and (c); and
- (b) 50,076 acre-feet of the total amount is the return flows of others under Texas Water Code § 11.046(c) and § 11.121 and is subject to Special Condition 5.A.3.⁹²

Similar verbiage would be added for the other three demand scenarios. In addition, and consistent with the ALJs' recommendation in their September 23, 2015 letter responding to the parties' exceptions to the PFDR, BRA proposes additional verbiage which would limit, by 14%, total authorized diversions within each river reach. Specifically, BRA proposes that a new paragraph should be added at the bottom of page 9 in the WMP which reads as follows:

Subject to Special Condition 5.D.5.b, the maximum annual use for each reach is limited to 86% of the largest maximum annual diversion amount under the "SysOp" for that reach in Tables G.3.14 through G.3.25 of Appendix G of the WMP Technical Report for the firm appropriation demand scenario that is applicable during the year in which water is diverted, or 1,460 acre-feet, whichever is greater.⁹³

The ED agrees with these recommendations.⁹⁴ Dow agrees that the 14% reduction should also apply to total authorized diversions within reach.⁹⁵

Dow argues that because the 14% reduction was based on storage lost to sedimentation in reservoirs, the reduction should properly only apply to BRA's authorization to appropriate surface waters, but should not apply to BRA's authorization to appropriate others' return flows or to reuse its own return flows.⁹⁶ FBR agrees.⁹⁷ Dow argues, therefore, that the 14% was

⁹² BRA Initial Brief at BRA Proposed Revised Permit at 11-12.

⁹³ BRA Proposed Stipulations at 1; BRA Initial Brief at Proposed Order at 29.

⁹⁴ ED Proposed Stipulations at 1.

⁹⁵ Dow Initial Brief at 13.

⁹⁶ Dow Initial Brief at 12.

⁹⁷ FBR Reply Brief at 6-7.

improperly calculated in the PFDR, and that the proper amount of the 14% reduction is not knowable—either for the total appropriation amounts, or for the diversion amounts per reach—based on the evidence in the record. Thus, Dow contends “the BRA permit, as anticipated by the TCEQ Commissioners, cannot be granted under the holdings of the TCEQ Commissioners in the Interim Order.”⁹⁸ The ED does not disagree with the point, but argues that it is beyond the scope of the remand.⁹⁹ The ALJs agree that the argument is beyond the scope of the remand.

The ALJs conclude that the verbiage proposed by BRA largely achieves the Commission’s objectives. However, the ALJs have modified the verbiage so that BRA’s own return flows are not considered a part of the appropriation amount in the Proposed Permit. For example, the 327,718 acre-feet set out in BRA’s proposed new Section 5.A.5.a would be reduced to 287,013 acre-feet.¹⁰⁰ The exact wording proposed by the ALJs can be found in the attached Proposed Order.

3. Interim Order Issues (4)(ii)(2) and (3): Redraft Proposed Permit Special Conditions in 5.D. in a manner that authorizes BRA to demonstrate that it has additional sources of supply sufficient to offset the 14% reduction due to sedimentation; and, if the demonstration is made, increases the amount of water authorized for diversion and use up to the appropriated amounts in Permit Provision 1.A.

BRA proposes adding the following as a new section 5.D.5.b to the Proposed Permit:

(b) If Permittee, as a subsequent major amendment of the WMP, is able to demonstrate the availability of sufficient additional sources of supply to offset these reductions in storage capacity, the amount of water authorized for diversion and use may increase up to the appropriated amount in Use Paragraph 1.A.¹⁰¹

⁹⁸ Dow Reply Brief at 11; *see also* Dow Initial Brief at 12-14.

⁹⁹ ED Reply Brief at 4.

¹⁰⁰ $(381,068 - 47,332) \times 0.86 = 287,013$.

¹⁰¹ BRA Initial Brief at BRA Proposed Revised Permit at 11-12.

BRA points out that, with this verbiage, BRA would be able to increase its authorized use only through a major amendment to the WMP, thus ensuring opponents an opportunity for a contested case hearing on the issue.¹⁰² The ED agrees with this approach.¹⁰³

Dow argues that the range of reasons to restore the 14% ought to be expanded beyond solely BRA demonstrating that it has obtained “sufficient additional sources of supply.” Thus, Dow would also allow BRA to use the 14% if it demonstrates “other changes to the system to offset [the] reductions in storage capacity.”¹⁰⁴ The ALJs reject this argument for two reasons. First, it runs counter to the specific language asked for by the Commission. Second, the ALJs believe that the phrase “additional sources of supply” is generic enough that it encompasses a multitude of possible strategies, including changes to the system to offset reductions.

Dow also worries that that the verbiage proposed would authorize additional sources of supply to directly counter (on a one-to-one basis) the loss of storage capacity due to sedimentation.¹⁰⁵ FBR worries that there is no evidence to support restoring the 14% reduction.¹⁰⁶ The ALJs believe these issues need not be resolved here, but would be the kinds of issues that could be addressed in any future contested case hearing in which BRA seeks to restore the 14%. FBR also believes the verbiage proposed by BRA “clearly attempts to limit the scope of the issues” in any future hearing to amend the WMP and restore the 14%.¹⁰⁷ The ALJs disagree and believe that the scope of issues for any future contested case to amend the WMP should be decided in that proceeding, not here. As shown in the attached proposed order, the ALJs recommend using the language proposed by BRA.

¹⁰² BRA Initial Brief at 2.

¹⁰³ ED Initial Brief at 5-6.

¹⁰⁴ Dow Initial Brief at 14, Proposed Permit at 12.

¹⁰⁵ Dow Initial Brief at 14.

¹⁰⁶ FBR Initial Brief at 3-5.

¹⁰⁷ FBR Reply Brief at 7.

IV. RECOMMENDATIONS

The ALJs recommend that the Commission adopt the attached Proposed Order; allocate the entire second hearing transcript cost of \$11,052.50 to BRA; partially grant BRA's Application; and issue to BRA the attached SysOp Permit, derived from BRA Ex. 132B, with the changes listed in the Proposed Order.¹⁰⁸ The ALJs also recommend that the Commission authorize the ED to make changes to the permit and the WMP to conform to the Final Order the Commission issues. Due to the large number of overlapping changes, the attached Proposed Order does not highlight the differences between the version now recommended and the earlier version attached to the PFDR.

SIGNED June 3, 2016.



**WILLIAM G. NEWCHURCH
ADMINISTRATIVE LAW JUDGE
STATE OFFICE OF ADMINISTRATIVE HEARINGS**



**HUNTER BURKHALTER
ADMINISTRATIVE LAW JUDGE
STATE OFFICE OF ADMINISTRATIVE HEARINGS**

¹⁰⁸ For ease of reference, in addition to the changes to the Proposed Permit recommended in this Supplement to the PFDR, all permit changes recommended in the PFDR are included in the attached Proposed Order.

**BRA Alternative Version Draft Permit (BRA Version)
- Post WMP (February 24, 2015)**

Reporter Copy

WATER USE PERMIT

PERMIT NO. 5851	TYPE §§ 11.121, 11.042, 11.085, & 11.1381
Permittee: Brazos River Authority	Address: P.O. Box 7555 Waco, Texas 76714-7555
Filed: October 15, 2004	Granted:
Purposes: Domestic, Municipal, Agricultural, Industrial, Mining, and Recreation	Counties: Parmer, Castro, Swisher, Bailey, Lamb, Hale, Floyd, Cochran, Hockley, Archer, Lubbock, Crosby, Baylor, Dickens, King, Knox, Jack, Terry, Lynn, Mitchell, Chambers, Young, Garza, Throckmorton, Kent, Haskell, Stonewall, Parker, Palo Pinto, Dawson, Scurry, Borden, Fisher, Stephens, Jones, Shackelford, Johnson, Hood, Nolan, Erath, Eastland, Taylor, Callahan, Somervell, Hill, Comanche, Bosque, Brown, Freestone, Hamilton, McLennan, Limestone, Mills, Coryell, Leon, Falls, Lampasas, Robertson, Bell, Madison, Milam, Burnet, Brazos, Grimes, Williamson, Burleson, Travis, Lee, Washington, Bastrop, Fayette, Waller, Harris, Austin, Colorado, Fort Bend, Galveston, Matagorda, Wharton, and Brazoria
Watercourses: Multiple Tributaries of the Brazos River and the Brazos River	Watersheds: Brazos River Basin, Trinity River Basin, Red River Basin, Colorado River Basin, San Jacinto River Basin, San Jacinto-Brazos Coastal Basin, Brazos-Colorado Coastal Basin, Lavaca River Basin, Guadalupe River Basin

WHEREAS, the Brazos River Authority, Applicant, owns the water rights and reservoirs authorized by Certificate of Adjudication (Certificate) No. 12-5155 (Possum Kingdom Lake), Certificate No. 12-5156 (Lake Granbury), Certificate No. 12-5165 (Lake Limestone), and Water Use Permit No. 2925, as amended, (Allens Creek Reservoir in conjunction with the Texas Water Development Board and the City of Houston); and

WHEREAS, Applicant also owns the water rights and has contracts with the United States Army Corps of Engineers for storage authorized by Certificate No. 12-5157 (Lake Whitney), Certificate No. 12-5158 (Lake Aquilla), Certificate No. 12-5159 (Lake Proctor), Certificate No. 12-5160 (Lake Belton), Certificate No. 12-5161 (Lake Stillhouse Hollow), Certificate No. 12-5162 (Lake Georgetown), Certificate No. 12-5163 (Lake Granger), and Certificate No. 12-5164 (Lake Somerville); and

WHEREAS, Applicant also owns the water rights authorized by Certificate Nos. 12-5166, as amended, and 12-5167, which authorize various uses of water within Applicant's other certificates and permits; and

WHEREAS, Applicant is authorized, pursuant to the 1964 System Operation Order (System Order), as amended, to manage and operate its tributary reservoirs as elements of a system, coordinating releases and diversions from the tributary reservoirs with releases and diversions from Applicant's mainstem reservoirs to minimize waste, and to conserve water in reservoirs in which the supply is short by making releases from tributary reservoirs in which the supply is more abundant; and

WHEREAS, Applicant's service area includes all or part of the following counties: Parmer, Castro, Swisher, Bailey, Lamb, Hale, Floyd, Cochran, Hockley, Archer, Lubbock, Crosby, Baylor, Dickens, King, Knox, Jack, Terry, Lynn, Mitchell, Chambers, Young, Garza, Throckmorton, Kent, Haskell, Stonewall, Parker, Palo Pinto, Dawson, Scurry, Borden, Fisher, Stephens, Jones, Shackelford, Johnson, Hood, Nolan, Erath, Eastland, Taylor, Callahan, Somervell, Hill, Comanche, Bosque, Brown, Freestone, Hamilton, McLennan, Limestone, Mills, Coryell, Leon, Falls, Lampasas, Robertson, Bell, Madison, Milam, Burnet, Brazos, Grimes, Williamson, Burleson, Travis, Lee, Washington, Bastrop, Fayette, Waller, Harris, Austin, Colorado, Fort Bend, Galveston, Matagorda, Wharton, and Brazoria; and

WHEREAS, Applicant initially applied for a new appropriation of state water in the amount of 421,449 acre-feet per year for multiple uses, including domestic, municipal, agricultural, industrial, mining, and other beneficial uses on a firm basis in the Brazos River Basin. The amount of the new appropriation of water included the current and future return flows requested in Applicant's application. Applicant also requested an appropriation of an interruptible supply of 670,000 acre-feet of water per year utilizing 90,000 acre-feet of water per year of the firm supply plus other unappropriated flows. The entire annual amount of 1,001,449 acre-feet of water (331,449 acre-feet of firm water and 670,000 acre-feet of interruptible water) is available only if all of it is diverted at the mouth of the Brazos River, and can only be made available by Applicant through the system operation of its water rights; and

WHEREAS, Applicant amended its initial application with the filing of its Water Management Plan and applied for this Water Use Permit to authorize:

- A new appropriation of non-firm state water in the amount of 1,001,449 acre-feet of water per year for multiple uses, including domestic, municipal, agricultural, industrial, mining, and other beneficial uses in the Brazos River Basin. This new appropriation of water can only be made available by Applicant through the system operation of its water rights, with the maximum amount of the water being available at the mouth of the Brazos River. To the extent water is diverted upstream, the amount of the water available under the new

appropriation downstream is reduced and will itself vary depending upon the location of its diversion and use;

- Diversion of the water authorized by this permit from: (i) the existing diversion points authorized by Applicant's existing water rights; (ii) the Brazos River at the Gulf of Mexico; and (iii) at such other diversion points that are identified and included in Applicant's Water Management Plan (WMP);
- An exempt interbasin transfer authorization to transfer and use, on a firm and non-firm basis, such water in the adjoining San Jacinto-Brazos Coastal Basin and the Brazos-Colorado Coastal Basin, and to transfer such water to any county or municipality or the municipality's retail service area that is partially within the Brazos River Basin for use, on a firm and non-firm basis, in that part of the county or municipality and the municipality's retail service area not within the Brazos River Basin;
- An appropriation of return flows (treated sewage effluent and brine bypass/return) to the extent that such return flows continue to be discharged or returned into the bed and banks of the Brazos River, its tributaries, and Applicant's reservoirs. The appropriation of return flows would be subject to interruption by direct reuse or termination by indirect reuse within the discharging entity's city limits, extraterritorial jurisdiction, or contiguous water certificate of convenience and necessity boundary;
- Operational flexibility to (i) use any source of water available to Applicant to satisfy the diversion requirements of senior water rights to the same extent that those water rights would have been satisfied by passing inflows through Applicant's reservoirs on a priority basis; and (ii) release, pump and transport water from any of Applicant's reservoirs for subsequent storage, diversion and use throughout Applicant's service area. (Applicant's "service area" includes all counties listed above);
- Use of the bed and banks of the Brazos River, its tributaries and Applicant's reservoirs for the conveyance, storage, and subsequent diversion of (i) the appropriated water; (ii) waters that are being conveyed via pipelines and subsequently discharged into the Brazos River, its tributaries or stored in Applicant's reservoirs; (iii) surface water imported from areas located outside the Brazos River Basin for subsequent use; (iv) in-basin surface water and groundwater subject to Applicant's control; (v) waters developed from future Applicant projects; and (vi) reuse of surface and groundwater based return flows appropriated in this permit;
- A term permit, pursuant to Texas Water Code § 11.1381, for a term of thirty (30) years from the issued date of this permit, or until the ports are closed on the dam impounding Allens Creek Reservoir, whichever is earlier, to allow Applicant to use the water appropriated under Water Use Permit No. 2925, as amended, until the construction of the Allens Creek Reservoir. Applicant requested a term authorization to impound, divert, and use not to exceed 202,650 acre-feet of water per year at the Gulf of Mexico; and

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

WHEREAS, the Commission adopted environmental flow standards for the Brazos River Basin on February 12, 2014, which are required to be followed in any water right permit for new appropriation issued following that adoption; and

WHEREAS, based on the Executive Director's recommendations, the Commission finds that in order to protect senior and superior water rights owners, special conditions should be included in the permit; and

WHEREAS, to avoid ambiguities between this system operation authorization and Applicant's previous system operation authorizations reflected by the System Order and existing permits, based on the Executive Director's recommendations, the Commission concludes that this permit is subject to all provisions included in the Commission's July 23, 1964 System Order, as amended, authorizing system operation of certain reservoirs in the Brazos River Basin, and to all terms and conditions of Applicant's authorizations in Certificates Nos. 12-5155, 12-5156, 12-5165, 12-5157, 12-5160, 12-5159, 12-5164, 12-5161, 12-5163, 12-5162, 12-5158, 12-5166 and 12-5167 and Water Use Permit No. 2925, as amended, except to the extent specifically provided otherwise by conditions in this permit regarding the total amount of water appropriated and available for storage, use and diversion and purpose of use, and as may be modified in the future by Commission approval of amendments to Applicant's WMP or these water rights; and

WHEREAS, the application supporting this permit is subject to the Texas Coastal Management Program (CMP) and must be consistent with the CMP goals and policies; and

WHEREAS, the Commission finds that the issuance of this permit is consistent with the goals and policies of the Texas CMP; and

WHEREAS, this permit, if granted, is subject to the requirements and orders of the Brazos Watermaster; 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 permit;

NOW, THEREFORE, Water Use Permit No. 5851 is issued to the Brazos River Authority (Permittee), subject to the following terms and conditions:

1. USE

A. APPROPRIATION

Permittee is authorized to divert and use not to exceed 516,955 acre-feet of water per year for domestic, municipal, agricultural, industrial, mining and recreation use, as further described and defined in the Water Management Plan (WMP), within its service area, subject to special conditions.

B. USE OF BED AND BANKS

Permittee is authorized to use the bed and banks of the Brazos River below Possum Kingdom Lake, the Brazos River tributaries and Permittee's authorized reservoirs for the conveyance, storage, and subsequent diversion of the water authorized herein, subject to identification of specific losses and to special conditions.

C. INTERBASIN TRANSFER

Permittee is hereby granted an exempt interbasin transfer authorization to transfer and use the water authorized herein in Permittee's service area in the adjoining San Jacinto-Brazos Coastal Basin and the Brazos-Colorado Coastal Basin and to transfer such water to the part of the geographic area of any county or municipality or a retail public utility's retail service area that is partially within the Brazos River Basin, San Jacinto-Brazos Coastal Basin, or Brazos-Colorado Coastal Basin for use on a firm and non-firm basis in that part of the geographic area of the county or municipality or that contiguous part of the utility's retail service area within the Trinity, Red, Colorado, Guadalupe, Lavaca and San Jacinto River Basins.

D. RETURN FLOWS

Permittee is authorized to impound, divert and use return flows discharged into the Brazos River Basin subject to special conditions to protect water rights granted based on the presence of those return flows as well as other senior rights. The storage and diversion of return flows is subject to the requirements set out in Special Condition 5.A. and to environmental flow conditions set out in Special Condition 5.E.

E. TERM AUTHORIZATION

Pursuant to Texas Water Code § 11.1381, for a term of thirty (30) years from the issued date of this permit, or until the ports are closed on the dam impounding Allens Creek Reservoir, whichever is earlier, Permittee may use the water appropriated under Water Use Permit No. 2925, as amended. As part of the amount appropriated in Paragraph 1.A., during the term of this authorization Permittee may divert and use not to exceed 202,650 acre-feet of water per year, subject to Special Conditions 5.C.1-5.

2. DIVERSION

Permittee is authorized to divert and use the water authorized by this permit as follows:

A. POINTS

- 1) At the diversion points authorized by Permittee's existing water rights, as amended.
- 2) At the mouth of the Brazos River at the Gulf of Mexico at Latitude 28.8783°N, Longitude 95.379111°W in Brazoria County.
- 3) At other such locations identified and included in Permittee's WMP.

B. RATES

- 1) At the diversion rates authorized by Permittee's Certificates of Adjudication and Water Use Permit, No. 2925, as amended, authorizing each of the reservoirs comprising the system operation as defined in this permit; and

2) At rates specified in Permittee's WMP.

3. PRIORITY

The priority date for the rights authorized by this permit, including diversion of return flows, is October 15, 2004.

4. CONSERVATION

A. Permittee shall implement water conservation plans that provide for the utilization of those reasonable practices, techniques, and technologies that will reduce on a per unit basis the consumption of water, prevent or reduce the loss or waste of water, improve the efficiency in the use of water, increase the recycling and reuse of water, and prevent the pollution of water, so that a water supply is made available for future or alternative uses. The practices, techniques, and technologies used shall be designed to achieve a level of efficiency of use that is equal to or greater than the level provided for in Permittee's most recent water conservation plans on file with the Commission as of the date of the issuance of this permit. Such plans shall include a requirement that in every wholesale water supply contract entered into on or after the date of this permit, including any contract extension or renewal, each successive wholesale customer develop and implement conservation measures meeting the requirements of this provision. 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 is required to implement water conservation measures meeting the requirements of this provision.

B. At least once every ten years after the issuance date of this permit and in connection with an application for reconsideration or amendment of the WMP, Permittee shall submit for review and approval updated water conservation plans and drought contingency plans demonstrating compliance with the requirements of the Commission rules then in effect for applications for new water rights and with the requirements of this Paragraph 4, applied as of the date of the filing of the application under consideration.

5. SPECIAL CONDITIONS

Unless expressly otherwise provided, the requirements of the Special Conditions of this permit apply only to diversion and storage under the authority of this permit and do not address or limit diversion or storage of water authorized by other water rights held by Permittee.

A. SPECIAL CONDITIONS RELATIVE TO USE OF RETURN FLOWS

1) Permittee's authorization to divert and use return flows under this permit is limited to return flows that are authorized for discharge by Texas Pollutant Discharge Elimination System (TPDES) Permits in effect as of the issuance date of this permit, and as authorized by future modifications of this permit or the WMP.

2) Permittee shall maintain a record of return flows as a part of its accounting plan required by Special Conditions 5.C and 5.D (return flow accounting plan). The return flow accounting plan must account, by source, for all return flows

discharged. The return flow accounting plan shall include amounts discharged by outfall. Computation of the amount of additional water supply available due to return flows actually discharged is determined in the WMP, taking into account environmental flow conditions and demands of senior water rights. Permittee's use of additional water supply attributable to the presence of return flows is limited to the amount shown to be available, based upon amounts discharged as determined in the WMP. The return flow accounting plan shall be included as part of Permittee's accounting/delivery plan.

- 3) Permittee's storage, diversion and use of that portion of the appropriation based on return flows is dependent upon potentially interruptible return flows. Permittee's storage, diversion and use of that portion of the appropriation based on return flows will be interrupted by direct reuse or will be terminated by indirect reuse within the discharging entity's corporate limits, extraterritorial jurisdiction, or contiguous water certificate of convenience and necessity boundary, provided the discharging entity has applied for and been granted authorization to reuse the return flows.
- 4) Permittee's storage, diversion and use of groundwater based return flows is subject to interruption by direct reuse or indirect reuse upon issuance of a bed and banks authorization pursuant to Texas Water Code § 11.042(b) by the Commission to the discharging entity.
- 5) Permittee shall, at a minimum, use the return flow (effluent discharges) volumes reported monthly to the Commission by wastewater dischargers that have permitted discharges of greater than or equal to one (1) million gallons per day, and by other wastewater dischargers as provided by the accounting plan, to verify the available return flows for the accounting plan.

B. SPECIAL CONDITIONS RELATIVE TO USE OF BED AND BANKS

- 1) The use of the bed and banks of Allens Creek from below Allens Creek Reservoir to the Brazos River is not authorized until Permittee applies for and is granted an amendment to Water Use Permit No. 2925B authorizing such use.
- 2) Permittee is authorized to use the following reaches, authorized in Permittee's certificates and amendments, for conveyance of water previously appropriated to Permittee and water authorized by this permit, downstream for diversion within these reaches in accordance with the WMP:
 - a. Brazos River from Possum Kingdom Lake to the Gulf of Mexico;
 - b. Leon River from Lake Proctor to the confluence with the Little River;
 - c. Lampasas River from Lake Stillhouse Hollow to the confluence with the Little River;
 - d. Little River from the junction of Leon and Lampasas Rivers to the confluence with the Brazos River;
 - e. Yegua Creek from Lake Somerville to the confluence with the Brazos River;
 - f. Navasota River from Lake Limestone to the confluence with the Brazos River;
 - g. San Gabriel River from Lake Granger to the confluence with the Little River and downstream to its confluence with the Brazos River;

- h. North Fork San Gabriel River from Lake Georgetown to the confluence with the San Gabriel River, to its confluence with the Little River and downstream to its confluence with the Brazos River;
 - i. Aquilla Creek from Lake Aquilla downstream to its confluence with the Brazos River; and
 - j. Allens Creek, following construction of Allens Creek Reservoir, downstream from Allens Creek Reservoir to its confluence with the Brazos River, subject to Special Condition 5.B.1.
- 3) Permittee shall maintain an accounting/delivery plan that describes the procedure to estimate daily deliveries of water using the bed and banks identified in Special Condition 5.B.2. above. This procedure should be in electronic format and detail by source, type and priority date, the amounts to be conveyed and delivered, losses associated with the conveyance, specific points of diversion, associated travel times, and times of commencement and termination of transit for conveyed waters. Documentation of actual deliveries as well as the accounting/delivery plan shall be maintained by Permittee in electronic format and made available to the general public during normal business hours and to the Executive Director upon request. Modifications to the accounting/delivery plan must be approved by the Executive Director.
- 4) Before using the bed and banks of streams and tributaries in the Brazos River Basin not identified in the WMP for conveyance of water appropriated under this permit, or other sources available to Permittee, Permittee shall obtain approval by the Commission of an application by Permittee that identifies specific sources and types of water, specific points of discharge and diversion, and conveyance and other losses, and that satisfies the requirements of Texas Water Code § 11.042.

C. SPECIAL CONDITIONS RELATIVE TO APPROPRIATION

- 1) Permittee shall maintain an accounting/delivery plan as part of its WMP. Permittee shall maintain the accounting/delivery plan in electronic format and make it available to the general public during normal business hours and to the Executive Director upon request. Modifications to the plan must be approved by the Executive Director.
- 2) Permittee may not exercise a priority call on water rights in the Brazos River Basin with priority dates senior to October 15, 2004 for purposes of refilling storage in Permittee's system reservoirs where Permittee's system reservoir storage was emptied by diversion of water under this permit. The Commission shall consider the amount of water impounded at the October 15, 2004 priority date, consistent with the WMP and approved accounting plans, in analyses of future applications to appropriate water from the Brazos River Basin.
- 3) Permittee may use any source of water available to Permittee to satisfy the diversion requirements of senior water rights to the same extent that those water rights would have been satisfied by passing inflows through the Permittee's system reservoirs on a priority basis. Permittee's use of water previously stored in Permittee's reservoirs or available for appropriation by Permittee's senior water rights shall be documented in the accounting/delivery plan. Use of this option shall not cause Permittee to be out of compliance with the accounting/delivery plan or Special Condition 5.C.2.

- 4) Permittee may divert water from storage in its permitted reservoirs and store that water in Permittee's other reservoirs for use within Permittee's service area so long as all diversions and storage are included in the accounting/delivery plan.
- 5) Permittee shall maintain, at a minimum, the release schedule from Possum Kingdom Lake at or above the appropriate value in the following table, except when inflow to Possum Kingdom Lake is less than the defined release value. In such instances, the release may be adjusted downward to match inflow. Additionally, temporary deviations from this release requirement may be made to accommodate maintenance or operational issues associated with Possum Kingdom Lake's Morris Sheppard Dam:

Reservoir Elevation	March – June	July – September	October - February
Above 994.5 msl	100 cfs	75 cfs	50 cfs
990 msl – 994.5 msl	50 cfs	37.5 cfs	25 cfs
Below 990 msl	Leakage (≈20 cfs)	Leakage (≈20 cfs)	Leakage (≈20 cfs)

D. WATER MANAGEMENT PLAN SPECIAL CONDITIONS

- 1) Permittee shall maintain the Water Management Plan (WMP), which is attached to and incorporated into this permit, and which shall include, in addition to the specific requirements listed in Special Condition 5.D.4, such studies and other information as may be required by the Commission to demonstrate Permittee's compliance with and its ability to comply with all of the Special Conditions included in this permit.
- 2) Proceedings to consider any major amendment of the WMP shall be pursuant to contested case procedures. Any proceeding to consider a major amendment of the WMP shall be preceded by notice and opportunity to request a hearing, in accordance with the Commission's regulations applicable to water rights permitting proceedings.
- 3) At a minimum, every ten years after the issued date of this permit, Permittee shall submit to the Executive Director an application for reconsideration or amendment of the WMP.
- 4) Permittee shall maintain an approved WMP that includes the following:
 - a. Accounting/delivery plans;
 - b. Environmental flow conditions that comply with adopted environmental flow standards for the Brazos River Basin; and
 - c. Maximum diversion rates for diversions of water authorized in this permit, and a method to determine the amounts of firm and non-firm water available at any location, subject to the limitations on permit amounts in this permit.

- 5) In the first reconsideration or major amendment of the WMP after issuance of this permit, Permittee shall demonstrate that it has additional sources of supply sufficient to offset any reduction in its system reservoirs due to sedimentation or shall, at a minimum, provide evidence demonstrating that Permittee has worked diligently and continuously to develop such alternate sources of supply. Should Permittee fail to either demonstrate that such supplies are available or that it has pursued diligent development of those supplies, the amount of water authorized for use under this permit may be reduced.

E. ENVIRONMENTAL FLOWS SPECIAL CONDITION

Environmental flow conditions for this permit shall be included in the WMP, and are subject to adjustment by the Commission pursuant to Texas Water Code-§11.147(e-1)-and 30 TAC §298.25.

F. BRAZOS WATERMASTER SPECIAL CONDITIONS

Upon implementation of the Brazos Watermaster Program, the diverter, as defined in 30 TAC §304.3(9), shall comply the rules and orders of the watermaster. Specifically, the diverter shall comply with the following special conditions pursuant to 30 TAC §304, Subchapter B.

- 1) Diverter shall install a measuring device which accounts for, within 5% accuracy, the quantity of water diverted from the diversion point. Diverter shall allow representatives of the TCEQ Brazos Watermaster reasonable access to the property to inspect the measuring device.
- 2) Diverter shall contact the Brazos Watermaster prior to diversion of water authorized by this permit.

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

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

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

This permit 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

ISSUED:

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



**AN ORDER GRANTING IN PART THE AMENDED APPLICATION BY THE BRAZOS
RIVER AUTHORITY FOR WATER USE PERMIT NO. 5851
AND APPROVING ITS WATER MANAGEMENT PLAN;
TCEQ DOCKET NO. 2005-1490-WR;
SOAH DOCKET NO. 582-10-4184**

On January 20, 2016, the Texas Commission on Environmental Quality (Commission or TCEQ) considered an amended application by the Brazos River Authority (BRA or Applicant) for Water Use Permit No. 5851 and its incorporated Water Management Plan (WMP). A proposal for decision on remand (PFDR) was presented by William G. Newchurch and Hunter Burkhalter, Administrative Law Judges (ALJs) with the State Office of Administrative Hearings (SOAH), who conducted hearings concerning the original application, the amended application, and the WMP on May 9–20, 31, and June 2, 2011, and February 17–20, 23–26, 2015, in Austin, Texas. After considering the ALJs' PFDR and Proposed Order, the Commission issued an Interim Order dated January 29, 2016, by which the Commission remanded this matter to SOAH, in the form of a limited remand, for the ALJs and the parties to address implementation of the Commission's decisions on two issues, based on the existing evidentiary record.

On June 3, 2016, the ALJs submitted to the Commission their Supplement to the PFDR and a new Proposed Order, consistent with the Commission's instructions.

On _____, after considering the Supplement to the PFDR and the ALJs' new Proposed Order, the Commission adopts the following findings of fact and conclusions of law:

I. FINDINGS OF FACT

Procedural History

1. On June 25, 2004, the Brazos River Authority (BRA or the Applicant) filed an application (Application No. 5851) for an appropriative water right.
2. Application No. 5851 was declared administratively complete by the Executive Director (ED) of the TCEQ on October 15, 2004, and was filed with the Office of Chief Clerk.
3. Notice of the application was issued by mail to all water right holders in the Brazos River Basin on April 22, 2005. Notice was published in 27 newspapers on May 11–13, 2005.
4. A public meeting on Application No. 5851 was held on May 17, 2005, in Waco, Texas. On May 4, 2006, the Executive Director of the TCEQ filed a written response to comments received at that meeting and written comments received after that meeting.
5. Numerous persons filed requests for a contested case hearing on the application. On May 5, 2010, the Commission issued an interim order granting hearing requests and referring this case to SOAH for a contested case hearing.
6. Notice of a preliminary hearing on the application before SOAH was issued by the Chief Clerk of the TCEQ on May 13, 2010.
7. The ALJs held the preliminary hearing on the application on June 7, 2010, in Austin, Texas. The ALJs issued Order No. 1 on June 8, 2010, memorializing the preliminary hearing, naming persons or entities admitted as a party to the proceeding, and setting a hearing schedule. In addition to the statutory parties, the following parties were named: Matthews Land and Cattle Company; Dow Chemical Company (Dow); Texas Westmoreland Coal Company; the City of Lubbock; Fort Bend County Levee Improvement District Nos. 11 and 15; Sienna Plantation Municipal Utility District (MUD) No. 1; the City of Bryan; the City of College Station; the Friends of the Brazos River; Helen Jane Vaughn; Lawrence Wilson; Mary Lee Lilly; the National Wildlife Federation (NWF); the Texas Parks and Wildlife Department (TPWD); the Gulf Coast Water Authority (GCWA); the City of Round Rock; Bradley B. Ware; Mike and George Bingham, William D. and Mary L. Carroll, Frasier Clark, and Robert Starks, who collectively aligned themselves as the Comanche County Growers (CCG).

8. In accordance with settlement agreements, Fort Bend County Levee Improvement District Nos. 11 and 15, Sienna Plantation MUD No. 1, Texas Westmoreland Coal Company, and Matthews Land and Cattle Company withdrew their protests and were formally dismissed as parties.
9. In accordance with settlement agreements, the City of Lubbock, the City of Bryan, the City of College Station, GCWA, and the City of Round Rock withdrew their protests, but remained parties to the proceeding.
10. The ALJs held the evidentiary hearing on Application No. 5851 on May 9-20, 31, and June 2, 2011, in Austin, Texas.
11. The record was closed on August 19, 2011, after the parties submitted written closing arguments and responses.
12. The ALJs issued a Proposal for Decision (PFD) on October 17, 2011; and the Commission considered Application No. 5851 and the PFD on January 25, 2012.
13. The Commission, after considering the PFD and Application No. 5851, issued an interim order dated January 30, 2012, that: (1) remanded Application No. 5851 to SOAH with instructions to abate the hearing to allow the Applicant to provide additional information to the Executive Director related to its permit application in the form of a WMP; (2) required the Applicant to submit its WMP to the Executive Director within 10 months of the date of the Commission's January 30, 2012 Interim Order; (3) provided the Executive Director with 7 months to review the WMP; (4) directed the ALJs to reopen the record upon completion of the Executive Director's review and compliance with additional application public participation requirements; (5) directed the ALJs to hold a hearing on the new information, including Application No. 5851 as modified by the WMP; and (6) directed the ALJs to issue a revised PFD and proposed order.
14. The Applicant prepared and filed its WMP on November 28, 2012, which was further revised on June 12, 2013. The Executive Director completed his review on June 28, 2013.
15. On July 3, 2013, the Chief Clerk of the TCEQ mailed the combined revised notice of Application No. 5851, a public meeting, and the preliminary hearing to the persons and entities on the mailing list for Application No. 5851 and to those persons and entities required to be mailed notice under 30 Texas Administrative Code § 295.153.
16. Between July 6 and July 12, 2013, the combined revised notice of Application No. 5851 was published in 35 newspapers of general circulation within the 81 counties that are within the Brazos River Basin.
17. The Commission conducted a public meeting regarding Application No. 5851 at the Midway Independent School District Performing Arts Center in Hewitt, Texas, on July 25, 2013, to receive public comment.

18. The ALJs convened a preliminary hearing on August 26, 2013, in Austin, Texas. The ALJs issued Order No. 18 on August 28, 2013, memorializing the preliminary hearing, naming additional persons and entities admitted as parties to the proceeding, and setting the hearing schedule for the second evidentiary hearing. In addition to the statutory parties, the following parties were named in this matter: Dow; the City of College Station; the City of Lubbock; the City of Bryan; Friends of the Brazos River, Helen Jane Vaughn, Lawrence Wilson, Mary Lee Lilly, Brazos River Alliance, Ken W. Hackett, and Joe Williams (collectively, FBR); NWF; TPWD; GCWA; Chisholm Trail Ventures, L.P.; George Bingham; Robert Starks; Frasier Clark; William D. and Mary Carroll; William and Gladys Gavranovic; Bradley B. Ware; NRG Texas Power, LLC (NRG); Friends of Lake Limestone and Mark Bissett; the City of Houston; Possum Kingdom Lake Association (PKLA); City of Round Rock; Mike Bingham; and the City of Granbury, Hood County, and Lake Granbury Waterfront Owners' Association (collectively, the Lake Granbury Coalition or LGC).
19. On October 21, 2013, the ALJs abated the matter and certified questions to the Commission regarding the applicability to Application No. 5851 of the environmental flow rules for the Brazos River Basin that the Commission would later adopt on February 12, 2014.
20. After considering the certified questions on December 11, 2013, the Commission issued its December 17, 2013 Interim Order stating that Texas Water Code § 11.147(e-3) required the environmental flow standards to be applied immediately to Application No. 5851 and remanding the case to SOAH.
21. On January 7, 2014, the ALJs issued a revised scheduling order (Order No. 22) that abated this matter until August 14, 2014, to allow the Applicant to revise its WMP and update its application to incorporate the environmental flow standards.
22. The Applicant submitted an updated WMP to the Executive Director on May 13, 2014, and the Executive Director completed his review of the application and updated WMP on August 18, 2014.
23. During the period leading up to the second evidentiary hearing, the following protesting parties withdrew their protests of Application No. 5851 and were granted the right to participate in this case only as non-aligned, interested parties: Chisholm Trail Ventures, L.P.; City of Houston; George Bingham; Robert Starks; Frasier Clark; William D. and Mary L. Carroll; PKLA; and NRG. Additionally, GCWA, Friends of Lake Limestone, Mark Bissett, and Joe Williams withdrew as parties.
24. The second evidentiary hearing on Application No. 5851 and its updated WMP was held on February 17-20 and 23-26, 2015, in Austin, Texas. William and Gladys Gavranovic, Bradley B. Ware, and Mike Bingham did not attend nor were they represented at the evidentiary hearing.

25. The ALJs issued a Proposal for Decision on Remand (PFDR) on July 17, 2015, and the Commission considered Application No. 5851 with the WMP, and the PFDR on January 20, 2016.
26. The Commission issued an Interim Order dated January 29, 2016, that: (1) remanded this matter to SOAH in the form of a limited remand, to clarify the existing record and allow the parties and the ALJs to implement the Commission's decisions on two issues—reservoir capacities and return flows—in the Special Conditions and WMP portions of the Proposed Permit recommended by the ALJs; (2) instructed the ALJs not to reopen the evidentiary record in addressing and making recommendations on these two remanded issues; (3) requested determinations and recommendations on revised permit and WMP terms to address the remanded issues; and (4) called for the ALJs to recommend the procedure to ensure WMP incorporation of the Commission's decisions, and the manner in which the remanded issues should be incorporated into the ALJs' Proposed Order and recommended Permit No. 5851.
27. Following extensive additional briefing by the parties on the two remanded issues, and pursuant to the schedule directed by the ALJs (Order No. 36) the ALJs issued a Supplement to the PFDR and a new Proposed Order on June 3, 2016.

Background

28. The Applicant owns the water rights and reservoirs authorized by Certificate of Adjudication (Certificate) No. 12-5155 (Possum Kingdom Lake), Certificate No. 12-5156 (Lake Granbury), Certificate No. 12-5165 (Lake Limestone), and Water Use Permit No. 2925 (Allens Creek Reservoir, which the Applicant owns in conjunction with the Texas Water Development Board and the City of Houston).
29. The Applicant also owns the water rights and has contracts with the United States Army Corps of Engineers for storage authorized by Certificate No. 12-5157 (Lake Whitney), Certificate No. 12-5158 (Lake Aquilla), Certificate No. 12-5159 (Lake Proctor), Certificate No. 12-5160 (Lake Belton), Certificate No. 12-5161 (Lake Stillhouse Hollow), Certificate No. 12-5162 (Lake Georgetown), Certificate No. 12-5163 (Lake Granger), and Certificate No. 12-5164 (Lake Somerville).
30. The Applicant owns the water rights authorized by Certificate Nos. 12-5166 and 12-5167, which authorize various uses of water within the Applicant's other certificates and permits.
31. The Applicant is currently authorized, pursuant to the 1964 System Operation Order, as amended, to manage and operate its tributary reservoirs as elements of a system, coordinating releases and diversions from the tributary reservoirs with releases and diversions from the Applicant's mainstem reservoirs to minimize waste, and to conserve water in reservoirs in which the supply is low by making releases from tributary reservoirs in which the supply is more abundant.

32. The TCEQ recently amended the Applicant's Excess Flows Permit (Certificate No. 12-0166) to include the diversion points for the proposed Allens Creek Reservoir.
33. The Applicant abandoned its Certificate No. 12-2939 that was associated with diversions for steam electric power generation downstream of Lake Belton.
34. TCEQ amended Permit No. 2925, the Allens Creek Reservoir water right, based on the statutory change in 2011 that modified the timeframe for construction of this new reservoir. The Allens Creek Reservoir must now be constructed by 2025.

Application No. 5851

35. The Applicant initially applied for new Water Use Permit No. 5851 (Permit No. 5851 or the System Operation Permit), with a priority date of October 15, 2004, to authorize a new appropriation of state water in the amount of 421,449 acre-feet per year (af/yr or AFY) in firm water and 670,000 af/yr in interruptible water for multiple uses, including domestic, municipal, agricultural, industrial, mining, recreation, and other beneficial uses on a firm basis in the Brazos River Basin.
36. The Applicant amended the application to include as a part of Permit No. 5851 the WMP and Technical Report and Appendices (collectively, the WMP), all of which would be incorporated into proposed Permit No. 5851.
37. The amended and updated Application No. 5851 seeks:
 - a. A new appropriation of non-firm state water in the amount of 1,001,449 af/yr of water at the Gulf of Mexico for multiple uses, including domestic, municipal, agricultural, industrial, mining, recreation, and other beneficial uses in the Brazos River Basin. This appropriation request was clarified during the 2015 hearing on the merits to be limited to the amount of water available as shown in the WMP. This new appropriation of water can only be made available by the Applicant through the system operation of its water rights. To the extent water is diverted upstream, the amount of the water available under the new appropriation downstream is reduced and will itself vary depending upon the location of its diversion and use;
 - b. Diversion of the water authorized by this permit from: (1) the existing diversion points authorized by the Applicant's existing water rights (including contractually authorized diversion points); (2) the Brazos River at the Gulf of Mexico; and (3) at such other diversion points that are identified and included in the Applicant's WMP;
 - c. An exempt interbasin transfer authorization to transfer and use, on a firm and non-firm basis, such water in the adjoining San Jacinto-Brazos Coastal Basin and the Brazos-Colorado Coastal Basin, and to transfer such water to any county or municipality or the municipality's retail service area that is partially within the

Brazos River Basin for use, on a firm and non-firm basis, in that part of the county or municipality and the municipality's retail service area not within the Brazos River Basin;

- d. An appropriation of return flows (treated sewage effluent and brine bypass/return) to the extent that such return flows continue to be discharged or returned into the bed and banks of the Brazos River, its tributaries, and the Applicant's reservoirs. The appropriation of return flows would be subject to interruption by direct reuse or termination by indirect reuse within the discharging entity's city limits, extraterritorial jurisdiction, or contiguous water certificate of convenience and necessity boundary;
 - e. Operational flexibility to: (1) use any source of water available to the Applicant to satisfy the diversion requirements of senior water rights to the same extent that those water rights would have been satisfied by passing inflows through the Applicant's reservoirs on a priority basis; and (2) release, pump, and transport water from any of the Applicant's reservoirs for subsequent storage, diversion, and use throughout the Applicant's service area;
 - f. Use of the bed and banks of the Brazos River, its tributaries, and the Applicant's reservoirs for the conveyance, storage, and subsequent diversion of: (1) the appropriated water; (2) waters that are being conveyed via pipelines and subsequently discharged into the Brazos River or its tributaries or stored in the Applicant's reservoirs; (3) surface water imported from areas located outside the Brazos River Basin for subsequent use; (4) in-basin surface water and groundwater subject to the Applicant's control; (5) waters developed from future Applicant projects; and (6) reuse of surface and groundwater-based return flows appropriated in this permit; and
 - g. A term permit, pursuant to Texas Water Code § 11.1381, for a term of 30 years from the issued date of the permit, or until the ports are closed on the dam impounding Allens Creek Reservoir, whichever is earlier, to allow the Applicant to use the water appropriated under Water Use Permit No. 2925, as amended, until the construction of the Allens Creek Reservoir. The Applicant requested the term permit to impound, divert, and use not to exceed 202,000 af/yr of water per year at the Gulf of Mexico.
38. The Applicant's amended application with the WMP:
- a. Includes TCEQ's adopted environmental flow standards;
 - b. Includes an updated BRA accounting plan for BRA reservoirs, stream reaches of the Brazos River and its tributaries where water will be delivered and/or water authorized under Permit No. 5851 will be diverted, application of the adopted environmental flow standards, and other reference and summary information;

- c. Specifies diversion points for the new appropriation as follows: (1) the diversion points authorized in BRA's existing water rights (including contractually authorized diversion points); (2) the Brazos River's outlet at the Gulf of Mexico; and (3) specified diversion points and reaches identified in BRA's WMP and associated technical documents, including accounting plans. Diversion rates at the diversion reaches are set out in BRA's WMP and associated technical documents, including accounting plans; and
 - d. Removes the request in Application No. 5851 for recognition that Permit No. 5851 would prevail over inconsistent provisions in BRA's existing water rights regarding system operation.
39. During the evidentiary hearing on remand, the Applicant clarified that it was seeking an appropriation of water as shown by the appropriation runs for the various use scenarios in the WMP. Thus, the Applicant, with its amended application, seeks to appropriate a maximum amount of 516,955 af/yr of water as a result of system operations. This appropriation will be subject to and limited by Permit No. 5851 and the WMP. The amount of this new appropriation of water includes the current return flows requested in this application.

Texas Water Code §§ 11.124, 11.125, 11.128, and 11.135 Requirements

40. Permit No. 5851 contains the required provisions outlined in Texas Water Code § 11.135, with the exception of the time within which to construct water works. The Applicant does not propose to construct any new water works to exercise Permit No. 5851. The Applicant, instead, plans to rely on existing facilities and coordinated operations of those facilities. Because the Applicant plans no new construction, location and description information, commencement and completion dates for the construction, and the time required for the application of the water to the proposed use are not necessary.
41. The application is in writing and sworn, contains the name and address of the Applicant, and identifies the source of supply.
42. No one holds a lien on the Applicant's water rights.
43. The Applicant has paid the fees required by Texas Water Code § 11.128.
44. The Applicant in its application, as amended to include the WMP, provided maps that show existing reservoirs and diversion points and reaches, stream reaches for the bed and banks authorization, and locations where BRA intends to use the water. The Applicant also provided data identifying discharges for return flows.

Diversion Amount, Diversion Rates, and Diversion Points

45. Permit No. 5851 states maximum annual water diversion limits that are equal to the annual use by the demand level scenario that is effective at the time of the diversion.

46. The four demand levels are: (1) Current Contracts (Level A); (2) Current Contracts with Comanche Peak Nuclear Power Plant (CPNPP) Expansion (Level B); (3) Current Contracts with Allens Creek Reservoir (Level C); and (4) Current Contracts with Allens Creek Reservoir and CPNPP Expansion (Level D). Current contracts include demands shown to be satisfied by the System Operation Permit in the 2011 Region G and Region H Water Plans. The demand levels represent four different possible scenarios that could happen in the future based on the State and Regional Water Plans and other information available to BRA. For each of the demand levels, the permit identifies the total maximum amount of water that BRA can use throughout the basin depending on the applicable demand level, and a total maximum amount of water that BRA can divert in each reach, depending on the applicable demand level.
47. BRA's maximum annual use of water within a reach will be limited in two ways, both subject to a special condition in the permit allowing BRA to demonstrate that it has additional sources of supply sufficient to offset conditions of reservoir sedimentation: (1) BRA will be limited to 86% of the total maximum amount of water available under the applicable demand scenario identified in the permit; and (2) BRA's water use within a reach will be limited to 1,460 af/yr or 86% of the maximum amount of water identified in Tables G.3.14 through G.3.25 of the WMP, whichever is more, for that reach and the applicable demand level.
48. The amount of water BRA is authorized to use is stated in definitive terms.
49. The WMP prescribes the maximum diversion rate limits by reach for run-of-river diversions under the System Operation Permit. The sum of all diversions under Permit No. 5851 within each reach cannot exceed that maximum diversion rate.
50. Setting the maximum diversion rate by a defined reach is consistent with TCEQ practice.
51. No additional diversion rates are proposed for diversions from reservoirs because the authorized diversion rates in BRA's current reservoir water rights will govern diversions that are lakeside.
52. Permit No. 5851, through its WMP, specifies diversion points and diversion reaches which are: (1) diversion points authorized by BRA's existing water rights, including those that have been added contractually on stream channels downstream of BRA reservoirs; (2) locations where future demands are identified in the 2011 Regional Water Plans (Regions G and H) as using supplies from the System Operation Permit; and (3) the Richmond to Gulf of Mexico reach where BRA anticipates additional supplies from the System Operation Permit would be used.
53. The WMP evaluates the impacts resulting from the use of the System Operation Permit appropriation at those actual and proposed diversion points and diversion reaches. There are 40 defined diversion reaches described in the WMP. Demands within these reaches were modeled as part of the WMP, and include the following:

- a. Demands at diversion points authorized by BRA's existing water rights, including current contractually authorized diversion points on stream channels downstream of BRA reservoirs;
 - b. Demands in reaches in which the 2011 Regional Water Plans (Region G and Region H) list the System Operation Permit as a recommended source of supply to meet demands; and
 - c. Demands in the reach from Richmond to the Gulf of Mexico.
54. Identifying a diversion reach is an accepted practice of TCEQ.
 55. Modeling diversions by reach where specific diversion points are anticipated is not problematic from a modeling perspective and the modeling for the Application shows how much water can be developed under the System Operation Permit without affecting senior water rights.
 56. The System Operation Permit authorizes storage of System Operation Permit water. Therefore, BRA may use 30 Texas Administrative Code § 297.102(b) to add diversion points in the future and those new diversion points will be specifically identified and provided to the TCEQ before diversions can occur at the new location.
 57. To the extent that new diversion points are added in the future based on new contracts, the new diversions of System Operation Permit water must be within the amount authorized for the reach in which the customer's diversion is located and the customer's diversion rate must not cause BRA to exceed the applicable maximum aggregate diversion rate in Table 4.6 of the WMP.
 58. Permit No. 5851 and the WMP use actual and planned diversion points to determine water available for appropriation.

Water Availability, Drought of Record, Impairment of Existing Rights

59. BRA's preferred permit is BRA Exhibit No. 132B, which proposes to reduce the amount of water BRA is authorized to use to 516,955 af/yr.
60. For Permit No. 5851, there are three sources of unappropriated water: unappropriated riverine flows; return flows of treated wastewater; and water available for appropriation from BRA's existing reservoirs.
61. The Brazos River has a large uncontrolled drainage area downstream from BRA's reservoirs. The flows in this uncontrolled drainage area vary greatly. During times of high flow, there is water in the area that cannot be used by existing water rights and that is not needed to meet environmental flow requirements, but these flows are not reliable.

62. Through the use of its storage, BRA can make this unappropriated water into a reliable supply by using stream flows not being used by senior water rights when that water is available, and providing water from storage when there are little or no stream flows available for use.
63. In determining water availability, the permitted capacity of a reservoir is used when considering a new appropriation from the same reservoir.
64. The Applicant's WMP examined alternative water availability scenarios because the amount of water available depends, in part, upon the location of uses of water, as well as the development of authorized but not yet constructed projects. These scenarios are referred to as Demand Levels A, B, C, and D.
65. Demand Level A is a current conditions approach. It models all of BRA's existing customers and all demands shown by the 2011 Regional Water Plans (Regions G and H) to be supplied by the System Operation Permit with the remainder of the water available for appropriation being taken in the reach below Richmond. As modeled by the Applicant, Demand Level A shows 381,068 af/yr as the maximum possible use.
66. Demand Level B anticipates expansion of the CPNPP, a major demand located relatively high in the basin. The location of this demand results in an overall reduction in water availability as compared to Demand Level A. As modeled by the Applicant, the maximum possible use under Demand Level B is 344,625 af/yr.
67. Demand Level C anticipates construction of the Allens Creek Reservoir without the CPNPP expansion. As modeled by the Applicant, this results in the largest possible use of unappropriated water: 516,955 af/yr.
68. Demand Level D anticipates both expansion of the CPNPP and construction of the Allens Creek Reservoir. As modeled by the Applicant, it produces a maximum possible use of unappropriated water of 482,035 af/yr.
69. Permit No. 5851 authorizes the Applicant's diversion and use of water according to the Demand Level facts that exist at any given time in the future.
70. The water availability quantities in the WMP firm appropriation scenarios are those required to generate a firm water supply and do not include water for interruptible or non-firm water sales. Any amount of additional water appropriated would be a new appropriation at a junior priority.
71. The WMP uses authorized reservoir storage capacity for its appropriation models, but actual or projected capacity for its operational models.
72. In calculating the appropriation amounts for the permit for the four Demand Levels, the WMP failed to properly account for the fact that BRA's reservoirs have lost capacity due to sedimentation.

73. In order to account for these losses of reservoir capacities due to sedimentation, Permit No. 5851 should include a special condition to immediately reduce BRA's maximum annual diversion and use amounts under each of the four Demand Levels, and each of the maximum diversions by river reach, by 14%.
74. The special condition in Permit No. 5851 accounting for reservoir capacity losses, however, should also provide a way for BRA to subsequently be able to demonstrate that it has sufficient additional sources of supply available to offset those reservoir storage losses, and thus for BRA to have restored for annual diversion and use up to the full amount of authorized appropriation under the applicable demand scenario or reach limitation.
75. In calculating the appropriation amounts for the Permit for the four Demand Levels, BRA improperly included 47,332 acre-feet of BRA's own groundwater-based and surface water-based return flows.
76. The annual appropriation amounts authorized in the Permit for the four Demand Levels should each be reduced by 47,332 acre-feet to account for BRA's own groundwater-based and surface water-based return flows that were incorrectly included in the appropriation amounts. With the correction, the appropriation amounts for the permit are:
- Demand Level A – 333,736 af/yr;
 - Demand Level B – 297,293 af/yr;
 - Demand Level C – 469,623 af/yr; and
 - Demand Level D – 434,703 af/yr.
77. The permit should authorize the Applicant to appropriate a diversion amount depending on the applicable demand scenario.
78. The Applicant is not required in modeling the availability of water for Permit No. 5851 to fully utilize all of its existing storage rights every year before run-of-river water under the System Operation Permit can be used.
79. WMP modeling resulted in complete utilization of the Applicant's existing rights without the necessity of making releases. Requiring the Applicant to fully utilize its existing rights before using run-of-river water is not required and would frustrate the purpose and goal of system operation.
80. The Applicant's existing water rights permits do not require that storage under the 1964 System Operation Order be at a junior priority. Instead, they allow storage at the existing priority but the water so stored is subject to release for downstream needs at TCEQ's direction.
81. The Water Availability Model (WAM) used by TCEQ operates in such a fashion that water storage capacity emptied at the junior priority is refilled at the junior priority.

82. The Brazos River Basin has experienced serious drought conditions since mid-2008, particularly the upper portion of the basin above Possum Kingdom Reservoir.
83. The recent drought ended on May 26, 2015.
84. It is possible that the recent drought reduced the amount of water available for appropriation below the amounts shown in the WMP. It is likely it was a worse drought than the drought of record for the watershed above Possum Kingdom Reservoir.
85. It is unknown whether the Brazos River Basin as a whole suffered a worse drought than the 1950s drought of record.
86. Determining the ultimate impact of this drought on water availability under Permit No. 5851 will require a major effort to evaluate the current impact of the drought, and halting permit processing to undertake this analysis is not justified.
87. No purpose would be served by either delaying permit processing until complete evaluation of the recent drought or abating it until new hydrologic models could be developed to include the recent drought hydrology.
88. In order to properly account for the recent drought, the following condition should be included in Permit No. 5851:

In recognition of current drought conditions, BRA shall perform a detailed evaluation of whether the recently-ended drought: (1) represents a drought worse than the drought of record of the 1950s in the Brazos River Basin; and (2) decreases the amount of water available for appropriation under this permit. BRA shall provide a report to the TCEQ documenting its findings within nine months after issuance of this permit. If the report concludes that the recently-ended drought decreases the amount of water available for appropriation under this permit, then the amount of that reduction shall be determined and the appropriation amounts specified in Paragraph 1.A. of this permit shall be correspondingly reduced.

89. Under TCEQ's water availability rule (30 Texas Administrative Code § 297.42), no specific degree of reliability is required for water appropriated by Permit No. 5851 because it is one of the recognized exceptions of subsection (d). Instead, the required availability of unappropriated water for these special type projects is determined on a case-by-case basis based upon whether the proposed project can be viable for the intended purposes and the water will be beneficially used without waste.
90. TCEQ's consideration of subsequent amendments to the WMP (including certain changes to the accounting plan) will be treated as an amendment to the permit, and depending on the type of amendment, may be subject to TCEQ's notice and contested case hearing requirements as well as all other requirements applicable to a major water right amendment.

91. To protect existing water rights, the WAM uses a “dual simulation” modeling technique that prevents any existing BRA water right from using more water at its original priority date than it could have without the System Operation Permit.
92. There are multiple protections for existing water rights in the System Operation Permit, including the accounting plan and the other provisions of the WMP. The environmental flow conditions in Permit No. 5851 will prohibit diversions at times of low flow, leaving water that can be used by existing downstream senior water rights that are not subject to the same environmental flow requirements.
93. The Applicant’s ability to make water available through system operation, while protecting senior rights and environmental flows, will be improved by giving the Applicant operational flexibility to: (1) use any source of water available to the Applicant to satisfy the diversion requirements of senior water rights to the same extent that those water rights would have been satisfied by passing inflows through the Applicant’s reservoirs on a priority basis; and (2) release, pump, and transport water from any of the Applicant’s reservoirs for subsequent storage, diversion, and use throughout the Applicant’s service area.
94. Environmental flow conditions would apply to any impoundment of inflows at a reservoir under Permit No. 5851 even when BRA is exercising this operational flexibility.
95. Vested riparian rights will be fully protected by the environmental flow requirements in the System Operation Permit.
96. There will be no adverse effect on existing water rights by the System Operation Permit.
97. The water requested by BRA is available for appropriation.

Beneficial Use

98. The System Operation Permit would authorize diversion of water for domestic uses, municipal uses, agricultural and industrial uses, mining, and recreation, which are all recognized beneficial uses.
99. Of the 705,000 af/yr of water rights currently owned by BRA, 99% of this available water is under contract already.
100. There is demand for additional water supplies in the Brazos River Basin. BRA has pending requests for additional long-term water supply. The approved 2011 Regional Water Plans for Regions G and H forecast that substantial additional water supplies will be needed between now and 2060. The increase in demand for water in both regions is primarily due to population growth. There are projected shortages for irrigation and manufacturing uses. Water users in Fort Bend County must convert a large portion of their current water use from groundwater to surface water.

101. The adopted 2012 State Water Plan, based on the 2011 Regional Water Plans for Regions G and H, recommends a total amount of 110,249 af/yr of water to be supplied from the System Operation Permit to meet projected demands for a combination of municipal, industrial steam-electric, manufacturing, and mining uses in the Regions G and H planning areas.
102. BRA has been approached by a number of current and prospective customers that have requested additional long-term water supply from the System Operation Permit. To date, BRA has received requests from 28 entities for over 300,000 af/yr of water.
103. There is an immediate need for additional water supplies in a large portion of the Brazos River Basin and BRA intends to beneficially use the newly appropriated water by contracting with its existing and future customers who have a need for these additional supplies.

Environmental Flows

104. The environmental flow conditions that are applicable to the System Operation Permit are set out in Tables 4.3A–4.3L of the WMP. These tables describe the minimum flows that must exist at each identified measurement point during specified hydrologic conditions within a season before diversions under the System Operation Permit may occur. The measurement points in the WMP coincide exactly with the applicable measurement points for the Brazos River Basin in the TCEQ rules. 30 Texas Administrative Code §.298.480(a)(6)-(8), (10)-(11), (13)-(19).
105. Table 4.4 of the WMP describes which measurement point is applicable to each river reach. The environmental flow conditions applicable to a diversion are determined based upon the reach in which the diversion is located.
106. Of the 40 river and lake reaches identified in the WMP, nine use an upstream measurement point to govern all or part of the diversions in the reach. Four of these reaches are associated with reservoirs: Possum Kingdom Reservoir, Dennis gage to Lake Granbury dam, Glen Rose gage to Lake Whitney dam, and Leon River at Gatesville to Lake Belton dam. For two of the reaches, the applicable measurement point is in the middle of the reach: Aquilla Creek/Brazos River confluence to Highbank gage, and Richmond gage to the Gulf of Mexico. There are three reaches where all diversions in the reach will look to an upstream measurement point: Palo Pinto gage to Dennis gage; Cameron gage to Brazos River and Little River confluence; and Easterly gage to the Brazos River and Navasota River confluence.
107. Storage at BRA system reservoirs under Permit No. 5851 will be governed by the measurement point immediately downstream of each respective dam. Except for Possum Kingdom Reservoir, Lake Whitney, Lake Granbury, and Lake Belton, lakeside diversions will be governed by the next downstream measurement point. Lakeside diversions under the System Operation Permit occurring within Possum Kingdom Reservoir, Lake Whitney, Lake Granbury, and Lake Belton will be according to the applicable

measurement point that lies upstream of each respective lake. For diversions above Lake Granbury, Lake Whitney, and Lake Belton, the applicable measurement point is upstream of each lake.

108. To divert System Operation Permit water, whether the reach is upstream or downstream of the applicable measurement point, the flow passing the measurement point gage must not be lower than the environmental flow requirement. For diversions upstream of the applicable measurement point, the daily maximum allowable run-of-river diversion under the System Operation Permit will be limited such that the daily flow at the measurement point gage is not reduced below the applicable environmental flow standard. For diversions located downstream of a measurement point, the environmental flow requirement will be calculated by adding the aggregate downstream System Operation Permit diversion rate to the applicable environmental flow standard at the applicable measurement point gage.
109. For each season and each hydrologic condition at the measurement point, there is a corresponding environmental flow condition which must be met before diversions under the System Operation Permit may occur.
110. Each measurement point is located in a defined geographic area which is used to determine the hydrologic condition. The WMP identifies three geographic areas, which coincide with the TCEQ's rules and are delineated by major existing reservoirs along the main stem of the Brazos River.
111. The WMP determines the hydrological condition using the Palmer Hydrological Drought Index (PHDI), as required by TCEQ.
112. Because the climate zones used by the National Climatic Data Center (NCDC) to calculate the PHDI each month are not exactly coincident with the WMP geographic areas, an area-weighted composite PHDI is calculated by adding together the NCDC's PHDI for each climate zone that has first been multiplied by the fraction of the area intersecting the geographic area.
113. The composite PHDI is then compared to the values described in Table 4.12 of the WMP Technical Report to determine whether the hydrologic condition is dry, average, or wet. 30 Texas Administrative Code § 298.470(c).
114. Because the NCDC does not report the preceding month's PHDI on the first day of the succeeding month, the Applicant will operate under an interim hydrologic condition between the first day of the season and the day the final hydrologic condition is determined. To determine the interim hydrologic condition, the interim PHDI values provided by the NCDC will be used.
115. It is reasonable to use the interim PHDI values to determine an interim hydrologic condition because it is likely the hydrologic condition will not change once the NCDC's PHDI values are finalized. If there is any non-achievement of environmental flow

conditions as a result of using the interim PHDI and hydrologic condition in the first few weeks of a season, BRA will report the non-achievement in an annual Environmental Flow Achievement Report to the TCEQ.

116. For each measurement point, a certain number of high flow pulses is required per season depending on the hydrologic condition. 30 Texas Administrative Code § 298.480.
117. A high flow pulse begins when the flow at the measurement point becomes higher than the applicable pulse trigger flow and the pulse ends when either the applicable volume condition or the applicable duration condition is achieved.
118. Consistent with the TCEQ rules, the WMP prohibits Applicant from diverting or storing water under the System Operation Permit if such storage or diversion would prevent meeting a seasonal schedule or individual high flow pulse at the applicable measurement point, unless the seasonal schedule has already been met.
119. Storage and diversion under the System Operation Permit are authorized during high flow pulse events if: (1) the stream flow is not reduced below the pulse trigger flow; or (2) the number of pulse events exceeds the frequency criteria. Storage and diversion under the System Operation Permit may also continue during a pulse as long as the storage amount or diversion amount is lower than the applicable diversion rate trigger level.
120. The diversion rate trigger levels in the WMP were developed in accordance with TCEQ rules and are defined as 20% of the pulse trigger flow. 30 Texas Administrative Code § 298.485(b).
121. As part of the development of the WMP, Applicant evaluated how high flow pulses relate between adjacent selected measurement points. The evaluation illustrated the complex temporal relationship between pulses occurring at adjacent upstream and downstream measurement points because of travel time between measurement points, existing structural and operational influences, and pulse magnitude relative to diversion rates. Because of these factors, operations and accounting under the WMP will manage storage and diversion within a reach according to the measurement point applicable to that reach.
122. The use of one measurement point and the use of upstream measurement points are permitted by TCEQ's rules and are justified considering the distance between measurement points, travel time, channel losses, attenuation, magnitude of pulses relative to base flow conditions, intervening inflows at large confluences, intervening structures, and different hydrologic conditions in different geographic areas.
123. The WMP allows BRA to temporarily store pulse events. If impounded flows under the System Operation Permit would prevent the achievement of a qualifying pulse event at the applicable measurement point and should be released, BRA will coordinate with the United States Army Corps of Engineers (USACE) (if the reservoir's dam is operated by the USACE), and releases of the pulses will conform to existing BRA and USACE water control plans. BRA will coordinate its operational release pattern with downstream flow

patterns to increase the probability that an intended pulse achievement will occur at a downstream measurement point and to ensure the release conforms to any water control plan.

124. Temporary storage of pulse events is a practical reality. A pulse event coming into a reservoir will be captured inside the reservoir. Temporary storage of a pulse is necessary to determine: (1) if storage is occurring under the System Operation Permit; and (2) whether applicable environmental flow conditions are being met.
125. While the WMP does not specify a period of time in which a qualifying pulse must be released (if one is required to be released), the pulse requirements will need to be satisfied in accordance with the environmental flow conditions if BRA intends to use the water under the System Operation Permit. BRA's best chance of meeting the environmental flow conditions will be to make the release consistent with other hydrological events that are occurring at the same time.
126. The environmental flow portion of the WMP Accounting Plan tracks what happens with respect to the environmental flow requirements, includes calculations that classify high flow pulses according to flow, duration, and volume, and tracks releases of high flow pulses that are temporarily stored.
127. BRA will generate and submit to the TCEQ an Environmental Flow Achievement Report once per year. The report will summarize storage and diversions under the System Operation Permit occurring during the previous year with respect to the environmental flow conditions at each measurement point. If the report indicates that the WMP environmental flow conditions were not achieved due to storage or diversion under the System Operation Permit, BRA will include in the report an action plan that describes how BRA will prevent further non-achievement from occurring during System Operation Permit storage and diversion.
128. The environmental flow conditions for Permit No. 5851 include the exact measurement points, seasons, and hydrologic conditions as those found in the TCEQ rules. The flow values at each measurement point are the flow values adopted by TCEQ.
129. The environmental flow conditions for the System Operation Permit are subject to adjustment by the Commission pursuant to Texas Water Code § 11.147(e-1).
130. Even though a separate analysis under Texas Water Code §§ 11.150, 11.151, and 11.152 is no longer required with the adoption of the Senate Bill 3 environmental flow standards for the Brazos River Basin, BRA has nevertheless assessed the effects of Permit No. 5851 on fish and wildlife habitat, water quality, bays and estuaries, and groundwater.
131. With respect to the assessment of the effects of BRA's application on fish and wildlife habitat, the environmental flow conditions in the permit, which are consistent with TCEQ's adopted environmental flow standards, will be protective of instream uses. The System Operation Permit uses already-permitted reservoirs. This limits the effect of

construction of new reservoirs on fish and wildlife habitat. The System Operation Permit will use run-of-river flows during times when these flows are available instead of using BRA's existing water rights. This strategy will allow BRA to save water in storage under its existing water rights for delivery downstream when river flows are not high enough to meet environmental flow conditions and allow for diversions under the System Operation Permit. This strategy will benefit instream uses by providing more times of higher stream flows closer to the environmental flow conditions than would have otherwise occurred without the System Operation Permit. BRA has adopted and implemented reservoir operating guidelines to manage the frequency and magnitude of reservoir level fluctuations to avoid or minimize impacts on reservoir fisheries, including fish and wildlife habitat.

132. With respect to water quality, recent studies on the Brazos, Little, and Navasota Rivers relating to water quality conditions (temperature and dissolved oxygen) evaluated flow levels lower than or consistent with the System Operation Permit's environmental flow conditions. These studies showed achievement of temperature and dissolved oxygen goals at those flow conditions that are comparable to the System Operation Permit's environmental flow conditions.
133. BRA has agreed in its amended Memorandum of Understanding with TPWD to limit operations under the System Operation Permit so that its operations do not reduce flows to less than the lowest average flow for seven consecutive days in a two-year period (7Q2) at seven locations, which are in addition to the applicable measurement points, and BRA will collect routine water quality monitoring data at or near eight locations.
134. The bay and estuary system for the Brazos River is limited. The Brazos River estuary is a river-dominated estuary that has no directly associated barrier island embayment. In recognition of these facts, the Senate Bill 3 environmental flow standards provide sufficient inflows to support a sound ecological environment at the mouth of the Brazos River. Because the Brazos River has no natural bay and limited connection to associated existing bays and the Brazos River estuary is dominated by river flows, the System Operation Permit is not anticipated to have an adverse impact on any bay or estuary.
135. The System Operation Permit will not affect groundwater resources or impair existing uses of groundwater, groundwater quality, or spring flow in the Brazos River Basin.

Public Welfare, Public Interest, Instream Uses

136. The approved 2011 Regional Water Plans for Regions G and H forecast that substantial additional water supplies will be needed between now and 2060.
137. The 2011 Region G Regional Water Plan anticipates that Permit No. 5851 will supply 86,429 af/yr of water by 2060 to meet municipal and steam-electric generation demands.

138. Region H projects that, between 2010 and 2060, the water supply needs region-wide will grow from 2,376,414 af/yr to 3,524,666 af/yr. The 2011 Region H Regional Water Plan anticipates that Permit No. 5851 will supply a total of 25,347 af/yr to meet municipal, manufacturing, mining, and other demands in the region between 2010 and 2060.
139. The System Operation Permit water supply strategy has been adopted as a recommended water supply strategy in the 2012 State Water Plan, which recommends that 110,249 af/yr of water be supplied for various uses from the System Operation Permit.
140. BRA has continued to receive requests for long-term water supply and to date has received requests from 28 entities for over 300,000 af/yr of water.
141. The water made available from Permit No. 5851 will address anticipated water shortages that are identified in the current adopted State and Regional Water Plans. Without the System Operation Permit, the Brazos River Basin will be faced with water supply shortages.
142. As compared to alternative water supply strategies, such as new reservoir construction, identified in the 2011 Region G and Region H water plans, the unit cost of the System Operation Permit water is substantially less.
143. Permit No. 5851 water is readily available and does not require significant land acquisitions, permitting, and construction.
144. The low cost of the water coupled with its availability in the near-term will help the Applicant stabilize its water rates.
145. The environmental impacts of the System Operation Permit are far less than the environmental impacts that might be associated with an alternative new water supply project, such as the construction of a new reservoir.
146. BRA is committed to providing water out of the System Operation Permit to the Texas Water Trust and executed an amendment to its Memorandum of Understanding with TPWD reaffirming this commitment. BRA has also committed to limiting operations under the System Operation Permit so that such operations do not reduce flows to less than 7Q2 flow values at seven identified locations within the Brazos River Basin, and will be conducting additional environmental studies at eight locations in the Brazos River Basin for the benefit of the basin and bay area stakeholder committee.
147. BRA has agreed to maintain environmental flows that were required by BRA's Federal Energy Regulatory Commission (FERC) license for its now-decommissioned hydroelectric facilities at Possum Kingdom Reservoir. Those conditions are incorporated into Permit No. 5851 as Special Condition 5.C.5.

148. With the environmental flow conditions included in the System Operation Permit, the permit will maintain adequate flow for a wide variety of recreational uses below Possum Kingdom Reservoir in the John Graves Scenic Riverway.
149. BRA, along with TPWD, has developed operating guidelines to manage the frequency and magnitude of reservoir level fluctuations to avoid and minimize impacts on reservoir fisheries and has incorporated those guidelines into the WMP. These guidelines will provide direction to TPWD fisheries managers on how BRA can be anticipated to manage the reservoirs, and allow TPWD to minimize or mitigate impacts to fisheries, or adjust its management and stocking strategies.
150. BRA has developed general guidelines for daily reservoir operations. Release decisions are made to provide for beneficial use of water downstream while at the same time considering local water supply needs around the reservoirs, environmental needs, and recreational uses.
151. Operations under the System Operation Permit as set out in the WMP will not cause chloride or total dissolved solid concentrations in the Brazos River Basin to exceed TCEQ's water quality standards.
152. The System Operation Permit complies with and implements the TCEQ's adopted environmental flow standards.
153. The System Operation Permit will allow BRA to provide water for a wide variety of beneficial uses including municipal, industrial, and agricultural uses.
154. BRA has adopted and implemented water conservation and drought contingency plans and these plans are consistent with the requirements of Chapter 288, Title 30 of the Texas Administrative Code.
155. The System Operation Permit is a water conservation strategy that reduces the waste of water and improves the efficient use of water through coordinating reservoir operations with unappropriated stream flows, increases BRA's recycling and reuse of water for the benefit of its customers, and makes additional water available for future and alternative uses.
156. The System Operation Permit will not be detrimental to the public welfare, and in fact provides significant public welfare benefits.

Consistency with Water Plans

157. The System Operation Permit is a recommended water management strategy in the approved 2011 Regional Water Plans for the Region G and Region H planning regions and is a recommended strategy in the most recently adopted state water plan, *2012 Water for Texas*, and is therefore consistent with those plans.

Conservation and Drought Planning

158. BRA has adopted water conservation and drought contingency plans. TCEQ has approved these plans and determined they are consistent with the requirements in Chapter 288, Title 30 of the Texas Administrative Code.
159. BRA requires compliance with its adopted water conservation plan and drought contingency plan. BRA's water supply contracts require customers to implement a water conservation plan and meter water usage. The customers must operate and maintain facilities in a manner that will prevent unnecessary waste of water.
160. The System Operation Permit itself reduces the waste of water, improves the efficiency in water use by coordinating reservoir operations with unappropriated stream flows, increases the recycling and reuse of water, makes more water available from the facilities that are already in place, and requires the implementation of water conservation plans to help reduce or maintain the consumption of water, prevent or reduce waste of water, maintain or improve the efficient use of water, and prevent the pollution of water.
161. BRA will use reasonable diligence to avoid waste and achieve water conservation.
162. BRA presented evidence that supports the proposed use of the water with consideration of the water conservation goals in its plan and demonstrates that BRA evaluated water conservation as an alternative, but found it was insufficient to produce the amount of water needed or required significant financial resources to develop. The System Operation Permit itself is a form of water conservation.
163. The System Operation Permit also includes an additional provision requiring BRA to submit updated water conservation and drought contingency plans in connection with future applications for reconsideration or amendment of its WMP.

Return Flows

164. Return flows, once returned to a state watercourse, are unappropriated flows available for appropriation.
165. The System Operation Permit should authorize: (1) the appropriation of current return flows discharged by others (Texas Water Code §§ 11.046(c) and 11.121) once they are discharged into a watercourse; and (2) a bed and banks authorization in the case of return flows originating from BRA's own water supplies or discharged from BRA wastewater treatment plants (Texas Water Code § 11.042(b) and (c)). This is consistent with state law, prior Commission practice, and the Commission's directives in the Interim Order; therefore, it is reasonable.
166. Through the WMP, BRA will account for the total discharges of return flows and adjust its water availability computation if total discharges decrease by 5% or more. BRA should also be required to revise the WMP, subject to approval by the Executive Director,

to account for return flows authorized under Texas Water Code § 11.042(b) and (c) in accordance with WMP Technical Appendix H-2, and to account for return flows authorized under Texas Water Code §§ 11.046(c) and 11.121 in accordance with WMP Technical Appendix H-1.

167. Permit No. 5851 has a special condition that states that BRA's storage, diversion, and use of the portion of the appropriation based on others' surface water-based return flows is interrupted by direct reuse and is terminated by indirect reuse upon issuance of a bed and banks authorization to the discharging entity.
168. Another special condition in the permit expressly makes BRA's storage, diversion, and use of others' groundwater-based return flows interrupted by direct reuse by the discharger, and terminated upon issuance of a bed and banks authorization to the discharger.
169. As a result of an agreement with the Cities of Bryan and College Station, a provision addressing groundwater-based return flows, without any service area limitation, is included in Permit No. 5851, which will allow for future indirect reuse by dischargers of such water.
170. Accounting for individual discharges and diversions of return flows is not necessary for the protection of senior water rights.

Bed and Banks Authorization

171. Permit No. 5851 authorizes the use of the bed and banks of the Brazos River and its tributaries subject to identification of specific losses and various special conditions. BRA, through its WMP accounting procedures, will estimate daily deliveries of water that considers losses and travel time.
172. The water to be transferred in the bed and banks of the Brazos River and its tributaries originates in the basin and will have water quality consistent with the natural water quality of the Brazos River. There should not be any effect on water quality in the Brazos River Basin as a result of the bed and banks authorization.
173. Included among the waters that BRA will be authorized by Permit No. 5851 to transport via the bed and banks is 47,322 acre-feet of BRA's own return flows, pursuant to Texas Water Code § 11.042(b) and (c).

Interbasin Transfer

174. BRA requests authorization for exempt interbasin transfers of water to any county or municipality that is partially in the Brazos River Basin for use in that part of the county or municipality within the Guadalupe, Lavaca, Trinity, Red, Colorado, or San Jacinto river basins, and for use in San Jacinto-Brazos Coastal Basin and the Brazos-Colorado Coastal Basin.

175. BRA has demonstrated that its Application No. 5851, as amended to include the WMP, complies with all requirements for exempt interbasin transfer authorization.

Allens Creek Reservoir and Term Permit Authorization

176. Allens Creek Reservoir (Water Use Permit No. 2925) is a yet-to-be-constructed off-channel reservoir that may be filled with diversions from the Brazos River. The Allens Creek Reservoir permit limits annual diversions from the Brazos River to 202,000 af/yr. Diversions from the Brazos River to Allens Creek Reservoir in excess of 202,000 af/yr are authorized by BRA's Certificate No. 12-5166.
177. For the period before the construction of Allens Creek Reservoir, BRA is seeking a term permit to use up to 202,000 af/yr of water for a period of 30 years or until the ports are closed on the dam impounding Allens Creek Reservoir, whichever is earlier. The Allens Creek Reservoir permit is not yet perfected and the use of the water under the term permit will not jeopardize the financial commitments to develop the reservoir and will not prevent BRA or the City of Houston from beneficially using the Allens Creek Reservoir during the term permit authorization.
178. Until construction of the Allens Creek Reservoir is completed, it is reasonable and consistent with Commission practice to authorize the use of the water appropriated under the Allens Creek Reservoir permit on a term basis.
179. BRA's Application No. 5851 requests that all of its system reservoirs, including the Allens Creek Reservoir, be allowed to store additional water at the System Operation Permit priority date if storage capacity and unappropriated water are available.
180. BRA has entered into an agreement with the City of Houston that allows BRA to use Houston's share of the storage capacity in the Allens Creek Reservoir for System Operation Permit water.
181. BRA obtained an amendment to its Excess Flows Permit (Certificate No. 12-5166) to include the diversion points for the proposed Allens Creek Reservoir. The amendment to the Excess Flows Permit allows BRA to divert water from the Brazos River into the reservoir thereby increasing the supply of water that could be made available from the Allens Creek Reservoir.
182. The inclusion of Allens Creek Reservoir in the System Operation Permit after the reservoir is constructed and the recognition of existing authority to divert from the Brazos River to Allens Creek Reservoir in excess of 202,000 af/yr are reasonable.

Texas Coastal Management Program

183. BRA's operation under Permit No. 5851, as approved by this order, should not have significant adverse impacts on coastal natural resources and is consistent with the goals and policies of the Texas Coastal Management Program.

Permit Conditions/Revisions

184. Water Use Permit No. 5851 should be issued in the form attached with the following changes:

- a. The bullet point on page three of the Permit which begins "An appropriation of return flows," should be revised to read as follows:

An appropriation of return flows (treated sewage effluent and brine bypass/return) to the extent that such return flows continue to be discharged or returned into the bed and banks of the Brazos River, its tributaries, and Applicant's reservoirs. The appropriation of return flows would be subject to interruption or termination by direct reuse or ~~termination by indirect reuse within the discharging entity's city limits, extraterritorial jurisdiction, or contiguous water certificate of convenience and necessity boundary;~~

- b. The "TYPE" of authorization at the top of the first page should be amended as follows:

TYPE §§ 11.121, 11.042, 11.046, 11.085, & 11.1381

- c. An unnumbered, bulleted paragraph on page 3 should be amended as follows:

A term permit, pursuant to Texas Water Code § 11.1381, for a term of thirty (30) years from the issued date of this permit, or until the ports are closed on the dam impounding Allens Creek Reservoir, whichever is earlier, to allow the Applicant to use the water appropriated under Water Use Permit No. 2925, as amended, until construction of the Allens Creek Reservoir. The Applicant requested a term authorization to impound, divert, and use not to exceed ~~202,650~~ 202,000 acre-feet of water per year at the Gulf of Mexico; and

- d. The existing Paragraph 1.A should be deleted and replaced with the following:

Permittee is authorized to divert and use, for domestic, municipal, agricultural, industrial, mining and recreation use, water in the applicable amount shown below, as further described, defined, and limited by the Water Management Plan (WMP), within its service area, subject to special conditions:

- (1) Not to exceed 333,736 acre-feet per year at all times prior to: (1) an expansion of the Comanche Peak Nuclear Power Plant (CPNPP) in a

manner that results in the plant needing at least 90,000 acre-feet per year of additional water; and (2) the point when the ports are closed on the dam impounding Allens Creek Reservoir. Of the total amount, 50,076 acre-feet constitutes the return flows of others pursuant to Texas Water Code §§ 11.046(c) and 11.121. This 50,076 acre-feet is subject to Special Conditions in Permit Paragraph 5.A.

(2) Not to exceed 297,293 acre-feet per year at all times when: (1) CPNPP has been expanded in a manner that results in the plant needing at least 90,000 acre-feet per year of additional water; but (2) the ports on the dam impounding Allens Creek Reservoir have not yet been closed. Of the total amount, 50,076 acre-feet constitutes the return flows of others pursuant to Texas Water Code §§ 11.046(c) and 11.121. This 50,076 acre-feet is subject to Special Conditions in Permit Paragraph 5.A.

(3) Not to exceed 469,623 acre-feet per year at all times when: (1) CPNPP has not yet been expanded in a manner that results in the plant needing at least 90,000 acre-feet per year of additional water; but (2) the ports have been closed on the dam impounding Allens Creek Reservoir. Of the total amount, 50,076 acre-feet constitutes the return flows of others pursuant to Texas Water Code §§ 11.046(c) and 11.121. This 50,076 acre-feet is subject to Special Conditions in Permit Paragraph 5.A.

(4) Not to exceed 434,703 acre-feet per year at all times after: (1) CPNPP has been expanded in a manner that results in the plant needing at least 90,000 acre-feet per year of additional water; and (2) the ports on the dam impounding Allens Creek Reservoir have been closed. Of the total amount, 50,076 acre-feet constitutes the return flows of others pursuant to Texas Water Code §§ 11.046(c) and 11.121. This 50,076 acre-feet is subject to Special Conditions in Permit Paragraph 5.A.

e. Paragraph 1.B should be revised as follows:

(1) Permittee is authorized, pursuant to Texas Water Code § 11.042(a), to use the bed and banks of the Brazos River below Possum Kingdom Lake, the Brazos River tributaries and Permittee's authorized reservoirs for the conveyance, storage, and subsequent diversion of the water authorized as a new appropriation herein, subject to identification of specific losses and to special conditions.

(2) Permittee is authorized, pursuant to Texas Water Code § 11.042(b) and (c), to use the bed and banks of the Brazos River below Possum Kingdom Lake, the Brazos River tributaries and Permittee's authorized reservoirs for the conveyance, storage, and subsequent diversion of 47,322 acre-feet

of Permittee's own return flows, subject to identification of specific losses and to special conditions.

- f. Paragraph 1.E should be amended as follows:

Pursuant to Texas Water Code § 11.1381, for a term of thirty (30) years from the issued date of this permit, or until the ports are closed on the dam impounding Allens Creek Reservoir, whichever is earlier, Permittee may use the water appropriated under Water Use Permit No. 2925, as amended. As part of the amount appropriated in Paragraph 1.A., during the term of this authorization Permittee may divert and use not to exceed ~~202,650~~ 202,000 acre-feet of water per year, subject to Special Conditions 5.C.1-~~57~~.

- g. The existing section 5.A should be revised as follows:

- (1) Permittee's authorization to divert and use return flows under this permit is limited to return flows that are authorized for discharge by Texas Pollutant Discharge Elimination System (TPDES) Permits in effect as of the issuance date of this permit, and as authorized by future modifications of this permit or the WMP.
- (2) ~~Permittee shall maintain a record of return flows as a part of its accounting plan required by Special Conditions 5.C and 5.D (return flow accounting plan). The return flow accounting plan must account, by source, for all return flows discharged. The return flow accounting plan shall include amounts discharged by outfall. Computation of the amount of additional water supply available due to return flows actually discharged is determined in the WMP, taking into account environmental flow conditions and demands of senior water rights. Permittee's use of additional water supply attributable to the presence of return flows is limited to the amount shown to be available, based upon amounts discharged as determined in the WMP. The return flow accounting plan shall be included as part of Permittee's accounting/delivery plan. Subject to approval by the Executive Director, Permittee shall revise the WMP Accounting Plan to account for return flows authorized under Texas Water Code § 11.042(b) and (c) in accordance with the Brazos River Authority Accounting Plan, Executive Director's Approach to Return Flows and to account for return flows authorized under Texas Water Code §§ 11.046(c) and 11.121 in accordance with the Brazos River Authority Accounting Plan BRA Approach to Return Flows.~~
- (3) Permittee's storage, diversion and use of that portion of the appropriation based on return flows is dependent upon potentially interruptible return flows. Permittee's storage, diversion and use of that portion of the appropriation based on surface water based return flows ~~will be~~ is

~~interrupted by direct reuse or will be terminated by indirect reuse within the discharging entity's corporate limits, extraterritorial jurisdiction, or contiguous water certificate of convenience and necessity boundary, provided the discharging entity has applied for and been granted authorization to reuse the return flows and is terminated by indirect reuse upon the issuance of a bed and banks authorization pursuant to Texas Water Code § 11.042(c) by the Commission to the discharging entity.~~

- (4) Permittee's storage, diversion and use of groundwater based return flows is ~~subject to interruption~~ interrupted by direct reuse ~~or indirect reuse~~ and is terminated by indirect reuse upon issuance of a bed and banks authorization pursuant to Texas Water Code § 11.042(b) by the Commission to the discharging entity.
- (5) Permittee shall, at a minimum, use the return flow (effluent discharges) volumes reported monthly to the Commission by wastewater dischargers that have permitted discharges of greater than or equal to one (1) million gallons per day, and by other wastewater dischargers as provided by the accounting plan, to verify the available return flows for the accounting plan.

h. Paragraph 5.C.3 should be amended as follows:

Permittee may use any source of water available to Permittee to satisfy the diversion requirements of senior water rights to the same extent that those water rights would have been satisfied by passing inflows through the Permittee's system reservoirs on a priority basis. Permittee's use of water previously stored in Permittee's reservoirs or available for appropriation by Permittee's senior water rights shall be documented in the accounting/delivery plan. Use of this option shall not cause Permittee to be out of compliance with the accounting/delivery plan, or Special Condition 5.C.2, or prevent the achievement of environmental flow requirements that would have otherwise been achieved.

i. A new Special Condition 5.C.6 should be added to read as follows:

Permittee shall not divert or impound water pursuant to the authorizations in the permit if such diversions or impoundments would cause the flow at USGS Gage 081166550 (Brazos River near Rosharon) to fall below the lesser of 630 cfs, or Dow Chemical Company's projected daily pumping rate. This provision is not effective if: (a) Dow Chemical Company has not provided its projected daily pumping rate to Permittee; or (b) a watermaster having jurisdiction over the lower Brazos River has been appointed and continues to function.

j. A new Special Condition 5.C.7 should be added to read as follows:

In recognition of current drought conditions, BRA shall perform a detailed evaluation of whether the recently-ended drought: (1) represents a drought worse than the drought of record of the 1950s in the Brazos River Basin; and (2) decreases the amount of water available for appropriation under this permit. BRA shall provide a report to the TCEQ documenting its findings within nine months after issuance of this permit. If the report concludes that the recently-ended drought decreases the amount of water available for appropriation under this permit, then the amount of that reduction shall be determined and the appropriation amounts specified in Paragraph 1.A. of this permit shall be correspondingly reduced.

- k. The existing Paragraph 5.D.5 should be deleted and replaced with the following:
- (a) Permittee's diversion and use under this permit and WMP shall be immediately reduced by 14% of the amounts authorized in Paragraph 1.A. USE due to sedimentation in Permittee's reservoirs, as follows:
 - (1) not to exceed 287,013 acre-feet per year at all times prior to: (1) an expansion of the Comanche Peak Nuclear Power Plant (CPNPP) in a manner that results in the plant needing at least 90,000 acre-feet per year of additional water; and (2) the point when the ports are closed on the dam impounding Allens Creek Reservoir;
 - (2) Not to exceed 255,672 acre-feet per year at all times when: (1) CPNPP has been expanded in a manner that results in the plant needing at least 90,000 acre-feet per year of additional water; but (2) the ports on the dam impounding Allens Creek Reservoir have not yet been closed;
 - (3) Not to exceed 403,876 acre-feet per year at all times when: (1) CPNPP has not yet been expanded in a manner that results in the plant needing at least 90,000 acre-feet per year of additional water; but (2) the ports have been closed on the dam impounding Allens Creek Reservoir; and
 - (4) Not to exceed 373,845 acre-feet per year at all times after: (1) CPNPP has been expanded in a manner that results in the plant needing at least 90,000 acre-feet per year of additional water; and (2) the ports on the dam impounding Allens Creek Reservoir have been closed.
 - (b) If Permittee, as a subsequent major amendment of the WMP, is able to demonstrate the availability of sufficient additional sources of supply to offset these reductions in storage capacity, the amount of water authorized for diversion and use may increase up to the appropriated amount in Use Paragraph 1.A.

185. BRA should be directed to revise its WMP, which was admitted as BRA Exhibit 113 and includes the WMP Technical Report, all appendices, and other attachments, and is approved and incorporated as a part of the permit, with the following changes:

a. A new paragraph should be added at the bottom of page 9 of the WMP to read as follows:

Subject to Special Condition 5.D.5.b, the maximum annual use for each reach is limited to 86% of the largest maximum annual diversion under the “SysOp” for that reach in Tables G.3.14 through G.3.25 of Appendix G-3 of the WMP Technical Report for the firm appropriation demand scenario that is applicable during the year in which water is diverted, or 1,460 acre-feet, whichever is greater.

b. A paragraph on page 41 of the WMP should be amended as follows:

The maximum allowable System Operation Permit diversion amount within a reach applies to the aggregate of all diversions in the reach. An allowable System Operation Permit diversion, whether upstream or downstream of the reach’s applicable measurement point, will not reduce flow below the environmental flow standard at a point immediately below BRA’s point of diversion and additionally will not exceed provisions set forth in Section IV.D.4.b below.

c. The last paragraph on page 5-7 and continuing on page 5-8 of the WMP Technical Report should be amended as follows:

[Initial portion of paragraph unchanged] The BRA approach version of the Accounting Plan includes reported monthly return flows for dischargers that have a permitted discharge greater than or equal to 1 million gallons per day (MGD). Within one month after this data is available from TCEQ for the prior calendar year, the total annual amount of return flows ~~These monthly amounts will be compared to the assumed amount used during the time period of this initial WMP. If actual return flows are substantially less than the amounts used in the modeling the assumptions used in the model will be adjusted and the model re-run to examine the impacts on yield less than the amount used in modeling by 5% or greater, BRA will revise the models and submit results to TCEQ.~~

186. All other changes proposed by the parties to Permit No. 5851 and the WMP are unreasonable or unnecessary.

Transcript Costs

187. BRA paid the full cost of the transcript for the first hearing and does not now seek to have that cost allocated among the parties.

188. Reporting and transcription of the remanded second hearing on the merits was warranted because the hearing lasted eight days. The total cost of the transcript for the second hearing was \$11,052.50, which has been paid by BRA subject to allocation among the parties by the Commission.
189. Several parties did not participate in the second hearing: the Cities of Lubbock, Round Rock, Bryan, and College Station, Mike Bingham, William and Gladys Gavranovic, and Bradley B. Ware. The following parties had no or limited participation at the second hearing because of their status as non-aligned, interested parties: Chisholm Trail Ventures, L.P., City of Houston, George Bingham, Robert Starks, Frasier Clark, William D. and Mary L. Carroll, PKLA, and NRG. TPWD's participation was limited to certain issues.
190. Neither the Executive Director of the TCEQ nor the Office of Public Interest Counsel may be assessed transcription costs because they cannot appeal a TCEQ order.
191. BRA, Dow, NWF, LGC, and FBR fully and actively participated in the second hearing. These parties benefit equally with BRA from the availability of a hearing transcript, both in terms of preparation of written argument and exceptions, and possible appeal.
192. BRA, Dow, NWF, LGC, and FBR each had multiple attorneys participating in the hearing, and each had one or more retained expert witnesses.
193. BRA, Dow, LGC, and FBR, which retained multiple attorneys and expert witnesses to participate in the hearing, have sufficient resources to pay a share of the costs of the transcript.
194. NWF is a non-profit entity.
195. The second hearing was only necessary because BRA's Application as considered during the first hearing was deficient, and the Commission gave BRA an opportunity to extensively amend it and have it reconsidered in the second hearing.
196. BRA should pay the entire cost of the second-hearing transcript, \$11,052.50, and no portion of that cost should be allocated to any other party.

II. CONCLUSIONS OF LAW

1. The Commission has jurisdiction over permits to use state water and to issue Permit No. 5851 under Texas Water Code §§ 5.013, 11.121, 11.134, and 11.1381.
2. SOAH has jurisdiction over all matters relating to the conduct of a hearing in this proceeding, including the preparation of a PFD and findings of fact and conclusions of law, under Texas Government Code Ch. 2001 and 2003.

3. BRA published notice and the Commission mailed notice to navigation districts and water rights holders in the Brazos River Basin as required by Texas Water Code § 11.132 and 30 Texas Administrative Code Ch. 295.
4. BRA has complied with Texas Water Code § 11.124(a)(5)-(7), concerning facilities, and Texas Water Code § 11.125, concerning maps, to the extent they are applicable when no new facilities are proposed.
5. Notice of the application, the opportunity for a hearing, and the hearing was provided as required by Texas Water Code §§ 11.128 and 11.132, and Texas Government Code §§ 2001.051 and 2001.052.
6. The Commission has jurisdiction to consider the application without amendments for settlements and notice was not required to address the settlements that are not part of the current application.
7. BRA's choice to proceed with a new permit application rather than a permit amendment application does not conflict with the Commission's traditional interpretation of the laws it administers, deny any affected party a right to notice or hearing, or avoid the application of environmental flow requirements to BRA's existing water rights.
8. The Commission's jurisdiction and broad authority over the appropriation of state water allows it to grant Permit No. 5851 and require the submittal and approval of a WMP to be included as part of Permit No. 5851.
9. Application No. 5851 is administratively complete, includes all of the required information, was accompanied by all required fees, and was properly noticed, and therefore complies with Texas Water Code § 11.134(b)(1), and 30 Texas Administrative Code Ch. 295.
10. Application No. 5851 sufficiently identifies the total amount of water to be used in definitive terms in accordance with 30 Texas Administrative Code § 295.5.
11. Application No. 5851 sufficiently identifies the maximum diversion rate in accordance with 30 Texas Administrative Code § 295.6.
12. Application No. 5851 sufficiently identifies diversion points and reaches and complies with 30 Texas Administrative Code § 295.7.
13. New diversion points may be added in the future in accordance with 30 Texas Administrative Code § 297.102(b).
14. Application No. 5851 complies with the applicable procedural rules in Chapter 295 of Title 30 of the Texas Administrative Code.

15. Water is available for appropriation by Permit No. 5851 in the amounts indicated in this order, in accordance with the applicable Demand Level in effect at the time of diversions. Tex. Water Code § 11.134(b)(2).
16. Return flows, once discharged into a state watercourse, are subject to appropriation by others. Tex. Water Code §§ 11.046(c), 11.121. However, these appropriative rights in the return flows of others can be later reduced or terminated once the discharger directly reuses or obtains an indirect reuse bed and banks authorization under Texas Water Code § 11.042(b) or (c).
17. There is no conflict between Texas Water Code § 11.042 and § 11.046(c). Section 11.042(c) does not operate to reserve return flows for the discharger or water right holder. Therefore, current return flows discharged by third parties, subject to the limitations in Permit No. 5851, are appropriated to BRA, but are subject to curtailment by direct or indirect reuse by the discharger.
18. BRA has demonstrated that it sought authorization to use the bed and banks of the Brazos River and its tributaries to convey and divert its surface water-based and groundwater-based return flows pursuant to Texas Water Code § 11.042(b) and (c) and met all requirements under these provisions and applicable TCEQ rules for such bed and banks authorization.
19. The appropriation by BRA of groundwater-based and surface water-based return flows discharged by other persons or entities is a new appropriation subject to the environmental flow requirements for the Brazos River Basin in 30 Texas Administrative Code Chapter 298.
20. BRA has demonstrated that the proposed appropriation is intended for a beneficial use. Tex. Water Code § 11.134(b)(3)(A).
21. Permit No. 5851 will not impair existing water rights or vested riparian water rights. Tex. Water Code § 11.134(b)(3)(B); 30 Tex. Admin. Code § 297.45.
22. Permit No. 5851 will not be detrimental to the public welfare. Tex. Water Code § 11.134(b)(3)(C).
23. Texas Water Code § 11.134(b)(3)(D) requires the TCEQ to consider applicable environmental flow standards under Texas Water Code § 11.1471. This provision is further clarified by Texas Water Code § 11.147(e-3). The environmental flow standards adopted by TCEQ in Chapter 298, Title 30 of the Texas Administrative Code are the standards that must be applied to any new water rights application.
24. A water right permit that complies with the environmental flow standards of Chapter 298, Title 30 of the Texas Administrative Code will maintain water quality and instream uses, including recreation and habitat for fish and aquatic wildlife, and provide necessary beneficial flows to bays and estuaries while considering all public interests and fully

satisfying the requirements of Texas Water Code §§ 11.0235(b) and (c); 11.046(b); 11.134(b)(3)(D); 11.147(b), (d), (e), and (e-3); 11.150; and 11.152; and 30 Texas Administrative Code § 297.54(a).

25. Environmental flow restrictions may only be applied to a new appropriation of water or to the increase in the amount of water to be stored, taken, or diverted that is authorized by an amendment to an existing permit. Tex. Water Code § 11.147(e-1). Therefore, the environmental flow requirements in the System Operation Permit may not be applied to BRA's existing water rights.
26. The environmental flow conditions in Permit No. 5851 implement and are consistent with the environmental flow standards adopted for the Brazos River Basin. 30 Tex. Admin. Code Ch. 298, Subchapters A and G.
27. Permit No. 5851, as approved by this order, will maintain water quality and instream uses, including recreation and habitat for fish and aquatic wildlife, and provide necessary beneficial flows to bays and estuaries while considering all public interests and fully satisfying the requirements of Texas Water Code §§ 11.0235(b) and (c); 11.046(b); 11.134(b)(3)(D); 11.147(b), (d), (e), and (e-3); 11.150; 11.151; and 11.152; and 30 Texas Administrative Code §§ 297.54(a), 307.4(g)(1) and (2), and 307.10(1), and Chapter 298.
28. The environmental flow limits in Permit No. 5851, as approved by this order, are subject to adjustment by the Commission.
29. All of the regional planning areas within the Brazos River Basin have an approved regional water plan. Tex. Water Code § 11.134(c).
30. Application No. 5851 and Permit No. 5851 are consistent with the adopted State Water Plan, and applicable regional water plans. Tex. Water Code § 11.134(b)(3)(E).
31. BRA will use reasonable diligence to avoid waste and achieve water conservation. Tex. Water Code § 11.134(b)(4).
32. BRA has an approved water conservation plan and drought contingency plan, and conservation measures and alternatives were evaluated in considering Application No. 5851. Tex. Water Code § 11.1271(a), (c); 30 Tex. Admin. Code §§ 288.4, 288.5, 288.7, 288.20, 288.22, 297.50.
33. Application No. 5851's requests for a bed and banks authorization and an exempt interbasin transfer authorization comply with the TCEQ rules. Tex. Water Code §§ 11.042 and 11.085(v).
34. The term permit to use water appropriated under Water Use Permit No. 2925 (Allens Creek Reservoir) prior to reservoir construction complies with Texas Water Code § 11.1381.

35. The Commission has reviewed this action for consistency with the goals and policies of the Texas Coastal Management Program (CMP) in accordance with the regulations of the Coastal Coordination Council and has determined that the action is consistent with the applicable CMP goals and policies. 30 Tex. Admin. Code Ch. 281.
36. BRA should be assessed the entire cost of the transcript of the First and Second Hearings in this case. 30 Tex. Admin. Code § 80.23.
37. BRA has demonstrated that Application No. 5851 satisfies each applicable statutory and regulatory requirement for appropriation of water.
38. The evidence admitted in this case shows that Application No. 5851 should be granted in part and Permit No. 5851 should be issued, as that permit is proposed by BRA Exhibit No. 132B and that permit and its WMP are amended as provided in this order. The changes BRA is ordered to make to conform the WMP to the Commission's order are clerical and do not affect the finality of the order.

NOW, THEREFORE, BE IT ORDERED BY THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY THAT:

1. Application No. 5851 is granted in part and Water Use Permit No. 5851 is issued to the Brazos River Authority in the form attached with the following changes:
 - a. The "TYPE" of authorization at the top of the first page is amended as follows:

Type §§ 11.121, 11.042, 11.046, 11.085, & 11.1381.
 - b. An unnumbered, bulleted paragraph on page 3 is amended as follows:

A term permit, pursuant to Texas Water Code § 11.1381, for a term of thirty (30) years from the issued date of this permit, or until the ports are closed on the dam impounding Allens Creek Reservoir, whichever is earlier, to allow Applicant to use the water appropriated under Water Use Permit No. 2925, as amended, until construction of the Allens Creek Reservoir. Applicant requested a term authorization to impound, divert, and use not to exceed ~~202,650~~ 202,000 acre-feet of water per year at the Gulf of Mexico; and
 - c. The bullet point on page three of Permit which begins "An appropriation of return flows," is revised as follows:

An appropriation of return flows (treated sewage effluent and brine bypass/return) to the extent that such return flows continue to be discharged or returned into the bed and banks of the Brazos River, its tributaries, and Applicant's reservoirs. The appropriation of return flows would be subject to interruption or termination by direct reuse or ~~termination by indirect reuse within the discharging entity's city~~

~~limits, extraterritorial jurisdiction, or contiguous water certificate of convenience and necessity boundary;~~

- d. The existing Paragraph 1.A is deleted and replaced with the following:

Permittee is authorized to divert and use, for domestic, municipal, agricultural, industrial, mining and recreation use, water in the applicable amount shown below, as further described, defined, and limited by the Water Management Plan (WMP), within its service area, subject to special conditions:

- (1) Not to exceed 333,736 acre-feet per year at all times prior to: (1) an expansion of the Comanche Peak Nuclear Power Plant (CPNPP) in a manner that results in the plant needing at least 90,000 acre-feet per year of additional water; and (2) the point when the ports are closed on the dam impounding Allens Creek Reservoir. Of the total amount, 50,076 acre-feet constitutes the return flows of others pursuant to Texas Water Code §§ 11.046(c) and 11.121. This 50,076 acre-feet is subject to Special Conditions in Permit Paragraph 5.A.
- (2) Not to exceed 297,293 acre-feet per year at all times when: (1) CPNPP has been expanded in a manner that results in the plant needing at least 90,000 acre-feet per year of additional water; but (2) the ports on the dam impounding Allens Creek Reservoir have not yet been closed. Of the total amount, 50,076 acre-feet constitutes the return flows of others pursuant to Texas Water Code §§ 11.046(c) and 11.121. This 50,076 acre-feet is subject to Special Conditions in Permit Paragraph 5.A.
- (3) Not to exceed 469,623 acre-feet per year at all times when: (1) CPNPP has not yet been expanded in a manner that results in the plant needing at least 90,000 acre-feet per year of additional water; but (2) the ports have been closed on the dam impounding Allens Creek Reservoir. Of the total amount, 50,076 acre-feet constitutes the return flows of others pursuant to Texas Water Code §§ 11.046(c) and 11.121. This 50,076 acre-feet is subject to Special Conditions in Permit Paragraph 5.A.
- (4) Not to exceed 434,703 acre-feet per year at all times after: (1) CPNPP has been expanded in a manner that results in the plant needing at least 90,000 acre-feet per year of additional water; and (2) the ports on the dam impounding Allens Creek Reservoir have been closed. Of the total amount, 50,076 acre-feet constitutes the return flows of others pursuant to Texas Water Code §§ 11.046(c) and 11.121. This 50,076 acre-feet is subject to Special Conditions in Permit Paragraph 5.A.

- e. Paragraph 1.B is revised as follows:

- (1) Permittee is authorized, pursuant to Texas Water Code § 11.042(a), to use the bed and banks of the Brazos River below Possum Kingdom Lake, the Brazos River tributaries and Permittee's authorized reservoirs for the conveyance, storage, and subsequent diversion of the water authorized as a new appropriation herein, subject to identification of specific losses and to special conditions.
- (2) Permittee is authorized, pursuant to Texas Water Code § 11.042(b) and (c), to use the bed and banks of the Brazos River below Possum Kingdom Lake, the Brazos River tributaries and Permittee's authorized reservoirs for the conveyance, storage, and subsequent diversion of 47,322 acre-feet of Permittee's own return flows, subject to identification of specific losses and to special conditions.

f. Paragraph 1.E is amended as follows:

Pursuant to Texas Water Code § 11.1381, for a term of thirty (30) years from the issued date of this permit, or until the ports are closed on the dam impounding Allens Creek Reservoir, whichever is earlier, Permittee may use the water appropriated under Water Use Permit No. 2925, as amended. As part of the amount appropriated in Paragraph 1.A., during the term of this authorization Permittee may divert and use not to exceed ~~202,650~~202,000 acre-feet of water per year, subject to Special Conditions 5.C.1-~~57~~.

g. The existing section 5.A is revised as follows:

- (1) Permittee's authorization to divert and use return flows under this permit is limited to return flows that are authorized for discharge by Texas Pollutant Discharge Elimination System (TPDES) Permits in effect as of the issuance date of this permit, and as authorized by future modifications of this permit or the WMP.
- (2) ~~Permittee shall maintain a record of return flows as a part of its accounting plan required by Special Conditions 5.C and 5.D (return flow accounting plan). The return flow accounting plan must account, by source, for all return flows discharged. The return flow accounting plan shall include amounts discharged by outfall. Computation of the amount of additional water supply available due to return flows actually discharged is determined in the WMP, taking into account environmental flow conditions and demands of senior water rights. Permittee's use of additional water supply attributable to the presence of return flows is limited to the amount shown to be available, based upon amounts discharged as determined in the WMP. The return flow accounting plan shall be included as part of Permittee's accounting/delivery plan. Subject to approval by the Executive Director, Permittee shall revise the WMP~~

Accounting Plan to account for return flows authorized under Texas Water Code § 11.042(b) and (c) in accordance with the Brazos River Authority Accounting Plan, Executive Director's Approach to Return Flows and to account for return flows authorized under Texas Water Code §§ 11.046(c) and 11.121 in accordance with the Brazos River Authority Accounting Plan BRA Approach to Return Flows.

- (3) Permittee's storage, diversion and use of that portion of the appropriation based on return flows is dependent upon potentially interruptible return flows. Permittee's storage, diversion and use of that portion of the appropriation based on surface water based return flows ~~will be~~ is interrupted by direct reuse ~~or will be terminated by indirect reuse within the discharging entity's corporate limits, extraterritorial jurisdiction, or contiguous water certificate of convenience and necessity boundary, provided the discharging entity has applied for and been granted authorization to reuse the return flows and is terminated by indirect reuse upon the issuance of a bed and banks authorization pursuant to Texas Water Code § 11.042(c) by the Commission to the discharging entity.~~
- (4) Permittee's storage, diversion and use of groundwater based return flows is ~~subject to interruption~~ interrupted by direct reuse ~~or indirect reuse and is terminated by indirect reuse~~ upon issuance of a bed and banks authorization pursuant to Texas Water Code § 11.042(b) by the Commission to the discharging entity.
- (5) Permittee shall, at a minimum, use the return flow (effluent discharges) volumes reported monthly to the Commission by wastewater dischargers that have permitted discharges of greater than or equal to one (1) million gallons per day, and by other wastewater dischargers as provided by the accounting plan, to verify the available return flows for the accounting plan.

h. Paragraph 5.C.3 is amended as follows:

Permittee may use any source of water available to Permittee to satisfy the diversion requirements of senior water rights to the same extent that those water rights would have been satisfied by passing inflows through the Permittee's system reservoirs on a priority basis. Permittee's use of water previously stored in Permittee's reservoirs or available for appropriation by Permittee's senior water rights shall be documented in the accounting/delivery plan. Use of this option shall not cause Permittee to be out of compliance with the accounting/delivery plan, or Special Condition 5.C.2, or prevent the achievement of environmental flow requirements that would have otherwise been achieved.

i. A new Special Condition 5.C.6 is added to read as follows:

Permittee shall not divert or impound water pursuant to the authorizations in the permit if such diversions or impoundments would cause the flow at USGS Gage 081166550 (Brazos River near Rosharon) to fall below the lesser of 630 cfs, or Dow Chemical Company's projected daily pumping rate. This provision is not effective if: (a) Dow Chemical Company has not provided its projected daily pumping rate to Permittee; or (b) a watermaster having jurisdiction over the lower Brazos River has been appointed and continues to function.

j. A new Special Condition 5.C.7 is added to read as follows:

In recognition of current drought conditions, BRA shall perform a detailed evaluation of whether the recently-ended drought: (1) represents a drought worse than the drought of record of the 1950s in the Brazos River Basin; and (2) decreases the amount of water available for appropriation under this permit. BRA shall provide a report to the TCEQ documenting its findings within nine months after issuance of this permit. If the report concludes that the recently-ended drought decreases the amount of water available for appropriation under this permit, then the appropriation amounts specified in Paragraph 1.A. of this permit shall be correspondingly reduced.

k. The existing Paragraph 5.D.5 is deleted and replaced with the following:

(a) Permittee's diversion and use under this permit and WMP shall be immediately reduced by 14% of the amounts authorized in Paragraph 1.A. USE due to sedimentation in Permittee's reservoirs, as follows:

(1) not to exceed 287,013 acre-feet per year at all times prior to: (1) an expansion of the Comanche Peak Nuclear Power Plant (CPNPP) in a manner that results in the plant needing at least 90,000 acre-feet per year of additional water; and (2) the point when the ports are closed on the dam impounding Allens Creek Reservoir;

(2) Not to exceed 255,672 acre-feet per year at all times when: (1) CPNPP has been expanded in a manner that results in the plant needing at least 90,000 acre-feet per year of additional water; but (2) the ports on the dam impounding Allens Creek Reservoir have not yet been closed;

(3) Not to exceed 403,876 acre-feet per year at all times when: (1) CPNPP has not yet been expanded in a manner that results in the plant needing at least 90,000 acre-feet per year of additional water; but (2) the ports have been closed on the dam impounding Allens Creek Reservoir; and

(4) Not to exceed 373,845 acre-feet per year at all times after: (1) CPNPP has been expanded in a manner that results in the plant needing at least 90,000 acre-feet per year of additional water; and (2) the ports on the dam impounding Allens Creek Reservoir have been closed.

(b) If Permittee, as a subsequent major amendment of the WMP, is able to demonstrate the availability of sufficient additional sources of supply to offset these reductions in storage capacity, the amount of water authorized for diversion and use may increase up to the appropriated amount in Use Paragraph 1.A.

2. Brazos River Authority's WMP, which was admitted as BRA Exhibit 113 and includes the WMP Technical Report, all appendices, and other attachments, is approved and incorporated as a part of the permit, with the following changes:

a. A new paragraph is added at the bottom of page 9 of the WMP to read as follows: Subject to Special Condition 5.D.5.b, the maximum annual use for each reach is limited to 86% of the largest maximum annual diversion under the "SysOp" for that reach in Tables G.3.14 through G.3.25 of Appendix G-3 of the WMP Technical Report for the firm appropriation demand scenario that is applicable during the year in which water is diverted, or 1,460 acre-feet, whichever is greater.

b. A paragraph on page 41 of the WMP is amended as follows:

The maximum allowable System Operation Permit diversion amount within a reach applies to the aggregate of all diversions in the reach. An allowable System Operation Permit diversion, whether upstream or downstream of the reach's applicable measurement point, will not reduce flow below the environmental flow standard at a point immediately below BRA's point of diversion and additionally will not exceed provisions set forth in Section IV.D.4.b below.

c. The last paragraph on page 5-7 and continuing on page 5-8 of the WMP Technical Report is amended as follows:

[Initial portion of paragraph unchanged] The BRA approach version of the Accounting Plan includes reported monthly return flows for dischargers that have a permitted discharge greater than or equal to 1 million gallons per day (MGD). Within one month after this data is available from TCEQ for the prior calendar year, the total annual amount of return flows These monthly amounts will be compared to the assumed amount used during the time period of this initial WMP. If actual return flows are substantially less than the amounts used in the modeling the assumptions used in the model will be adjusted and the model re-run to examine the impacts on yield less than the amount used in modeling by 5% or greater, BRA will revise the models and submit results to TCEQ.

3. The Executive Director shall make changes in Permit No. 5851 and the WMP to conform to this order.
4. The Brazos River Authority shall make changes to the WMP to conform with this order and submit them to the Executive Director for approval as to form.
5. Brazos River Authority shall pay the full cost of the transcript for the hearing.
6. The effective date of this Order is the date the Order is final.
7. All other motions, requests for entry of specific Findings of Fact or Conclusions of Law, and any other requests for general or specific relief not expressly granted herein, are hereby denied for want of merit.
8. If any provision, sentence, clause, or phrase of this Order is for any reason held to be invalid, the invalidity of any portion shall not affect the validity of the remaining portions of the Order.
9. The Chief Clerk of the Texas Commission on Environmental Quality shall forward a copy of this Order to the parties.

ISSUED:

**TEXAS COMMISSION ON
ENVIRONMENTAL QUALITY**

**Bryan W. Shaw, Ph.D., P.E., Chairman
For the Commission**