



State Office of Administrative Hearings

Kristofer Monson
Chief Administrative Law Judge

March 31, 2020

Natasha J. Martin
Re Client: Lost Pines Groundwater Conservation District
Graves Dougherty Hearon & Moody, P.C.
401 Congress Ave., Suite 2200
Austin, TX 78701

VIA E-FILE TEXAS

RE: Docket No. 952-19-0705; Application of Lower Colorado River Authority for Operating and Transport Permits for Eight Wells in Bastrop County, Texas

Dear Ms. Martin:

Please find enclosed a Proposal for Decision in this case. It contains our recommendation and underlying rationale.

Exceptions and replies may be filed by any party in accordance with 1 TEX. ADMIN. CODE § 155.507(c), a SOAH rule which may be found at www.soah.state.tx.us.

Sincerely,

Handwritten signature of Ross Henderson in blue ink.

Ross Henderson
Administrative Law Judge

Handwritten signature of Rebecca S. Smith in black ink.

Rebecca S. Smith
Administrative Law Judge

RS/lc
Enclosure (including 2 CDs)

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SOAH DOCKET NO. 952-19-0705

APPLICATION OF LOWER COLORADO § BEFORE THE STATE OFFICE
RIVER AUTHORITY FOR OPERATING §
AND TRANSPORT PERMITS FOR § OF
EIGHT WELLS IN BASTROP COUNTY, §
TEXAS § ADMINISTRATIVE HEARINGS

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SOAH DOCKET NO. 952-19-0705

APPLICATION OF LOWER COLORADO RIVER AUTHORITY FOR OPERATING AND TRANSPORT PERMITS FOR EIGHT WELLS IN BASTROP COUNTY, TEXAS §
§
§
§
§ **BEFORE THE STATE OFFICE**
OF
ADMINISTRATIVE HEARINGS

PROPOSAL FOR DECISION

I. INTRODUCTION

The Lower Colorado River Authority (LCRA) submitted eight applications (Applications) to the Lost Pines Groundwater Conservation District (District) seeking authorization to withdraw 25,000 acre-feet of water per year from eight wells in the Simsboro Formation in Bastrop County, Texas, and to transport that water to Travis, Lee, and Bastrop Counties. The District’s General Manager (GM) issued Draft Operating Permits and Draft Transport Permits, which contain provisions that LCRA and various other parties object to. At the close of briefing, the GM proposed additional changes to the Draft Operating Permits (Revised Draft Operating Permits). The Administrative Law Judges (ALJs) recommend that the Revised Draft Operating Permits and the Draft Transport Permits be issued with the following changes: (1) changes to the requirements to enter a well monitoring agreement, including the deadline to enter into the agreement and removal of the requirement that violation of the agreement is a permit violation; (2) an amendment to the definition of “monitoring well system” to require that effects on surface water be monitored; (3) the removal of the requirement that LCRA present end-user contracts or binding commitments; (4) an amendment to Revised Draft Operating Permit Special Condition 5 to clarify that affected landowners may participate in the permit renewal process, including the determination of whether an amendment is necessary; and (5) the removal from the Draft Transport Permits of the Special Provision prohibiting discharge into a surface watercourse.

II. BACKGROUND AND PROCEDURAL HISTORY

A. The Applications

LCRA is a conservation and reclamation district established by the Texas Legislature in 1934 that serves as a regional water supplier within its 35-county service area.¹ Although LCRA primarily manages and supplies surface water, its Executive Vice President for Water, John Hofmann, testified that LCRA's responsibility is not limited to surface water.² As part of a goal to diversify its water supply in order to "drought proof" it, LCRA began a groundwater project in the aquifer regulated by the District.³

As part of that project, on February 1, 2018, LCRA filed the Applications for operating and transport permits with the District. The application for operating permits sought authorization to withdraw a total of 25,000 acre-feet per year of groundwater from the Simsboro Formation based on groundwater rights LCRA acquired in 2015. These groundwater rights were beneath the Griffith League Ranch, an approximately 4,847-acre property owned by the Capitol Area Council, Inc. of the Boy Scouts of America. The water was to be used for all beneficial uses authorized in chapter 36 of the Texas Water Code. On February 21, 2018, LCRA resubmitted the Applications on different forms.

On August 20, 2018, the District's GM, James Totten, notified LCRA by letter that its Applications were administratively complete and that the Applications would be set for a public hearing. The letter also provided LCRA with the GM's Draft Operating Permits and Draft Transport Permits (collectively, Draft Permits.).

Following notice, the District held a public hearing on the Applications on September 26, 2018, and voted to contract with the State Office of Administrative Hearings

¹ LCRA Ex. 1 (Hofmann direct) at 7.

² LCRA Ex. 1 (Hofmann direct) at 8.

³ LCRA Ex. 1 (Hofmann direct) at 9.

(SOAH) to conduct a hearing on the Applications. Several Protestants disagreed with the issuance of the Draft Permits, and LCRA also challenged some of the Draft Transport Permits' provisions.

On December 18, 2018, SOAH ALJs Michael O'Malley and Laura Valdez held a prehearing conference in Bastrop, Texas. At the prehearing conference, the ALJs admitted the following as parties: LCRA, the District, Aqua Water Supply Corporation (Aqua), Environmental Stewardship, City of Elgin (Elgin), and Recharge Water, LP (Recharge). A group of landowners represented by a single attorney was also admitted, and will be referred to as the Brown Landowners. Several self-represented litigants were also named as parties. Following a challenge to party status, many of the self-represented litigants, and some of the Brown Landowners, were determined not to have a justiciable interest and were struck as parties.⁴ The remaining self-represented litigants were Peggy Jo and Marshall Hilburn, Walter Winslett, JC Jensen, Elvis and Roxanne Hernandez, Verna L. Dement, Catherine and Charles L. White, and Richard Martinez. Mr. Jensen and Mr. Martinez withdrew their protests, as did several of the Brown Landowners.

The hearing on the merits was held October 15-22, 2019, before ALJs Ross Henderson and Rebecca S. Smith. The first four days of the hearing were held in Bastrop, Texas, and the last two took place at SOAH's hearing facility in Austin, Texas. Mr. and Mrs. Hernandez were the only self-represented litigants who prefiled testimony and participated in the hearing on the merits. The record closed on January 31, 2020, with the filing of reply briefs.

In its original Applications, LCRA stated that the water would be used throughout its 35-county water service area. In its testimony, and at hearing, LCRA amended its request to only seek to use the water in Bastrop, Lee, and Travis Counties.

As an attachment to his reply brief, the GM made several changes to the Draft Operating Permits. Some of these changes are substantive; some are not. No party objected to these changes

⁴ SOAH Order No. 5.

or asked to file briefing in response to these changes. The ALJs will address these changes and will refer to the GM's January 31, 2020 version of the permits as the Revised Draft Operating Permits.⁵

B. Permits in the District

The groundwater regulated by the District is in the Simsboro Formation, part of the larger Carrizo-Wilcox aquifer.⁶ Overlaying the Simsboro is the Calvert Bluff, and the Hooper Formation underlies the Simsboro Formation.⁷ The Simsboro Formation “is often used for large-scale public water supply production.”⁸ However, there is no history of large-volume pumping within the District.⁹

The Simsboro Formation and the other aquifer units dip toward the Gulf of Mexico, and thus are deeper toward the east and southeast in Bastrop County.¹⁰ The deeper portion of the Simsboro is referred to as the downdip. There are also shallower outcrop areas.

The parties challenging the Draft Permits either have wells or permits to produce water from the area. Aqua, a retail public utility with a service area in Bastrop, Caldwell, Fayette, Lee, Travis, and Williamson Counties, has a permit from the District authorizing the production of 23,627 acre-feet per year from 15 wells in the Simsboro Formation.¹¹ Twelve of those wells are in two well fields near the shallow outcrop of the Simsboro. Aqua's three other wells are located on the south side of Highway 290, in the deeper downdip portion of the aquifer.¹²

⁵ The Revised Draft Permits reflect the second amendment the GM made to the Draft Operating Permits.

⁶ Recharge Ex. B (Thornhill direct) at 3.

⁷ Aqua Ex. 4 (Keester direct) at 7.

⁸ Aqua Ex. 4 (Keester direct) at 7.

⁹ GM Ex. 11 (Hutchison direct) at 16.

¹⁰ Aqua Ex. 4 (Keester direct) at 7.

¹¹ Aqua Ex. 1 (McMurry direct) at 2; Aqua Ex. 4 (Keester direct) at 8.

¹² Aqua Ex. 4 (Keester direct) at 8.

Elgin has a retail public utility that provides retail water utility service within its certificated service area.¹³ The city, which is located in the greater Austin area, expects continued and rapid growth.¹⁴ Elgin has four wells that are all partially or wholly completed within the Simsboro Formation.¹⁵ Two of Elgin's wells are in the outcrop area of the Simsboro Formation, with the wells screened partially in both the Simsboro and Hooper Formations.¹⁶ Its other two wells are located in the downdip and are entirely screened within the Simsboro Formation.¹⁷

Recharge, formerly known as End Op, L.P., has permits authorizing the production of 46,000 acre-feet from 14 wells, to be phased in, which it acquired following years of litigation and a settlement.¹⁸ Seven of the permitted wells are to be located in Bastrop County, and seven are to be located in Lee County.¹⁹ Some of Recharge's proposed wells in Bastrop County are the closest wells to LCRA's proposed pumping. Many of the parties currently opposed to LCRA's permit application also opposed Recharge's application. As part of its settlement of the underlying contested case about its application, Recharge agreed to create a mitigation fund to pay well owners. Recharge has not yet drilled any wells, but is required under the terms of its permit to complete four wells in Lee County before drilling any wells in Bastrop County, a term that was added to its permit, but was not part of its settlement. Recharge did not appeal the inclusion of this term. Under the permit (and settlement terms), Recharge's mitigation obligations start once it begins pumping in Lee County.²⁰

The other large permits in the District belong to Forestar USA Real Estate Group, Inc. (Forestar), which is authorized to pump 28,500 acre-feet per year in Lee County, subject to

¹³ Elgin Ex. 1 (Prinz direct) at 2.

¹⁴ Elgin Ex. 1 (Prinz direct) at 2.

¹⁵ Elgin Ex. 2 (Perry direct) at 3.

¹⁶ Elgin Ex. 6 (Keester direct) at 7.

¹⁷ Elgin Ex. 6 (Keester direct) at 8.

¹⁸ Recharge Ex. 1.

¹⁹ Recharge Ex. B (Thornhill direct) at 19.

²⁰ Recharge Ex. B (Thornhill direct) at 56.

phasing,²¹ and the City of Bastrop (Bastrop), which is authorized to pump 2,000 acre-feet per year.²² Bastrop's application was the subject of a contested case hearing. The Proposal for Decision (PFD) in that contested case was officially noticed in this case.²³ The Brown Landowners' and the Hernandezes' wells are exempt from District regulation. The Hernandezes' well is in the Calvert Bluff Formation, which overlays the Simsboro. The Brown Landowners' wells are scattered around the area.²⁴

C. The Draft Operating Permits

The GM's Draft Operating Permits contain sixteen special conditions, several of which are at the heart of this dispute. These special conditions first require that LCRA enter into a monitoring well agreement within a certain time. The Draft Operating Permits provided a 90-day deadline to enter into this agreement, but in response to LCRA's arguments, the Revised Draft Operating Permits extended the deadline to 180 days.²⁵

The special conditions in both the Draft Operating Permits and Revised Draft Operating Permits also divide the withdrawal of groundwater into four phases, three of which involve pumping. Withdrawal is not allowed during Phase I, which requires LCRA to add new monitoring wells and to comply with the monitoring well agreement required in another special condition.

Once the monitoring wells are in place, LCRA may move to Phase II. Phase II authorizes the withdrawal from two wells (Wells 7 and 8) of an aggregated annual amount of up to 8,000 acre-feet of water, with an aggregated maximum rate of withdrawal of 6,000 gallons per minute. LCRA would not be authorized to withdraw more water per year than the amount LCRA has a

²¹ Recharge Ex. 6.

²² Recharge Ex. 8.

²³ *Application of City of Bastrop for an Operating Permit for Well No. 1 in Bastrop County, Texas*, SOAH Docket No. 952-15-3851 (July 26, 2016).

²⁴ Environmental Stewardship's standing was based on the wells of some of its members.

²⁵ Revised Draft Operating Permit, Special Condition No. 1.

contract (under the Draft Operating Permits), or binding commitment (under the Revised Draft Permits) to provide to an authorized place of use.

Three years after permit issuance, LCRA may then request to be moved to Phase III, under which the aggregated annual withdrawal amount could be increased to 15,000 acre-feet of water per year from four wells with an aggregated maximum rate of withdrawal of 10,000 gallons per minute. To move to Phase III, LCRA must show it has withdrawn an aggregate amount of acre-feet per year from a combination of one or more of the aggregated wells during two consecutive twelve-month periods. In the Draft Operating Permits, this amount was 8,000 acre-feet per year; in the Revised Draft Operating Permits, it is 4,000 acre-feet. Once again, LCRA must show binding contracts or commitments. The utility and clarity of the formula the GM proposed to use in advancing LCRA from one phase to another is disputed. Discussion of the phasing formula is set out in Section G, below.

Finally, LCRA may request to move to Phase IV, under which the aggregated annual withdrawal may be increased to an amount not to exceed 25,000 acre-feet per year from all eight wells, with an aggregated maximum rate of withdrawal of 18,000 gallons per minute. To reach this phase, under the Revised Draft Permit, LCRA must show binding contracts or commitments. LCRA must also show it has withdrawn at least an aggregate amount of at least 11,250 acre-feet²⁶ per year from a combination of one or more of the aggregated wells during three consecutive twelve-month periods. As with Phase III, the GM's proposed formula is in dispute.

Additionally, the special conditions in the Revised Draft Permits require LCRA to provide written contracts or commitments within five years of beginning to pump under Phase II; to submit drought contingency and water conservation plans for certain end users; to be subject to future production limits the District imposes; to pay production fees; and to conduct 36-hour pump tests for each well.

²⁶ The 11,250 amount is contained in the Revised Draft Operating Permits. The Draft Operating Permits required a withdrawal of at least 15,000 acre-feet per year.

Unlike the Draft Operating Permits, the Revised Draft Operating Permits' special condition 14 requires a pump test for each new well.²⁷ This special condition requires that “[p]rior to the operation of any of the Aggregated Wells, [LCRA] shall complete a 36-hour pump test for each new well that complies with District Rule 5.1.B(5) and report the results of the test to the District.”

Under both the Draft Operating Permits and the Revised Draft Permits, wells must be sited within 100 feet of the location identified in the Application, and LCRA is granted a variance for the time limits for completion of permitted wells or well operation. Both versions of the Draft Permits required LCRA to provide the GM with the well-design specifications for his approval. Between the Draft Operating Permits and the Revised Draft Permits, the GM changed the timeline for LCRA to provide that information.

D. The Draft Transport Permits

The Draft Transport Permits authorize LCRA to transport the water it pumps in the District outside the District. Following LCRA's Application amendment, Travis County is the only county where LCRA seeks to transport water. A special condition in the Draft Transport Permits that prohibits transporting groundwater via the bed and banks of a river remains in dispute.

III. APPLICABLE LAW

In Texas, a landowner owns the groundwater below the surface of his or her land as real property and is entitled to drill for and produce that groundwater, subject to a groundwater conservation district's well-spacing and production restrictions, so long as the drilling and production does not cause waste or malicious drainage of other property, or negligently cause

²⁷ The Draft Operating Permits were ambiguous about whether a pump test was required before the operation of each well or before the operation of the first well. The change in the Revised Draft Operating Permits appears to be an uncontroversial clarification of the earlier special condition.

subsidence.²⁸ Groundwater conservation districts, which are described as the state's preferred method of groundwater management, have the following obligations:

to protect property rights, balance the conservation and development of groundwater to meet the needs of this state, and use the best available science in the conservation and development of groundwater through rules developed, adopted, and promulgated by a district in accordance with [chapter 36].²⁹

Chapter 36 of the Texas Water Code (Code) outlines the process by which landowners obtain the right to produce their groundwater within groundwater conservation districts. Under chapter 36, a groundwater conservation district, such as the District, "shall require a permit for the drilling, equipping, operating, or completing of wells,"³⁰ except for exempt wells.³¹

Before granting or denying an operating permit, a groundwater conservation district must consider whether:

- (1) the application conforms to the requirements prescribed by [Code chapter 36] and is accompanied by the prescribed fees;
- (2) the proposed use of water unreasonably affects existing groundwater and surface water resources or existing permit holders;
- (3) the proposed use of water is dedicated to any beneficial use;
- (4) the proposed use of water is consistent with the district's approved management plan;
- (5) if the well will be located in the Hill Country Priority Groundwater Management Area, the proposed use of water from the well is wholly or partly to provide water to a pond, lake, or reservoir to enhance the appearance of the landscape;

²⁸ Tex. Water Code § 36.002(a), (b), (d).

²⁹ Tex. Water Code § 36.0015(b).

³⁰ Tex. Water Code § 36.113(a).

³¹ Exempt wells are wells used solely for domestic use or for providing water for livestock or poultry and that are located on a tract of land larger than 10 acres and cannot produce more than 25,000 gallons of groundwater a day. Tex. Water Code § 36.117(b)(1). Certain wells related to oil rigs and mining are also exempt. Tex. Water Code § 36.117(b)(2),(3).

- (6) the applicant has agreed to avoid waste and achieve water conservation; and
- (7) the applicant has agreed that reasonable diligence will be used to protect groundwater quality and that the applicant will follow well plugging guidelines at the time of well closure.³²

The District has adopted similar rules for permit applications.³³ In deciding whether to grant an application, approve an application with terms other than those requested, or deny the application, the District's rules require it to consider, in addition to the seven factors set out above, the following:

- (8) whether granting the application is consistent with the District's duty to manage total groundwater production on a long-term basis to achieve an applicable Desired Future Condition, considering:
 - (a) the Modeled Available Groundwater determined by the [Texas Water Development Board (TWDB)] executive administrator;
 - (b) the TWDB executive administrator's estimate of the current and projected amount of groundwater produced under exemptions granted by District Rules and Texas Water Code § 36.117;
 - (c) the amount of groundwater authorized under permits previously issued by the District;
 - (d) a reasonable estimate of the amount of groundwater that is actually produced under permits issued by the District; and
 - (e) yearly precipitation and production patterns.
- (9) whether the conditions and limitations in the Operating Permit prevent [w]aste, achieve water conservation, minimize as far as practicable the drawdown of the water table or the reduction of artesian pressure, or lessen interference between wells; [and]
- (10) whether the applicant has a history of non-compliance with District Rules and chapter 36 of the Texas Water Code, including any record of

³² Tex. Water Code § 36.113(d). Identical provisions are found in Rule 5.2.D of the District's rules.

³³ The District's Rules were admitted into evidence as GM Ex. 9, and are also available at <https://www.lostpineswater.org/DocumentCenter/View/127/LPGCD-Rules---Adopted-10-16-19> (last visited March 23, 2020).

enforcement actions against the applicant for violation of District Rules or chapter 36.³⁴

Groundwater conservation districts may adopt rules regulating the spacing of wells and the production of groundwater.³⁵ When promulgating rules that limit groundwater production, a groundwater conservation district “may preserve historic or existing use before the effective date of the rules,” subject to the district’s management plan.³⁶

Under chapter 36, groundwater conservation districts are not required to adopt rules that provide for correlative rights—in other words, allocating to each landowner a proportionate share of available groundwater for production from the aquifer based on the number of acres the landowner owns.³⁷

IV. ISSUES REGARDING OPERATING PERMITS

Of the Protestants, Elgin, Environmental Stewardship, and Brown Landowners argue that the Applications should be denied, Recharge, Aqua, and Environmental Stewardship argue that the operating permits should be limited to 8,000 acre-feet per year, which is also the limit in the first phase of pumping (Phase II) under the Draft Permits. Elgin suggests the limit, if the permits are issued, should be 7,000 acre-feet per year; for Brown Landowners, that total is 6,000 acre-feet. The Hernandezes argue that the permit limit should be 10,000 acre-feet per year. Recharge, Elgin, and the Mr. Hernandez want the limits to be expressly tied to other factors.

In making their arguments, the parties focus on the following factors set out in Code chapter 36 and the District’s rules:

- Whether the proposed use of water unreasonably affects existing groundwater water resources or existing permit holders;

³⁴ District Rule 5.2.D.

³⁵ Tex. Water Code § 36.116(a).

³⁶ Tex. Water Code § 36.116(b).

³⁷ Tex. Water Code § 36.002(d)(3).

- Whether the proposed use of water unreasonably affects existing surface water resources or existing permit holders;
- Whether the conditions and limitations in the Operating Permit minimize as far as practicable the drawdown of the water table or the reduction of artesian pressure, or lessen interference between wells; and
- Whether granting the application is consistent with the District's duty to manage total groundwater production on a long-term basis to achieve an applicable Desired Future Condition.

The parties generally do not address the remaining factors, which will be set out in the findings of fact and conclusions of law, but not discussed further in this PFD.

A. Unreasonable Effects on Existing Groundwater Resources or Permit Holders

In deciding whether to issue an operating permit, the District must consider whether “the proposed use of water unreasonably affects existing groundwater . . . resources or existing permit holders.”³⁸

Many of the parties argue that the GM improperly determined that LCRA's proposed pumping would not cause an unreasonable effect on groundwater resources or existing permits. LCRA and the GM disagree. In arguing about unreasonable effects, the parties focus on four aspects of the examination. First, Elgin and Aqua disagree with LCRA and the GM about whose use—LCRA's or all permit holders'—should be considered in making this determination. Second, the parties disagree about what “unreasonably affects” means. Third, they disagree about which model should be used in determining whether the effects of pumping are unreasonable. Finally, the parties disagree about whether LCRA sufficiently modeled local effects.

After reviewing the four issues, the ALJs conclude that the District should look at LCRA's use, not the full permitted use; that the definition of “unreasonably affects” provided by LCRA's expert is too narrow; that the new Groundwater Availability Model (GAM) approved by the Texas

³⁸ Tex. Water Code § 36.113(d)(2), District Rule 5.2.D(2).

Water Development Board—and not the previous model that it superseded—should be used in modeling effects; and that, finally LCRA’s modeling sufficiently showed that LCRA’s pumping should not cause unreasonable effects on groundwater.

1. Whose Use Should Be Considered

Before determining whether “a proposed use” would cause unreasonable impacts, the ALJs must first decide whose use—LCRA’s proposed use or all permitted use—should be considered.

a. Parties’ Arguments

LCRA and the GM contend that in determining the effect of the use, the District must examine the use proposed in the Applications, not the use proposed in the Applications combined with all other permitted use in the District. Aqua and Elgin strongly disagree. Elgin points to another factor, which requires looking at District-wide pumping to argue that this factor envisions looking at District-wide pumping, as well.³⁹

b. ALJs’ Analysis

The ALJs will decide this issue by looking at both precedent and the language of the statute and rule. In an earlier contested case hearing for Bastrop’s application with the District for an operating permit, the ALJ concluded that only the applicant’s use should be examined when determining whether proposed use would lead to unreasonable effects. That ALJ concluded, “District Rule 5.2.D(2) only requires the Board to consider whether the [applicant’s] proposed use of water unreasonably affects existing groundwater, not cumulative pumping under the [applicant’s] permit and other existing users at a 100% pumping capacity.” He noted that “Rule 5.2.D. and Code § 36.113(d)(2), on which it is based, focus on the impact of the specific application, not cumulative pumping under the requested permit and other existing users.”

³⁹ See Closing Arguments of City of Elgin (Elgin’s Closing) at 20.

The ALJs agree with this conclusion. The language of the statute and the rule requires an examination of “the proposed use of water,” which suggests a concern with the use represented by the application. The language of “proposed use” is the same language used in other factors that only refer to an applicant’s use, such as whether “the proposed use of water is dedicated to any beneficial use” and, for proposed wells in the Hill Country Priority Groundwater Management Area, whether “the proposed use of water from the well is wholly or partly to provide water to a pond, lake or reservoir to enhance the appearance of the landscape.”⁴⁰

When the District intended to look at use beyond that proposed in an application, it made that clear. For example, the District must consider “the amount of groundwater authorized *under permits previously issued* by the District,” when analyzing whether the application is consistent with the District’s duty to manage total groundwater production on a long-term basis to achieve an applicable desired future condition (DFC).⁴¹

Accordingly, the ALJs conclude that the analysis of whether the proposed use unreasonably affects groundwater or existing permits must focus on LCRA’s proposed pumping, not District-wide permitted pumping.

2. The Definition of “Unreasonably Affect”

a. Parties’ Evidence and Arguments

Only LCRA provided a definition of the term “unreasonably affect,” which is not defined in either the Code or the District Rules. LCRA’s hydrogeology expert, Dr. Young, provided a definition in his testimony. According to Dr. Young, only the following, when resulting from drawdown solely from the pumping well, would constitute unreasonable impacts:

⁴⁰ Tex. Water Code § 36.113(d)(3), (5).

⁴¹ District Rule 5.2.D(8)(c) (emphasis added).

- Drawdown that produces land subsidence that (a) threatens the structural integrity of existing pipelines, building, or other infrastructure; (b) causes land from being used for its intended use; or (c) creates a drainage problem;
- Intrusion of surface water or groundwater from another aquifer into the pumped aquifer that degrades groundwater quality in the pumped aquifer so it would not be suitable for its intended use or its potential use;
- Sufficient reduction (or depletion) of the saturated thickness of an aquifer that prevents the intended use of the aquifer;
- Drawdowns in an aquifer that causes the groundwater conservation district to exceed a DFC for the aquifer; or
- Drawdown from a permitted well that does not meet the District's well spacing or property boundary set-back requirements.⁴²

Elgin's and Aqua's expert witness, Michael Keester, declined to offer an opinion on whether certain effects would be unreasonable. The other parties do not define the term in their arguments.

b. ALJs' Analysis

Although Dr. Young offered the only definition of "unreasonably affects," the ALJs will not simply accept Dr. Young's definition. Dr. Young is a hydrogeologist,⁴³ not an expert on statutory construction. The ALJs find Dr. Young's definition too narrow. While the ALJs agree that all five of Dr. Young's instances of unreasonable impacts would, indeed, be unreasonable, they conclude that impacts short of preventing the intended use of the aquifer or causing a DFC to be exceeded by one's own pumping could still be unreasonable. An unreasonableness determination is necessarily fact-specific. With that, the ALJs turn to the evidence relating to effects of LCRA's proposed pumping on the parties' wells, which requires first looking at the modeling, or the GAM.

⁴² LCRA Ex. 28 (Young direct) at 36.

⁴³ LCRA Ex. 28 (Young direct) at 8.

3. Which Groundwater Availability Model Should Be Used

a. Parties' Evidence and Arguments

What effects are predicted from LCRA's pumping depends on which model is used. Much of the testimony at hearing involved issues relating to the GAM, which is "a computer-based, three-dimensional numerical groundwater flow model that is designed to simulate the dynamics of the groundwater flow for a specific area in Texas."⁴⁴ GAMs for all major and most minor aquifers were developed by the Texas Water Development Board (TWDB) as part of state water planning.

In 2004, the Central Queen City-Sparta GAM was developed and was then used by the District. In 2018, the TWDB updated the model, which is now called the Central Carrizo-Wilcox GAM.⁴⁵ For purposes of this Proposal for Decision, the 2004 GAM will be called the "Old GAM," and the 2018 GAM will be called the "New GAM."

The GM's expert witness Dr. William Hutchison described both GAMs as using a three-dimensional grid of cells, with rows, columns, and layers to represent the structure of an aquifer. The rows and columns represent the area of the aquifers, such as would be seen on a map, and the layers represent the individual aquifers and intervening low-permeability units.

Dr. Hutchison described how the GAM works:

Boundaries of the aquifer and the thicknesses and depths of the layers are represented in the grid based on the best information available to the modelers. Properties of the aquifer—i.e., numerical values such as horizontal and vertical hydraulic conductivity—that control how water moves and how water levels change in response to stresses to the aquifer—e.g., pumping from wells—are applied to each model cell. Processes that add and subtract water to and from the model, including recharge to the various aquifers, movement in and out of the model from areas outside of the model boundaries, discharge to streams and springs, evaporation and transpiration (i.e., uptake of water from plants), and

⁴⁴ GM Ex. 11 (Hutchison direct) at 10.

⁴⁵ GM Ex. 11 (Hutchison direct) at 10.

pumping from wells is also included in a separate set of text files with one text file representing each process, e.g., a wel file (or “welfile”) for the well pumping, a .rch file for the recharge, etc. In model terminology, the processes that add and subtract water from the model domain are called “stresses.” The GAMS are “transient” models, in that they simulate changes throughout time, e.g., through an historical period and throughout the multi-decadal planning period. Time in the model is simulated by a set of stress periods. In the case of the Old GAM and New GAM, each stress period represents a single year.

The actual functions of the aquifer—i.e., the movement of water through the aquifer, changes in water stored within the aquifer layers, and changes in water levels throughout time — are simulated by a set of equations that basically calculate the hydraulic head, i.e. water level, in each model cell in each stress period. Calculating hydraulic head is specifically what the GAMS do, and the changes in hydraulic head from one cell to the next, and from one stress period to the next, can then be used to determine fluxes of water throughout the model and changes in hydraulic head, i.e., drawdown, throughout time.⁴⁶

Several changes were made between the Old GAM and the New GAM. Among those changes is the grid cell. In the Old GAM, the grid cells are consistently spaced at one square mile. In contrast, the New GAM has a variable grid that that reduces the cell size in the area of selected surface water features. The largest cell size in the New GAM is one square mile (the same as the Old GAM), whereas the smallest size is 40 acres.⁴⁷ Although these changes were made to the grid cell sizes, the grid cell size for the area around LCRA’s proposed production area remains one square mile.

GM witness Dr. Hutchison testified that the calibration of the New GAM is better than the Old GAM in Bastrop County, and that impacts from production in Bastrop County may occur in Lee County.⁴⁸ LCRA’s expert witnesses Van Kelly and Dr. Steven Young, along with Recharge expert witness Michael Thornhill, also agreed that the New GAM was an improvement over the Old GAM.⁴⁹ These witnesses all agreed that the Old GAM did not accurately predict drawdown

⁴⁶ GM Ex. 11 (Hutchison direct) at 11.

⁴⁷ GM Ex. 11 (Hutchison direct) at 13.

⁴⁸ GM Ex. 11 (Hutchison direct) at 11. *See also* Tr. at 1489 (“given all those factors, [the New GAM] was a better model.”).

⁴⁹ Recharge Ex. B (Thornhill direct) at 18.

within the District. When LCRA filed its application, the Old GAM was in place, and it was the model the GM used in analyzing the Application. Since that time, both the GM's and LCRA's experts have analyzed the application using the New GAM.

In contrast, Aqua's and Elgin's joint expert, Michael Keester, relied on the Old GAM in his report and testimony.⁵⁰ Mr. Keester testified that while the New GAM was better calibrated for high-volume pumping near the Bryan-College Station area, he did not believe it was better calibrated for high-volume pumping near LCRA's proposed pumping.⁵¹ He also testified that the New GAM has the potential to underestimate drawdown in the updip areas, and stated that this limitation was specifically noted in the New GAM report.⁵² On cross-examination, it was brought out that, when testifying on behalf of End-Op (now Recharge), Mr. Keester had testified about problems with the Old GAM, specifically, that the Old GAM overstates drawdown in the outcrop.⁵³

b. ALJs' Analysis

Based on the overwhelming consensus of the evidence, the ALJs find that the New GAM, as opposed to the Old GAM, is the better model to use to predict the effect of LCRA's pumping. The question then becomes whether LCRA's modeling, using the New GAM, was sufficient to show that its use would not cause unreasonable effects on groundwater or existing wells.

4. The Modeling Does Not Show Unreasonable Effects

⁵⁰ Mr. Keester testified that he redid his analysis using the new GAM, but did not provide the results of that redone analysis. Aqua Ex. 4 (Keester direct) at 12.

⁵¹ Tr. at 747-48.

⁵² Tr. at 747-48.

⁵³ Tr. at 753.

a. Parties' Evidence and Arguments

The parties opposed to the Applications argue that LCRA has failed to present sufficient evidence on the effects its pumping would have on existing groundwater resources and permit holders. LCRA and the GM disagree.

The parties and the witnesses agree that the GAM is a regional planning tool that has limited use when it comes to looking at local effects.⁵⁴ Nevertheless, LCRA argues that the New GAM should still be used to evaluate effects. Its expert Dr. Young testified, “despite these limitations, the GAM is an appropriate tool to evaluate unreasonable impacts and represents the best available tool for such evaluation.”⁵⁵

The GM also argues that modeling performed under the New GAM is sufficient to allow the District to issue a permit, when that modeling is combined with permit terms that provide for monitoring and phasing.

When analyzing impacts using the New GAM, GM expert Dr. Hutchison predicted drawdowns in the Simsboro Formation from LCRA’s wells of approximately 8 feet in 2022; 14 feet in 2025; and 30 feet in 2070.⁵⁶ For the Calvert Bluff, he predicted drawdowns of 2 feet in 2022; 4 feet in 2025; and 15 feet in 2070. In doing this analysis, he analyzed approximately 1,800 wells.⁵⁷ His analysis does not, however, specifically address any of the wells owned by any of the parties here.

Aqua’s and Elgin’s expert Mr. Keester testified that he used a multi-step analysis to determine the effect of the proposed pumping on Aqua’s and Elgin’s wells. His four steps were as follows. First, he modeled using the Old GAM. Second, he “used an analytic model to improve

⁵⁴ LCRA Ex. 28 (Young direct) at 25.

⁵⁵ LCRA Ex. 28 (Young direct) at 25-26.

⁵⁶ GM Ex. 13 at 20.

⁵⁷ Tr. at 1278; GM Ex. 13 at 18.

the estimate of the water level at the grid scale to the well scale.” Third, he “applied another analytic model to simulate the effect [Aqua’s or Elgin’s] pumping would have on itself, that is, interference drawdown.” Fourth, to “estimate the water level declines during peak production, [he] used a pumping rate that was 12 percent above the annual average pumping rate in the analytic model of interference drawdown.”⁵⁸

Mr. Keester performed his analysis for peak summer demands with four alternatives: the Baseline (which consisted of the Modeled Available Groundwater calculated by the TWDB); the Baseline plus LCRA pumping; the Baseline plus Recharge’s pumping; and the Baseline plus LCRA’s and Recharge’s pumping.⁵⁹ As discussed above regarding whose use should be considered, the ALJs do not believe using Recharge’s possible pumping is appropriate in this analysis of the effects of LCRA’s permits.

Mr. Keester testified that he used the Old GAM and agreed that, using the New GAM, the drawdowns would be smaller than those he modeled. He added that he believed the level of uncertainty with the New GAM would be too high.⁶⁰

On rebuttal, LCRA’s expert Dr. Young testified about several problems he found with Mr. Keester’s approach. Among these problems was that Mr. Keester (1) reported results as reflecting LCRA’s impacts when those results included all of Recharge’s pumping; (2) used the Old GAM instead of the New GAM; and (3) inadequately described the models he used as part of his four-step process.⁶¹ Other problems Dr. Young noted were that, although Mr. Keester increased the levels for peak summer demands, he did not reduce the pumping amount he modeled. Dr. Young also criticized Mr. Keester’s correction for local interference among Aqua’s own wells because he was “unaware of any proven best-method for making such a correction.”⁶²

⁵⁸ Aqua Ex. 4 (Keester direct) at 11.

⁵⁹ Aqua Ex. 8.

⁶⁰ Aqua Ex. 4 (Keester direct) at 26.

⁶¹ LCRA Ex. 55 (Young rebuttal) at 13.

⁶² LCRA Ex. 55 (Young rebuttal) at 17.

In Dr. Young's rebuttal testimony, he testified that he performed several model runs with the New GAM.⁶³ He also testified that he updated his runs to improve the accuracy of the water level in Aqua's and Elgin's Simsboro wells.⁶⁴ He testified that his analysis factored in well-design factors, such as pump settings, well constrictions, and location of well screens for Aqua's and Elgin's wells.⁶⁵

Dr. Young provided graphs that show simulated water levels following his analysis for a baseline, a baseline with LCRA, a baseline with Aqua pumping its permitted amounts and with Elgin pumping its permitting amounts, a baseline with Aqua (or Elgin) plus LCRA, and finally for LCRA's pumping under the Old GAM.⁶⁶

Dr. Young testified that, under his modeling using the baseline plus LCRA, the water level for all of Aqua's wells would remain above the pump setting.⁶⁷ For one well, the combination of the baseline pumping plus LCRA's and Aqua's full pumping would result in the water level dropping below the pump setting in approximately 2050, but remaining well above the constriction point.⁶⁸

Dr. Young also predicted, as a result of his simulations, that LCRA's pumping along with the baseline pumping would not cause the water levels to drop below the elevation of the pump in any of Elgin's wells.⁶⁹ For Elgin's two wells in the outcrop, Dr. Young predicted that LCRA's pumping would cause less than one foot of drawdown.⁷⁰ For the two wells in the downdip, he

⁶³ LCRA Ex. 55 (Young rebuttal) at 18.

⁶⁴ LCRA Ex. 55 (Young rebuttal) at 15.

⁶⁵ LCRA Ex. 55 (Young rebuttal) at 20.

⁶⁶ LCRA Ex. 58 (Aqua), LCRA Ex. 59 (Elgin).

⁶⁷ LCRA Ex. 55 (Young rebuttal) at 21.

⁶⁸ LCRA Ex. 55 (Young rebuttal) at 22.

⁶⁹ LCRA Ex. 55 (Young rebuttal) at 24.

⁷⁰ LCRA Ex. 55 (Young rebuttal) at 25.

predicted that, in 2070, LCRA's pumping would contribute 29% of the total drawdown for one well and 27% for the other.⁷¹

b. ALJs' Analysis

The ALJs agree with Dr. Young's criticism of Mr. Keester's approach. The Old GAM has been shown to be less accurate, and an analysis based on that will not suffice. Yet, it is not enough that LCRA merely criticize the other experts, however. As the party seeking a permit, it does have a burden of proof. The parties opposed to the Applications argue that LCRA has failed to present sufficient evidence on the effects its pumping would have on existing groundwater resources and permit holders. The ALJs agree that LCRA's direct case is light on detail about other parties' wells; however, LCRA presented a more targeted analysis in its rebuttal case.

The ALJs conclude that the analysis conducted by Dr. Young is sufficient to allow the District to determine whether LCRA's proposed use would unreasonably affect existing groundwater resources or permit holders. Given the modeling, the proposed pumping would not cause unreasonable effects on existing groundwater resources or permit holders. The fact that real-world effects can differ from predicted modeling is addressed by the monitoring and phasing aspects of the Draft Permits, which will be addressed below.

B. Unreasonable Effects on Existing Surface Water Resources

As part of its review of LCRA's permit requests, the District must consider whether the proposed use of water unreasonably affects surface water resources.⁷² Three parties, LCRA, the GM, and Environmental Stewardship, provided evidence and testimony relating to the issue. All three found that LCRA's requested pumping may have some impact on surface water resources. Environmental Stewardship's and the GM's analysis both show potential loss of surface water to the groundwater formations in Bastrop County by around 2050. Environmental Stewardship

⁷¹ LCRA Ex. 55 (Young rebuttal) at 25.

⁷² Tex. Water Code § 36.113(d)(2); District Rule 5.2.D(2).

argues that the impacts to surface water resources will be unreasonable after the first 8,000 acre-feet of pumping. However, LCRA counters that unreasonable impacts are not defined, and that under LCRA expert's definition, the impacts would not be considered unreasonable. The GM maintains that impacts cannot accurately be determined until high-volume pumping in the District has begun—after the first phase of pumping (Phase II) is reached—and that is the purpose of having phases.

The ALJs find that LCRA's proposed pumping, standing alone, will not cause unreasonable impacts to surface water resources, but that certain changes to the Revised Draft Operating Permits are required for the District to monitor potential impacts to surface water resources.

1. Environmental Stewardship's Arguments

Environmental Stewardship posits that the best available science for evaluating impacts to surface water resources is the GAM.⁷³ Environmental Stewardship elaborates that while impacts cannot be quantified with specificity due to limitations of the GAM, all three parties that submitted information regarding this factor found that modeling LCRA's proposed withdrawals using the GAM showed impacts to the surface water system.⁷⁴ Environmental Stewardship estimated that LCRA's pumping would result in a loss of .5% of average annual flows to the Colorado River and that during periods of low flows (Nov. 1963 and Mar. 1964) the amount lost would be around 8%.⁷⁵ Environmental Stewardship and the GM both used the GAM to analyze the cumulative impacts of LCRA's permits combined with all other users in Bastrop County (the Base Case) and both show that District-wide proposed pumping of groundwater may result in loss of surface water to the groundwater formations in Bastrop County by around 2050.⁷⁶

⁷³ Environmental Stewardship's Closing Arguments (Environmental Stewardship's Closing) at 5.

⁷⁴ Environmental Stewardship's Closing at 5.

⁷⁵ Environmental Stewardship Ex. 100 (Rice direct) at 10.

⁷⁶ Environmental Stewardship's Closing at 5.

Environmental Stewardship argues that LCRA's analysis improperly excludes the cumulative impacts and looks only at LCRA's impacts to surface water.⁷⁷ Environmental Stewardship argues that ignoring cumulative impacts ignores the reality of what the total impacts to the surface water resource will be, and that considering the cumulative impacts is the only way for the District to consider the application in the context of the consistency with the District Management Plan as required by District Rule 5.2.D.(4).⁷⁸ Further, Environmental Stewardship disagrees with any reliance on the *City of Bastrop* PFD, which considered only Bastrop's impacts and not cumulative impacts because that permit was for a much smaller quantity of water (2,000 acre-feet).⁷⁹ Environmental Stewardship also takes issue with LCRA's decision not to use the "shallow flow zone" feature or the latest pumping file when running models using the New GAM.⁸⁰

Environmental Stewardship's expert Joseph Trungale used the GAM projections of its other expert, George Rice,⁸¹ which show loss of surface water to the groundwater formations in Bastrop County.⁸² He used the surface water availability model (WAM) to examine what the impacts of the estimated losses of surface water would be to the reliability of senior water rights and to instream flow conditions in the Colorado River.⁸³ Based on the WAM modeling, he concluded that LCRA's pumping and resultant reduction in surface water flows would unreasonably affect existing surface water rights holders and the environment.⁸⁴

Environmental Stewardship urges denial of the permits, arguing that the GM's Draft Operating Permits ignore the best available science (the GM's GAM analysis), which shows that

⁷⁷ Environmental Stewardship's Closing at 5.

⁷⁸ Environmental Stewardship's Reply to Closing Arguments (Environmental Stewardship's Reply) at 3.

⁷⁹ Environmental Stewardship's Reply at 2-3.

⁸⁰ Environmental Stewardship's Reply at 6.

⁸¹ Mr. Rice was also retained by the Brown Landowners.

⁸² Environmental Stewardship's Reply at 8.

⁸³ Environmental Stewardship's Reply at 8.

⁸⁴ Environmental Stewardship's Closing at 5.

the permits will unreasonably affect surface water resources in around 2050.⁸⁵ Environmental Stewardship argues that LCRA should not receive permits for even a portion of its total request, because it must meet the burden to prove the full amount of water requested, or receive none at all.⁸⁶ In the alternative, Environmental Stewardship requests the permits (which include phases), to require District Board approval of any GM recommendation for LCRA to proceed past the second phase, include provisions for notice and an opportunity for protestants to have a hearing on any decisions of the District.⁸⁷ Environmental Stewardship also requests that the Draft Operating Permits include requirements for LCRA to enter into a special surface/groundwater monitoring network agreement separate from the GM proposed Monitoring Well Agreement. The new surface/groundwater monitoring network agreement would provide data to the GM and the District in deciding whether to allow LCRA to proceed past Phase II.⁸⁸ Lastly, Environmental Stewardship suggests that LCRA's permits include requirements that LCRA implement a work plan set forth in a report conducted by LCRA witness Dr. Young which he had previously developed for the area.⁸⁹

2. GM's Arguments

Dr. Hutchison, the GM's expert, used the GAM to evaluate impacts to surface water resources.⁹⁰ The GM argues that the GAM is the best available science for conducting such evaluations and that expert model runs made by Dr. Hutchison using the New GAM indicate that pumping with the Base Case for the District will potentially reduce groundwater discharge to surface water.⁹¹ Further, adding LCRA's proposed withdrawals to the Base Case could result in a condition where the groundwater would be recharged by surface water in the Colorado River

⁸⁵ Environmental Stewardship's Closing at 5.

⁸⁶ Environmental Stewardship's Reply at 14.

⁸⁷ Environmental Stewardship's Reply at 13-14.

⁸⁸ Environmental Stewardship's Reply at 13-14.

⁸⁹ Environmental Stewardship's Reply; Environmental Stewardship Ex. 301.

⁹⁰ GM Ex. 11 (Hutchison direct) at 18.

⁹¹ GM Ex. 11 (Hutchison direct) at 18.

and its tributaries in Bastrop County.⁹² The GM agrees with Environmental Stewardship's assessment that under the modeling assumptions made by Dr. Hutchison and Environmental Stewardship expert Rice, the Colorado River could go from gaining to a losing stream by 2050.⁹³ Dr. Hutchison's GAM model runs show that half of LCRA's proposed pumping could be sourced from surface water after 2050.⁹⁴

However, the GM argues that the GAMs (both the Old and New GAM) are limited as a predictive tool by the lack of high volume pumping data in the District and should not be relied upon to make accurate quantifications of impacts.⁹⁵ The GM argues that the only conclusion to be made is that the GAM shows that surface water impacts from LCRA's and all other District users' potential pumping *are possible*. The GM is not opposed to including surface water monitoring in the well monitoring agreement with LCRA.⁹⁶ The GM concludes that the permits can be protective of surface water by including surface water monitoring in the well monitoring agreement with LCRA and by using the phased approach to permitting.⁹⁷ Further, the GM states that the Revised Draft Operating Permits' Special Condition 11 allows district-wide curtailment in the event of unreasonable impacts to surface water resources in the future.⁹⁸

3. LCRA's Arguments

LCRA states that there is not specific guidance in State law or District Rules on the means by which a groundwater district should determine whether proposed permits will unreasonably

⁹² GM Ex. 13.

⁹³ GM's Closing Brief (GM's Closing) at 30. A gaining stream is one that receives water from an aquifer. A losing stream is the reverse; in other words, where water from the stream flows into the aquifer. Environmental Stewardship Ex. 100 (Rice direct) at 8.

⁹⁴ GM Ex. 13.

⁹⁵ GM's Closing at 30.

⁹⁶ GM's Closing at 31.

⁹⁷ GM's Closing at 30.

⁹⁸ GM's Closing at 30-31.

affect surface water resources.⁹⁹ Therefore, LCRA relies upon the conclusions of its witness, Dr. Young. Based upon his expertise as a hydrogeologist and environmental scientist, Dr. Young suggests impacts to surface water resources are only unreasonable if LCRA's pumping, standing alone without considering the contributing pumping of others, will cause (1) drawdown that results in capture of underflow; or (2) cause a change in the hydraulic gradient between the water level in the stream and the water level in an adjacent shallow groundwater flow that causes a persistent and substantial flow from surface water to the groundwater system.¹⁰⁰ In its analysis using the GAM model, LCRA estimates the drawdown resulting solely from LCRA's pumping to be about .3% of annual average flow of the Colorado River near Bastrop (with annual average flow of about 1.4 million acre-feet per year). With this predicted amount of drawdown being a relatively small portion of the total annual flow, Dr. Young concludes that neither of his identified unreasonable condition are possible.¹⁰¹

LCRA is critical of Environmental Stewardship's approach, and the validity of Environmental Stewardship witness Mr. Trungale's findings in particular.¹⁰² LCRA argues that Environmental Stewardship's overly stringent approach has not been adopted in this District, or any other, and should be rejected.¹⁰³

Regarding Environmental Stewardship's use of the GAM to estimate the impact of LCRA's proposed pumping on surface water resources, LCRA argues that Environmental Stewardship's inquiry improperly evaluated LCRA's proposed use in combination with all other groundwater production authorized by the District, instead of the impact of LCRA's use standing alone because Code § 36.113(d)(2) and District Rule 5.2.D(2) refer to only the unreasonable impacts caused by the "proposed use."¹⁰⁴ LCRA also maintains that Environmental Stewardship's

⁹⁹ LCRA's Post-Hearing Closing Arguments (LCRA's Closing) at 30.

¹⁰⁰ LCRA's Closing at 30-31.

¹⁰¹ LCRA's Closing at 30-32.

¹⁰² LCRA's Post-Hearing Reply to Closing Arguments (LCRA's Reply) at 32-44.

¹⁰³ LCRA's Reply at 32-34.

¹⁰⁴ LCRA's Reply at 33.

approach is inherently flawed because Environmental Stewardship witness Mr. Rice's analysis goes beyond the limited predictive capabilities of the GAM to model impacts by making oversimplified and incorrect assumptions.¹⁰⁵ LCRA asserts that the GAM cannot accurately capture the complexities and variabilities of river conditions and bank storage, specifically, because: (1) the GAM is an annual average condition and analysis of surface-groundwater interactions requires timesteps of hours or days; and (2) infiltration and unsaturated flows in the alluvium are not represented in the GAM. LCRA lists assumptions made by Mr. Rice that LCRA alleges appear to be designed to overstate the potential impacts of pumping including: (1) assuming that LCRA (and only LCRA) will pump at maximum rates every year for 50 years; (2) attributing all losses to LCRA even though his model shows losses prior to LCRA pumping; (3) including other pumpers besides LCRA; (4) omitting critical parts of the alluvium from a segment of the Colorado River that shows a net gain of water through 2070; and (5) adjusting pumping at LCRA's Lost Pines Power Park up to permitted limits without making similar adjustments to other users.¹⁰⁶ LCRA argues that the flaws of the modeling are demonstrated by the fact that the modeling shows levels of flow in certain tributaries that historical records indicate have not occurred even under natural conditions.¹⁰⁷

LCRA believes that Mr. Trungale relied upon Mr. Rice's flawed inputs to conduct his own flawed analysis using the WAM.¹⁰⁸ LCRA states Mr. Trungale's use of the "Run 3" version of the WAM for his analysis significantly understates the amount of water expected to be in the Colorado River and therefore overstates modeled impacts of LCRA's pumping on the surface water.¹⁰⁹ LCRA attributes the over-stated impacts to "Run 3" not accounting for historic or future expected real world conditions in the river. Instead, "Run 3" is a conservative estimate of water consumption because it assumes full use of all permitted water by every water right holder in the Colorado River

¹⁰⁵ LCRA's Reply at 35-38.

¹⁰⁶ LCRA's Reply at 37-38.

¹⁰⁷ LCRA's Reply at 39.

¹⁰⁸ LCRA's Reply at 39-44.

¹⁰⁹ LCRA's Reply at 40-41.

basin and 100% consumption of the water (with no return flows) which is not the historical or expected norm in the future.¹¹⁰

LCRA also concludes that Mr. Trungale's use of the WAM to examine pumping impacts on instream flow requirements is overly simplistic and flawed. LCRA claims that even if Environmental Stewardship's quantifications in reduced surface water flows resulting from LCRA's pumping were accurate, Mr. Trungale's assessment of the impact to instream flows and the environment ignores consideration of actual historical subsistence flow data and the actual impact to wildlife habitat such as the Blue Sucker spawning area.¹¹¹

4. ALJs' Analysis

The ALJs conclude that LCRA's pumping under the Revised Draft Operating Permits alone would not result in unreasonable effects on surface water resources. Accordingly, the Applications should not be denied on that basis. On the other hand, the ALJs agree with the GM and Environmental Stewardship that the District should include appropriate conditions in the operating permits to monitor whether LCRA's proposed pumping combined with District-wide pumping will cause unreasonable effects and to order curtailment when needed.

a. The Standard for Unreasonable Effects on Surface Water Resources

No party cited precedent or a legal definition of unreasonable effects to surface water resources, but LCRA witness Dr. Young proposed certain standards for what would constitute unreasonable effects. Under Dr. Young's definitions, unreasonable effects would be shown by pumping that: (1) causes a drawdown that results in the capture of underflow; or (2) causes a change in the hydraulic gradient between the water level in the stream and the water level in an adjacent shallow groundwater flow that causes a persistent and substantial flow from surface water

¹¹⁰ LCRA's Reply at 40-41.

¹¹¹ LCRA's Reply at 43; LCRA Ex. 70.

to the groundwater system.¹¹² As they did regarding effects on groundwater, the ALJs note that there may be additional conditions that would constitute unreasonable effects, but agree that either condition would constitute unreasonable effects on surface water resources.

There is no requirement in law or the District's rules that requires the District to maintain groundwater flow of any amount into the surface water system. On the contrary, Texas courts have consistently held that groundwater can be pumped without protection of spring flow.¹¹³ Districts are, however, required to address conjunctive water management in their water management plans and in the adoption of the DFCs.¹¹⁴ Therefore, although cumulative effects of pumping are not relevant to the issue of unreasonable effects, those effects can, and should be, considered as part of the District's management, and the possibility exists that the District could curtail all users if necessary. In order to make those sorts of determinations, there will need to be monitoring, as discussed below.

b. There is No Evidence in the Record that LCRA's Proposed Pumping, Standing Alone, Will Unreasonably Affect Surface Water Resources

No party argues that LCRA's proposed pumping, standing alone, will cause a loss of surface water in the Colorado River in Bastrop County to the groundwater system. At most, the parties who modeled the effects of LCRA's pumping found that it would cause a loss of discharges of groundwater into the surface waters, resulting in a loss of flow in the Colorado and its tributaries of .5% of the average annual flow of the Colorado River at Bastrop.¹¹⁵ Environmental Stewardship also argued that such losses would be a greater percentage of the flows (up to 8%) during low flow conditions.¹¹⁶ The ALJs find, based on the credible testimony of Dr. Young and supported by

¹¹² LCRA Ex. 28 (Young direct) at 40.

¹¹³ See *Denis v. Kickapoo Land Co.*, 771 S.W.2d 235 (Tex. App.—Austin 1989, writ denied); *Pecos County Water Control & Improvement District No. 1 v. Williams*, 271 S.W.2d 503 (Tex. App.—El Paso 1954, writ ref'd n.r.e.).

¹¹⁴ Tex. Water Code §§ 36.1071(a)(4), 36.108(d)(4).

¹¹⁵ LCRA Ex. 28 at 41 (Dr. Young estimated losses of .2% of annual flow); Environmental Stewardship Ex. 100 (Rice direct) at 10. Mr. Rice estimated losses of .5% of annual flow and loss of 8% during low flows.

¹¹⁶ Environmental Stewardship Ex. 100 (Rice direct) at 10.

Dr. Hutchison, that extrapolations of the GAM model to low flow conditions are not appropriate because the GAM is a model that is based on annualized flows. Extrapolations improperly ignore many variables and the complexities of river conditions during different flow regimes. In sum, it has not been shown that LCRA's proposed pumping alone will cause unreasonable effects on surface water resources, and the permits should not be denied on that basis.

c. Cumulative Effects

The ALJs find that Dr. Hutchison's and Mr. Rice's GAM models show that the cumulative effects of LCRA's proposed pumping, combined with the District pumping base case, may cause significant losses of surface water to the groundwater system in Bastrop County by 2050, including up to half of LCRA's groundwater pumping being sourced by surface water. Such losses would be a "persistent and substantial flow from surface water to the groundwater system" and thus would meet the standards set forth by LCRA witness Dr. Young for unreasonable effects. However, the ALJs agree with Dr. Hutchison's (and others') conclusion that the GAM models are not accurate enough to predict such impacts with certainty, due to the lack of reliable high volume pumping data in Bastrop County.¹¹⁷

Because the ALJs do not find that the GAM is accurate enough to predict the loss of surface water with sufficient certainty or precision, the ALJs do not accept Environmental Stewardship's conclusion that LCRA's pumping will definitely cause unreasonable effects. Specifically, because the inputted surface water losses calculated by the GAM are not precise or certain enough to be used as reliable inputs in further analysis relating to surface water impacts, the ALJs do not make any findings relating to whether the methods Environmental Stewardship witness Mr. Trungale used, which relied upon those uncertain inputs, are appropriate evaluations.

Nevertheless, while the Old and New GAMs do not conclusively show future impacts, absent additional data, they are the most reliable tool available with which to make a determination

¹¹⁷ GM Ex. 11 at 16.

on the subject. The ALJs agree that the GAM modeling shows the possibility of future unreasonable effects on surface water resources caused by the cumulative effects of District-wide pumping, including LCRA's. Therefore, the District needs to monitor the impacts of groundwater pumping in order to have sufficient knowledge to be able to mitigate or prevent unreasonable effects. Details of this monitoring will be discussed in Section H, which addresses the Monitoring Well Agreement.

C. Well Drawdown and Interference

District Rule 5.2.D(9) requires consideration of "whether the conditions and limitations in the Operating Permit prevent [w]aste, achieve water conservation, minimize as far as practicable the drawdown of the water table or the reduction of artesian pressure, or lessen interference between wells." Relatedly, the District Rules require large-volume wells, such as those proposed by LCRA, to be spaced more than 5,000 feet away from other wells in the same aquifer owned by a different owner.¹¹⁸

1. Parties' Evidence and Arguments

LCRA's proposed wells are closely-spaced together on one portion of the Griffith League Ranch. According to LCRA's evidence, this was to respect the preference of the Boy Scouts as reflected in the deed.¹¹⁹ LCRA argues that, consistent with the District Rules, these wells are more than 100 feet away from the nearest property line and will be spaced at least 5,000 feet from the nearest Simsboro well not owned by LCRA. LCRA also noted that its wells will be located where the aquifer is deepest, and that its wells, like Recharge's permitted nearby wells, will be located in some of the most transmissive parts of the Simsboro in the District. LCRA presented testimony that because the wells will be part of an aggregated system, it will be able to adjust pumping among

¹¹⁸ District Rule 8.2(B).

¹¹⁹ LCRA Ex. 3 at 2 (granting LCRA the right to use the portion of the surface area designated as the Preferred Groundwater Development Area).

the wells to minimize reduction of artesian pressure.¹²⁰ LCRA noted that the pump test required by the Draft Operating Permits will reveal characteristics, and that the GM can restrict pumping if impacts are worse than anticipated, which will, in turn minimize impacts on wells.¹²¹ LCRA argues that its compliance with the spacing rules, along with the pump tests and potential restriction shows that the Draft Operating Permits will lessen interference among wells.

LCRA also presented evidence about Recharge's permitted wells. It notes that modeling shows that LCRA's impacts on Recharge's well will be approximately the same as Recharge's impacts on LCRA's wells.¹²²

Recharge, whose permitted wells will be close to LCRA's proposed well field, argues that LCRA failed to establish that its Applications will minimize as far as practicable the interference between wells.¹²³ Recharge argues that, to the contrary, LCRA's close-space siting of its wells on a portion of the Griffith League Ranch property maximizes well interference. Recharge argues that it was improper for LCRA to concentrate all of its wells near the property line and as close to Recharge's pre-existing permitted well field as the District's spacing rules allow. Recharge further contends, "LCRA took advantage of a recent change to the District's spacing rules that allows a well owner to avoid the 5000-foot well spacing rule that applies to all other wells of this size."¹²⁴ Recharge emphasizes that compliance with the District's spacing rules is not enough to lessen well interference. Recharge challenges LCRA's motives and emphasizes that LCRA's original experts used in studying the Griffith League Ranch site and obtaining the permits were not the same experts who testified at hearing.

Aqua and Elgin also argue that compliance with spacing rules is not enough to satisfy this requirement and contend that spacing rules do not override the permitting rule.

¹²⁰ LCRA Ex. 28 (Young direct) at 47.

¹²¹ Tr. at 583-592.

¹²² LCRA Ex. 55 (Young rebuttal) at 40.

¹²³ Recharge's Response to Closing Arguments (Recharge's Reply) at 8.

¹²⁴ Recharge's Closing Argument (Recharge's Closing) at 2.

Elgin emphasizes that its wells “are relatively updip within the Simsboro when compared to LCRA’s proposed wells,” and expresses concern that updip migration of drawdown caused by downdip pumping may be underestimated in the New GAM.

The Hernandezes argue that lessening drawdown and interference should be addressed by monitoring and mitigation.

The GM argues that his phased approach presents a reasonable and adequate solution to the issue of drawdown and interference and disagrees that its phased approach only considers broad, District-wide impacts. The GM points to the spacing rules and the 36-hour pump test as permit conditions that would lessen well interference. He also argues that if the pump test shows that there would be adverse impacts, Special Condition 14 of the Revised Draft Permits authorizes the GM to lower the maximum rate of withdrawal.

2. ALJs’ Analysis

The District’s Rule requires consideration of “whether the conditions and limitations in the Operating Permit prevent [w]aste, achieve water conservation, minimize as far as practicable the drawdown of the water table or the reduction of artesian pressure, or lessen interference between wells.”¹²⁵ Thus, under the District’s rule, the obligation on the District is to “minimize as far as practicable the drawdown of the water table or the reduction of artesian pressure,” but only to “lessen interference between wells.” Therefore, the standard is not whether interference between wells will be minimized as far as practicable, but rather whether it will be lessened. Similarly, the ALJs note that this Rule requires an inquiry into the terms of the Draft Permits, not just the Applications.

¹²⁵ This rule is consistent with Code section 36.116, which authorizes a groundwater conservation district to regulate “in order to minimize as far as practicable the drawdown of the water table or the reduction of artesian pressure, to control subsidence, to prevent interference between wells, to prevent the degradation of water quality, or to prevent waste.” Tex. Water Code § 36.116(a).

The ALJs agree that the Revised Draft Permits contain sufficient terms to lessen well interference. In particular, they find that the combination of pump tests, monitoring wells, and phasing, plus the GM's ability to curtail pumping if necessary satisfy this factor. The ALJs decline to read anything sinister into LCRA's decision to change experts. The ALJs also decline to find that compliance with the spacing rules automatically satisfies this rule.

D. Management of Total Groundwater Production on a Long-Term Basis to Achieve Desired Future Condition

District Rule 5.2.D(8) requires the District to consider "whether granting the application is consistent with the District's duty to manage total groundwater production on a long-term basis to achieve an applicable Desired Future Condition." A DFC is "a quantitative description, adopted in accordance with Section 36.108, of the desired condition of the groundwater resources in a management area¹²⁶ at one or more specified future times."¹²⁷

The Code requires that:

In issuing permits, the district shall manage total groundwater production on a long-term basis to achieve an applicable [DFC] and consider:

- (1) the Modeled Available Groundwater (MAG) determined by the executive administrator;
- (2) the executive administrator's estimate of the current and projected amount of groundwater produced under exemptions granted by district rules and Section 36.117;
- (3) the amount of groundwater authorized under permits previously issued by the district;
- (4) a reasonable estimate of the amount of groundwater that is actually produced under permits issued by the district; and
- (5) yearly precipitation and production patterns.¹²⁸

¹²⁶ A management area is defined as "an area designated and delineated by the Texas Water Development Board under Chapter 35 as an area suitable for management of groundwater resources." Tex. Water Code § 36.001(13).

¹²⁷ Tex. Water Code § 36.001(30).

¹²⁸ Tex. Water Code Ann. § 36.1132.

The District is a part of Groundwater Management Area (GMA) 12, which on April 27, 2017, adopted a DFC for the Simsboro Formation of a District-wide average drawdown between January 2000 and December 2069 of 240 feet.¹²⁹ The DFC is also divided into DFCs for the counties in the District. For Bastrop County, the DFC is a county-wide average drawdown between January 2000 and December 2069 of 174 feet; for Lee County, the DFC is a county-wide average drawdown between those dates of 350 feet.

The DFC is used to determine the GMA's MAG. The MAG is "the amount of water that the [TWDB's] executive administrator determines may be produced on an average annual basis to achieve a desired future condition."¹³⁰

It is undisputed that if LCRA and all the other permit holders pumped their full permitted amount, the total pumping would exceed the MAG.

1. The Parties' Arguments

The Hernandezes are the only party to raise an issue about how the District is issuing permits in relation to the DFCs and MAGs. They argue that by not using the MAG as a permitting cap, the District is not fulfilling its duty. They add, "[i]t is inane that countless hours and dollars are spent by five [groundwater conservation districts] in the GMA-12 to develop the DFCs only to have them disregarded for permitting decisions."¹³¹

For its part, the GM contends the MAG is not a hard cap; rather it is "a factor to consider when managing the DFC."¹³² He argues that this use of the MAG as a permitting tool is consistent with Code §36.1132, which requires a district, when making permitting decisions, to consider "a

¹²⁹ GM Ex. 10 at 7.

¹³⁰ Tex. Water Code § 36.001 (25).

¹³¹ Closing Argument of Elvis Hernandez (Hernandez Closing) at 3.

¹³² GM's Closing at 44.

reasonable estimate of the amount of groundwater that is actually produced under permits issued by the district.” He similarly testified that a significant reason why MAGs are used as management guides, not hard caps for permitting, is because permit holders typically do not produce their full permitted values.¹³³

2. ALJs’ Analysis

While noting the Hernandezes’ frustration, the ALJs find that the GM’s approach to the DFC and the MAG is consistent with the District’s duty to manage total groundwater production on a long-term basis to achieve an applicable DFC. The Code does not anticipate the MAG being a hard permitting cap. Rather, the MAG is one factor in the permitting analysis. The ALJs find that the evidence shows the GM appropriately considered the factors.

E. Special Conditions from Previous Permits

1. Parties’ Arguments

Recharge’s permits, like Forestar’s, contain several conditions that resulted from settlement. Among the settlement-related terms in Recharge’s permits are a reduction in its requested production amount, tiered phasing of production, and the creation of a mitigation fund.

Recharge argues that provisions contained in previous permits reflect District policy and, thus, must be included in the Draft Permits. Alternatively, they argue that the principle of applying equal, non-discriminatory treatment to all citizens of the District requires that permit provisions be the same.

As with its permits, Recharge argues that the same District policy considerations require that the following conditions be placed in LCRA’s Draft Operating Permits:

¹³³ GM Ex. 1 (Totten direct) at 39.

- Reducing the initial amount of water requested by the applicant;
- Requiring adequate spacing;
- Requiring future cutbacks, if necessary;
- For all permits over 20,000 acre-feet, requiring end-user contracts, monitoring-well agreements, and tiered phasing of production; and
- Financial mitigation for all production in Bastrop County.

Some of these items are, in fact, contained in the Revised Draft Operating Permits. The Revised Draft Operating Permits anticipate that the GM may require future cutbacks. The Revised Draft Operating Permits also require end-user contracts, monitoring-well agreements, and tiered phasing of production.

Recharge also argues that if the Draft Permits are issued without these provisions, its permit (as well as Forestar's and Bastrop's permits) should be reopened, and those provisions removed. Such an action is beyond the scope of this hearing and will not be addressed further.

Recharge argues that "policy can be adopted by action, in addition to a formal written policy, much like a contract can be formed through the parties' course of conduct."¹³⁴ It then argues that the District has adopted a standard practice of including certain special conditions in similarly-situated permits, and that this practice rises to the level of District policy. It argues that the record "demonstrates that the [District's] board adopted certain special conditions in writing for similarly-situated permit holders on a systematic basis."¹³⁵

Finally, Recharge also argues that "[t]he District has similarly adopted an effective policy of requiring adequate spacing between wells of at least 5,000 feet as between all large volume wells, as evidenced by the spacing for the Bastrop, Forestar, and Recharge wells."¹³⁶

¹³⁴ Recharge's Closing at 25.

¹³⁵ Recharge's Closing at 26.

¹³⁶ Recharge's Closing at 27.

The GM disagrees, as does LCRA. The GM argues that permitting decisions are made on a case-by-case basis, and that what is appropriate for one applicant and permit may not be appropriate for another. The GM also emphasizes the need for balancing private property and natural resource interests when managing groundwater.

2. ALJs' Analysis

The ALJs conclude that when, following a settlement, a groundwater conservation district issues a permit that reduces the total amount of production from the amount requested in the application, it does not create a policy of reducing the amount of production from the amount requested. Recharge cannot rely on the fact that in previous cases, the permit that was issued authorized less production than requested to argue that LCRA's requested production should be reduced, as well.¹³⁷ Such an approach would be inconsistent with the balancing analysis required by Code § 36.113(d) and District Rule 5.2.D.

As for a spacing policy, the undisputed evidence is that the District's spacing rules changed between the time the permits for Recharge's three wells were issued and LCRA's Applications. Under the current rules, the rules for spacing between wells belonging to one party are different from the rules addressing spacing between wells of different owners.¹³⁸ The current rules only require a distance of 5,000 feet between large wells owned by different owners. And it is also undisputed that the proposed wells in the Applications comply with the current spacing rules. Even assuming, for the sake of argument, that the District had a policy of requiring at least 5,000 feet between large-volume wells regardless of ownership, it changed that policy by adopting a new rule. Recharge does not—and could not—argue that it was improper for the District to amend its rules. Likewise, Recharge does not—and could not—directly argue that all later permit applications should be subject to the rules in place at the time the District granted the first large-volume permit. But by turning the spacing requirements in its permit into a “policy,” despite

¹³⁷ The ALJs note that Forestar's and Recharge's permitted production amounts (28,500 and 46,000 acre-feet, respectively) exceed the production amount allowed in the Revised Draft Operating Permits.

¹³⁸ District Rule 8.2.

the existence of the rule, that is, in essence, what Recharge is arguing. The ALJs are not convinced that the District has a separate well-spacing policy, aside from its spacing rule, that should apply here.¹³⁹

F. Separate Issues Raised by the Brown Landowners

The Brown Landowners raised several issues that were not raised by the other parties. Those issues will be addressed here.

1. Was the District Required to Consider Historic Use?

The Brown Landowners argue that the District was required to consider historic use when reviewing the Applications and failed to do so. In making this argument, they rely on Code § 36.116(b). As set out above, § 36.116(b) provides that a groundwater conservation district *may* preserve historic use in its rules that limit production. This section does not *require* a district to adopt rules preserving historic use, and it is undisputed that historic use is not one of the factors in the District's permitting rules.¹⁴⁰

Moreover, the Brown Landowners do not clearly describe the historic use that they argue must be considered. They argue that most of the available water in Bastrop and Lee Counties is groundwater, that those counties “are significantly more rural than Travis County,” and that “[t]here is no history of Travis County being an intended importer of Bastrop and Lee County water.”¹⁴¹ Rather than protect a specific historic use—except, broadly, groundwater use in Bastrop

¹³⁹ Recharge also argued that the District has a policy of requiring future cutbacks, which it agrees are contained in the Draft Permits.

¹⁴⁰ The Brown Landowners quote *Edwards Aquifer Authority v. Day*, 369 S.W.3d 814 (Tex. 2012) for the proposition that “the amount of groundwater withdrawn and its purpose are both relevant when identifying an existing or historic use to be preserved,” but they do not argue that *Day* holds that historic use must be preserved. Brown Landowners’ Brief in Support of Closing (Brown Landowners’ Closing) at 17 (quoting *Day*, 369 S.W.3d at 836).

¹⁴¹ Brown Landowners’ Closing at 17.

and Lee Counties—they appear to argue that because groundwater has been used in Bastrop and Lee Counties, a new use should not be allowed.

For these reasons, the ALJs decline to find that the District was required and failed to consider historic use.

2. Were the Applications Administratively Complete?

The Brown Landowners also argue that the Applications should be denied because they were not administratively complete.¹⁴² They contend that “[w]hen viewed under these guidelines and principles the LCRA application is not administratively complete as it was not given the proper scrutiny by the [District].”¹⁴³

The GM disagrees. According to the GM, administrative completeness is a technical requirement that does not require a balancing of the various factors that the District’s board must consider under chapter 36 and the District’s rules. Instead, Mr. Totten testified that to determine whether the Applications were complete, he determined whether LCRA had provided the information the District Rules and Code require and whether it used the correct forms in its Applications.¹⁴⁴ He also agreed that administratively complete “means it must have the minimal amount of information required in [the District’s] rules.”¹⁴⁵

The ALJs find that GM’s understanding is consistent with Code chapter 36, which provides that an application is administratively complete if it contains the information set forth under

¹⁴² Brown Landowners’ Closing at 2 (“First and foremost, the ALJ should deny the permit as it is administratively incomplete.”).

¹⁴³ Brown Landowners’ Closing at 5.

¹⁴⁴ GM Ex. 1 (Totten direct) at 17. Mr. Totten originally determined that LCRA had used the incorrect forms; he required LCRA to resubmit its applications using the correct forms.

¹⁴⁵ Tr. at 1118.

Sections 36.113 and 36.1131.¹⁴⁶ It also prohibits a district from requiring that additional information be included in an application for it to be considered administratively complete.¹⁴⁷

The Brown Landowners do not offer a competing definition of administrative completeness, nor do they indicate what it requires. They only argue that they do not think the Application satisfies it. To the extent that the Brown Landowners argue that the Application is not administratively complete because of the factors set out in the Code or the District's Rules, the discussion of that argument is set out in the sections discussing the substantive portions of the Code or Rules. Otherwise, the ALJs are satisfied that the Applications are administratively complete in that they contain the required information.

3. Analysis Based on Benefit in the District

The Brown Landowners also argue that a sort of geographic limitation should be added to the Draft Permits. In essence, they argue that the District failed to examine whether there will be a beneficial use in Bastrop and Lee Counties.¹⁴⁸ They do not point to any statute or rule that requires an examination of beneficial use within the District, as opposed to outside it, and the ALJs are not persuaded that any such requirement exists.

G. Phasing

The Draft Operating Permits and the Revised Draft Operating Permits both anticipate that LCRA will increase its pumping in phases. LCRA and the parties opposed to the Applications expressed concerns about various aspects of the phasing process.

¹⁴⁶ Tex. Water Code § 36.114(h).

¹⁴⁷ Tex. Water Code § 36.114(h).

¹⁴⁸ Brown Landowners' Brief in Support of Closing at 18 ("Including Travis county in their permit, the LCRA cannot demonstrate that there is a beneficial use to Bastrop and Lee counties.").

First, LCRA objects to a requirement in the Draft Operating Permits that it have binding contracts with end users to move to the next phase and increase pumping.

Next, both LCRA and Recharge have concerns about the phasing formula, and LCRA requested it be changed.¹⁴⁹ LCRA argues that, although it is willing to phase in production, it should not be required to accept special conditions “that are unreasonable, flawed, create significant uncertainty, or are so open to interpretation that they cannot be reasonably implemented” just because previous permittees agreed to those special conditions.¹⁵⁰ In particular, LCRA argues, citing Recharge’s expert, that the phasing formula is “a mess” that should be eliminated.¹⁵¹

Finally, Aqua and Elgin raise a different concern: that the phasing examines district-wide conditions, as opposed to local impacts. Equally significant for Aqua is that potentially-impacted local users cannot participate in the decision to move LCRA from one phase to the next. Aqua argues that, as the phasing standards stand in the Draft Operating Permits, they provide “no meaningful review of local impacts, and no due process for protestants to have their respective *local* impacts heard and addressed.”¹⁵² Both sets of concerns will be addressed in turn.

1. Binding Contracts

The GM’s Draft Operating Permits originally required LCRA to have “binding contracts” prior to each phase of pumping.¹⁵³ The permits would expire if LCRA did not have any binding contracts before the anniversary of five years from the Phase II date.¹⁵⁴ The Revised Draft

¹⁴⁹ Recharge would like to have this formula removed from its permit. As discussed above, such a request is outside the scope of this contested case hearing. In its briefing, LCRA suggests that nothing precludes potential amendments to Forestar’s and Recharge’s permits to remove the formula. LCRA’s Closing at 55 n.10.

¹⁵⁰ LCRA’s Closing at 44.

¹⁵¹ LCRA’s Closing at 51.

¹⁵² Closing Argument of Aqua (Aqua’s Closing) at 21.

¹⁵³ Draft Operating Permit Special Conditions 3(b)-(d), found in GM Ex. 7.

¹⁵⁴ Draft Operating Permit Special Condition 8, found in GM Ex. 7.

Operating Permits have amended the language to require “binding commitments” instead of “binding contracts,” as requested by LCRA, to reflect the possibility that LCRA may be the end user of the groundwater.¹⁵⁵ As will be explained below, the ALJs find that the requirement for “binding contracts” or “binding commitments” is unnecessary, but is within the District’s discretion and authority. If the District retains the requirement, the ALJs recommend the language in the Revised Draft Operating Permits should be included in the final permit.

a. GM’s Arguments

The GM argues that the requirement for “binding contracts” goes to the heart of LCRA’s requirement to demonstrate a need for groundwater under chapter 36 and the District’s Rules.¹⁵⁶ Specifically, the GM argues that the contracts are necessary to show beneficial use of the water and a need for the water in the receiving area.¹⁵⁷ The GM states that LCRA’s reliance upon Texas Commission on Environmental Quality (TCEQ) treatment of surface water permits is misplaced because groundwater is subject to different legal standards due to its nature of being private property – as opposed to State property.¹⁵⁸ The GM concludes that even if LCRA has shown enough contracts to obtain the permits, the language should not be removed from the permits because the contracts are needed after issuance at Phases II and III to show a continued beneficial use.¹⁵⁹ Finally, the GM states that such provisions have been included in recently granted operating permits and should likewise be included in LCRA’s permits for consistency.¹⁶⁰

b. LCRA’s Arguments

¹⁵⁵ GM’s Reply Brief (GM’s Reply) at 9, *See also* Revised Draft Operating Permit.

¹⁵⁶ GM’s Reply at 7-9.

¹⁵⁷ GM’s Reply at 7-9.

¹⁵⁸ GM’s Reply at 7-9.

¹⁵⁹ GM’s Reply at 7-9.

¹⁶⁰ GM Ex. 1 (Totten direct) at 30.

LCRA states that it has met all requirements of District Rule 5.1.B(8) because it has identified its existing and future customers as the end users.¹⁶¹ LCRA also contends that a requirement for “binding contracts” goes beyond the requirements of District Rule 5.1.B(8) and exceeds the District’s authority.¹⁶² LCRA notes that chapter 11 of the Code requires that surface water be put to a beneficial use, similar to chapter 36 with respect to groundwater, and that TCEQ has never required contracts with End Users prior to issuance of a surface water permit.¹⁶³ LCRA argues that there is no basis to hold groundwater to a higher standard than surface water.¹⁶⁴

Additionally, LCRA argues that the “binding contracts” language is not needed because the requirement in the permits to use the groundwater for a beneficial use subjects LCRA to enforcement if LCRA were to arbitrarily increase its pumping for a purpose other than meeting its end users’ needs.¹⁶⁵ LCRA believes that the requirements in the Draft Permits for LCRA to supply the water conservation and drought contingency plans of its end users to the District are sufficient for the District to evaluate whether the water is being beneficially used and not wasted.¹⁶⁶

LCRA contends that there is no over-arching policy to include this provision in all permits, rather, that it was only included as part of the Forestar Permit as a negotiated settlement term.¹⁶⁷ Further, LCRA believes that even to the extent that past permits have included this requirement, that LCRA, as an established reliable public water supplier, should be treated differently than other permit applicants that lack a demonstrable track record of reliability.¹⁶⁸

LCRA requests removal of the “binding contract” requirements from the permits. If it is not removed, LCRA requests: (1) that LCRA be found to have met the requirement with the

¹⁶¹ LCRA’s Closing at 50.

¹⁶² LCRA’s Closing at 50.

¹⁶³ LCRA’s Closing at 50.

¹⁶⁴ LCRA’s Closing at 50.

¹⁶⁵ LCRA’s Closing at 49.

¹⁶⁶ LCRA’s Reply at 51.

¹⁶⁷ LCRA’s Reply at 51.

¹⁶⁸ LCRA’s Closing at 51.

contracts it has submitted in this proceeding; (2) amendment of the language to “binding commitments” to reflect that LCRA may be the end user; (3) removal of the definition of “End User” from the permits because the language is already in the District’s rules and could be amended in the future; (4) removal of the language “for any agricultural commitments, LCRA shall be the End User” or amendment to say “LCRA may also be the End User;” and (5) removal of Special Condition 8 (which states the permits expire five years from the anniversary of the Phase II date unless LCRA provides one or more contracts), because LCRA has already provided contracts that allow LCRA to provide its existing customers water from any source of supply available.¹⁶⁹

c. ALJs’ Analysis

The ALJs find that it is within the District’s authority to require submission of End User contracts or proof from LCRA that it intends to use the water itself; however, such provisions do not appear to be necessary in these permits because: (1) LCRA has demonstrated a need for the water; (2) it is unlikely that LCRA would not beneficially use the groundwater it pumps; and (3) there are other safeguards in the permit to prevent waste by LCRA.

Although not currently required in the District’s rules, it is within the District’s authority to require LCRA to submit End User contracts or a statement from LCRA that it intends to use the water itself. Code § 36.113(c) provides a list of potential requirements a district may include in a permit or permit application.¹⁷⁰ Subsection (8)(B) of that provision includes “other information . . . reasonably related to an issue that a district by law is authorized to consider.”¹⁷¹ The GM’s stated reason for including the language is for LCRA to demonstrate a need for groundwater in the receiving area under chapter 36 and the District’s Rules and to show that the water will be beneficially used. Both reasons are within the scope and the District’s authority and are related to

¹⁶⁹ LCRA’s Reply at 51-52.

¹⁷⁰ Tex. Water Code § 36.113(c).

¹⁷¹ Tex. Water Code § 36.113(c)(8)(B).

the requirement to provide “binding contracts.”¹⁷² The District could amend its rules to require “binding contracts” in permits prior to pumping or otherwise require the information in a permit if the facts of the application warrant such a requirement.

However, the ALJs do not find there is a need for the provisions in LCRA’s permits. LCRA has met the District’s rule requirement to identify any End Users of the groundwater by providing contracts from existing users which far exceed the total amount of requested groundwater through all of the GM’s proposed phases.¹⁷³ Further, LCRA has demonstrated there is a need for the water in the receiving area by submission of these contracts, and as demonstrated by the Regional Water Plans.¹⁷⁴ It is highly unlikely that LCRA would arbitrarily pump water without beneficially using it, and to do so would violate the Revised Draft Operating Permit. In addition, the District can monitor LCRA’s use of the water by examining LCRA’s submittal of drought contingency plans and water conservation plans, which are required by the permits prior to supplying water to any End User, and the District can enforce provisions in the permits that require LCRA to use the water for beneficial purposes.¹⁷⁵ Therefore, there is not a compelling reason to include the requirement for “binding contracts.”¹⁷⁶

If the District decides to retain the requirement for “binding commitments” in the permits, the ALJs recommend the language in the Revised Draft Operating Permits. Regarding the definition of “End User” provided in the permits, while the definition unnecessarily lists the allowable beneficial uses, it is not necessary to remove the definition as suggested by LCRA because the language is sufficiently conditioned by the inclusion of the language preceding the

¹⁷² Tex. Water Code § 36.113(d)(3) (“the district shall consider whether . . . the proposed use of water is dedicated to any beneficial use.”); Tex. Water Code § 36.122(f) (the district shall consider the need for water in the proposed receiving area).

¹⁷³ LCRA Ex. 12; LCRA Ex. 46 (each contract includes a provision stating that LCRA may supply water from any source available).

¹⁷⁴ LCRA Ex. 13.

¹⁷⁵ Revised Draft Operating Permit, Standard Provision 8 and Special Condition, found at GM Ex. 7.

¹⁷⁶ LCRA requested a finding that its existing contracts would satisfy any End User requirement. Whether LCRA has complied with a permit before it has been issued is outside the scope of this contested case.

listed beneficial uses (“including, but not limited to”) so as to not require future amendment if the definition changes in the rules.

2. The Phasing Formula

The phasing formula contained in the Draft Operating Permits was developed as part of the District’s settlement with Forestar, and was then incorporated into Recharge’s permit.¹⁷⁷ The GM incorporated many of LCRA’s objections to this formula in drafting the Revised Draft Operating Permit.

a. Parties’ Arguments

LCRA first argues that formula contained in the Draft Operating Permits—but not the idea of tiered phasing—should be eliminated. It argues that “at renewal, if the District has adopted by rule scientifically sound and objective criteria to determine if further restrictions are warranted based on aquifer impacts, the GM could seek to initiate an amendment to LCRA’s permits at that time.”¹⁷⁸

In the alternative to eliminating the formula entirely, LCRA proposed, in its Exhibit 8A, changes to the phasing formula in Special Condition 3. In the Revised Draft Operating Permits, the GM accepted most of those changes, except proposed changes related to End User requirements, which are discussed above. Thus, the GM accepted that the relevant factor should be drawdown pursuant to the DFC, rather than a water level.¹⁷⁹ One proposed change the GM did not accept was LCRA’s suggestion that the relevant DFC that should be examined as LCRA moves through the phases is the DFC in place at the time the permit is issued, rather than the DFC in place

¹⁷⁷ Tr. at 1246.

¹⁷⁸ The Draft Operating Permits (and Revised Draft Operating Permits) have a five-year term.

¹⁷⁹ The DFC for the Simsboro adopted by GMA 12 is expressed in terms of drawdown, not water level. GM Ex. 10 at 7.

when the phasing inquiry occurs.¹⁸⁰ LCRA argues that the current DFC should be used for the life of the permit. It argues that keeping the current DFC is “consistent with the notion that DFC compliance should not be borne solely by a single permittee.”¹⁸¹

b. ALJs’ Analysis

The ALJs do not agree with LCRA that a phasing formula is unnecessary and that the District must adopt rules before it can impose requirements on LCRA that would allow it to progress from one phase to another. Therefore, the ALJs will not recommend removing the phasing formula from the Revised Draft Operating Permits.

Because the GM has agreed to most of LCRA’s proposed changes to the phasing formula, the only remaining issue is which DFC should be used when LCRA requests to move to the next phase and increase its pumping.

The ALJs agree with the GM that the DFC in place at the time LCRA requests to increase its pumping should apply. Contrary to LCRA’s arguments, using the DFC in place at the time of the requested increase in pumping does not mean that LCRA solely bears the responsibility of complying with the DFC. Instead it means that LCRA is not exempt from the effect of changes in conditions when it seeks to pump more water. The ALJs will not recommend making this change to the Revised Draft Operating Permits.

3. Concerns About Local Impacts and Input

a. Parties’ Arguments

¹⁸⁰ Compare LCRA Ex. 8A at 3-4 with Revised Draft Operating Permit at 3-4.

¹⁸¹ LCRA’s Closing at 59.

Aqua, Environmental Stewardship, and Elgin's primary concerns are that the phasing decision will not look at local impacts and that the decisions about whether LCRA can increase its pumping will be made solely by the District and LCRA, with no opportunity for public input.

The GM cites to several provisions in the Revised Draft Permits that it contends protects existing users. These are the monitoring well agreement, the phased approach, that LCRA like all users is subject to future cutbacks, the well-spacing requirements, and the 36-hour pump test requirements.¹⁸²

The GM strongly objects to parties other than LCRA being involved in any phasing decision. The GM argues, in fact, that allowing participation in such decisions would be contrary to Code chapter 36. In particular, the GM argues that participation must be limited to persons with a personal justiciable interest and that this interest be affected by the requested permit.¹⁸³ The GM also argues that other parties' participation would be "disruptive" and undercut the District's ability to do its job.¹⁸⁴

b. ALJs' Analysis

The ALJs are unconvinced by the GM's argument that the parties' involvement must end at the conclusion of this contested case hearing. The parties here have established their personal interest, and their focus is on potential harm to their wells, not to some generalized interest to the public.

One change the GM made in the Revised Draft Operating Permits is relevant to this issue. This change was to Special Condition 5 (previously Special Condition 7), which addresses the renewal application. In the Revised Draft Permits, if LCRA files a renewal application, the GM and LCRA must evaluate "the data collected from the Monitoring Well System prior to the date

¹⁸² GM's Reply at 24-25.

¹⁸³ Tex. Water Code § 36.415(b)(2).

¹⁸⁴ GM's Reply at 26.

of the application to renew to determine whether LCRA's pumping has resulted in substantially different impacts to groundwater resources than those predicted by the modeling relied upon [by] the District when the Permit was issued and jointly propose revisions to the Permit based on that data."¹⁸⁵ The ALJs recommend that the District adopt this Special Condition, but believe the condition should be revised to provide an opportunity for affected landowners to participate in the permit renewal process, including the determination of whether an amendment is necessary.

H. Monitoring Well Agreement

There are two main issues relating to the Special Condition 1, which requires LCRA and the GM to enter into a Monitoring Well Agreement. The GM and LCRA disagree about certain aspects of this Special Condition as it relates to monitoring groundwater. As discussed above, the ALJs also find it necessary to conduct monitoring of the impacts on surface water, as well.

1. Details of the Monitoring Well Agreement as It Relates to Groundwater

The GM and LCRA disagree about certain aspects of the special conditions relating to a Monitoring Well Agreement. Special Condition 1 of the Revised Draft Operating Permit requires LCRA to enter into a Monitoring Well System Construction and Maintenance Agreement, approved by the District's Board, within 180 days after the Permit has been issued.¹⁸⁶ LCRA would be required to construct and maintain the new monitoring wells, and a violation of the Monitoring Well Agreement would be a violation of the Permit.

Special Condition 4 of the Revised Draft Operating Permits sets out certain criteria for a monitoring well system. Wells in the system must be screened in the Simsboro Formation; must

¹⁸⁵ Revised Draft Operating Permit at 8.

¹⁸⁶ In the Draft Operating Permit, this deadline was 90 days after permit issuance.

improve the spatial coverage of the monitoring well system; must be easily accessible for regular measurements; and must meet any other criteria agreed upon by the GM and LCRA.¹⁸⁷

2. Parties' Arguments

LCRA first objects to the 180-day deadline to enter into a Monitoring Well Agreement. LCRA argues that decisions about the timing and number of monitoring wells should be deferred to provide both LCRA and the District with additional flexibility.¹⁸⁸ LCRA suggests that the deadline to enter into a monitoring well agreement should be before construction of a well to be used in the first pumping phase of the permit (Phase II).¹⁸⁹ According to LCRA, not having an exact date would provide greater flexibility and would allow it (and the District) to take changed conditions into account.¹⁹⁰

LCRA argues that the portion of Special Condition 1 under which a violation of the Monitoring Well Agreement is a violation of the operating permit should be removed. In LCRA's view, tying together an as-yet-unnegotiated Monitoring Well Agreement and the Draft Operating Permit would add an unreasonable amount of uncertainty to the process. LCRA points that it has incentive to comply with the Monitoring Well Agreement because it will be prevented from increasing its pumping unless it complies. LCRA also argues that the Monitoring Well Agreement should be enforced as a contract between the LCRA and the District, not as part of an operating permit.

¹⁸⁷ The Revised Draft Operating Permits remove a reference to an existing monitoring well, as LCRA requested. Similarly, the Revised Draft Operating Permits no longer require LCRA to "operate" the monitoring wells. LCRA had also requested that change.

¹⁸⁸ LCRA's Closing at 45.

¹⁸⁹ LCRA Ex. 8A at 2.

¹⁹⁰ LCRA's Closing at 45.

LCRA also suggests that the requirement that it “has assisted the District in adding any New Monitoring Wells that the District and Permittee agree are needed before Permittee may increase its pumping [to the requested phase]” be added to the Draft Operating Permit.¹⁹¹

The GM argues that negotiation of a monitoring well agreement cannot be delayed until after production, particularly since monitoring wells are used to analyze local impacts,¹⁹² such as those that have been contested in this case. The GM also argues that the District has the authority to include a special condition requiring a monitoring well agreement pursuant to District Rule 5.3.D(2), which provides that an operating permit may include “any special conditions required by the considerations in Rule 5.2.D and any other special condition required or authorized by these Rules or applicable law.”

3. ALJs’ Analysis

The ALJs agree that the District has the authority to require LCRA to enter into a Monitoring Well Agreement. The District may impose Special Conditions it determines are required by the considerations in Rule 5.2.D.¹⁹³ Among those considerations are whether the conditions and limitations “minimize as far as practicable the drawdown of the water table or the reduction of artesian pressure, or lessen interference between wells.” The special conditions relating to the Monitoring Well Agreement tie in to those considerations. The ALJs also note that the GM has incorporated some of LCRA’s suggestions in the Revised Draft Operating Permit.

That said, the ALJs recommend adopting LCRA’s proposed change to extend the deadline to enter into a Monitoring Well Agreement. The ALJs are convinced that a flexible deadline, rather than a 180-day deadline, will better allow LCRA and the GM to take any new pumping into account. Additionally, the ALJs agree that the portion of Special Condition 1 under which violation

¹⁹¹ LCRA Ex. 8A at 3-4.

¹⁹² Tr. at 1594.

¹⁹³ District Rule 5.3.D(2).

of the Monitoring Well Agreement is a permit violation should be removed. Incorporating a contract that does not yet exist into a permit adds too great a level of confusion to the permitting process.

4. Monitoring Effects on Surface Water Resources

As the ALJs previously found, the GAM modeling does not reliably address the potential cumulative effects of LCRA's proposed pumping on surface water resources, in combination with all other authorized pumping in the District. Code § 36.113(d)(2) requires the District to consider whether "the proposed use of water unreasonably affects . . . surface water resources." However, the GM's test-and-see approach, without a definite plan for monitoring effects, is not adequate to prevent unreasonable impacts on surface water resources.

The GM supports incorporating surface water monitoring in the Monitoring Well Agreement and is open to including language in that agreement that will be helpful in assessing impacts.¹⁹⁴ The GM is also not opposed to Environmental Stewardship's suggestion of including a work plan in the permit developed for the Colorado River which would relate to surface water/groundwater interaction.¹⁹⁵ However, the GM suggests that both the surface water monitors and the work plan be part of the Well Monitoring Agreement to be negotiated with LCRA at a later date.¹⁹⁶

The ALJs find that, in light of the fact that the GAMs show potential impacts to surface water resources caused by LCRA and District-wide pumping, any monitoring well system must include monitoring wells that could monitor effects on surface water resources. Thus, the ALJs recommend amending the definition of "Monitoring Well System" contained in Special Condition

¹⁹⁴ GM's Reply at 39.

¹⁹⁵ GM's Reply at 39.

¹⁹⁶ GM's Reply at 39.

(4)(a) in the Revised Draft Operating Permit to require that a monitoring well system must monitor such effects.

The ALJs have not included Environmental Stewardship's recommended changes to the permits incorporating the work plan created by Dr. Young. While the ALJs agree that adoption of a surface water plan (like the work plan created by Dr. Young or some other work plan the District has approved) may be beneficial for the purposes of managing District-wide pumping impacts on surface water resources, the adoption of a work plan in a permit is not appropriate. The process of adoption of a surface water work plan falls squarely within the process of adoption of the District's water management plan.¹⁹⁷ Instead, the Well Monitoring Agreement should incorporate any work plan that is adopted during the water management planning process.

I. 36-Hour Pump Test

LCRA argues that certain changes should be made to Special Condition 14, which relates to the 36-hour pump test. A 36-hour pump test is used to collect data to calculate aquifer parameters, such as transmissivity and storativity. LCRA was concerned that, as it stood, the Special Condition lacked specific parameters for transmissivity that would be used to determine whether pumping limits should be imposed. LCRA also suggested shortening the advance notice required before performing the pump test. LCRA also requested a clarification that the authorized maximum rate of withdrawal is an aggregated amount for all wells and also requested a procedure that would allow it to appeal the GM's decision to limit pumping as a result of a pump test. In his reply brief, the GM noted that he agreed to all those changes and included those changes in the Revised Draft Permits. No issues involving the 36-hour pump test remain to be resolved by the ALJs.

¹⁹⁷ Tex. Water Code §§ 36.1071(a)(4) (requiring coordination with surface water entities when developing a water management plan to include addressing conjunctive surface water management issues), .108(d)(4).

J. Review of LCRA's Designs and Specifications

LCRA argues that Special Condition 15, which in the Draft Operating Permit provided that the GM has the authority to approve or reject LCRA's well design after well completion, should be removed.

The GM concedes that a similar special condition is not in other permits. He argues that some kind of well-design review is necessary in this case, however, because LCRA did not include specific well-design information in its Applications.¹⁹⁸ He adds that “[w]ell-design requirements are intended to ensure that the well is completed in such a way as to prevent degradation of the aquifer and to protect the quality of the state's resource.” As shown by the Revised Draft Permits, the GM has agreed to amend Special Condition 15 to require LCRA to provide design specifications before drilling, rather than after the well is completed. The revision also removes the GM's authority to reject that design.

With this change in the timing of the design specification review and the elimination of the GM's approval authority, the ALJs find Special Condition 15 to be within the District's authority and not arbitrary. The ALJs recommend it remain in the Revised Draft Operating Permits.

¹⁹⁸ GM's Reply at 13.

K. Place and Type of Use

At LCRA's request, the Revised Draft Operating Permits reflect a change to the place of use. In its prefiled testimony, LCRA requested to amend its Applications to reduce the place of use from LCRA's entire water service area to the portion of LCRA's service area that is within Lee, Travis, and Bastrop Counties.¹⁹⁹ The GM initially did not accept the amendment because it was not part of the original application and was not submitted on the District's forms.²⁰⁰ However, no other parties contested this reduction in service area, and the GM ultimately accepted the change after LCRA witness Hoffman testified to the requested reduction at the hearing.²⁰¹ This reduction is reflected in the GM's Revised Draft Operating and Transport Permits.

LCRA also requested changes to the language relating to the type of use in both the Operating and Transportation Permits. The Applications requested authority to use the requested groundwater for all beneficial uses as defined by the District's rules and recognized under Chapter 36 of the Code.²⁰² The GM's initial draft permits granted LCRA's request by authorizing some, but not all, of the beneficial uses found in the District's rules and Chapter 36 (municipal, industrial, recreational, irrigation, and agricultural), because LCRA only listed that it had commitments for those uses.²⁰³ LCRA re-urged that the GM change the language to include "all beneficial uses as defined by the District's rules and recognized under Chapter 36 of the Texas Water Code" to give LCRA the flexibility to serve customers for any lawful beneficial use in its service area²⁰⁴ The GM responded that to be consistent with previously authorized permits, it must list out the authorized uses, and LCRA should be required to amend its permits if Chapter 36 is amended to include new uses. However, as a compromise, the GM's Revised Draft Operating Permits were amended to authorize "[a]ll beneficial uses authorized by Texas Water Code § 36.001(9)(A)-(B)."

¹⁹⁹ LCRA Exs. 8A, 8B.

²⁰⁰ GM Ex. 1 (Totten direct) at 30.

²⁰¹ GM's Reply at 4.

²⁰² LCRA Ex. 3(A-2).

²⁰³ GM Ex. 7.

²⁰⁴ LCRA's Closing at 42.

The ALJs agree that LCRA, as a regional water provider, should have the flexibility to serve its customers for any lawful beneficial use and the revision offered by the GM appears to allow for that flexibility.

L. Mitigation

The Brown Landowners, the Hernandezes, and Recharge argue that LCRA should be required to create a mitigation account, such as the one contained in Recharge's permit. This mitigation account was part of a negotiated settlement of the contested case concerning Recharge's application.²⁰⁵

The parties who argue in favor of mitigation have not pointed to a provision of chapter 36 or the District's rules that allow the District to impose mitigation requirements in individual permits. Certainly, it seems that the District could set up rules, or require production fees, that could be used for a mitigation fund. But the Protestants have not presented the authority the under which District could require the establishment of a fund. Nor have they presented any analysis for which permits should be subject to such a fund.

The ALJs recognize the difficulty this creates for the Protestants, particularly Recharge. Under the terms of Recharge's settlement agreement, it could theoretically pay to mitigate LCRA's impacts. But that difficulty does not give the District the authority, much less require it, to impose a mitigation fund as a special condition.²⁰⁶

²⁰⁵ GM Ex. 8.

²⁰⁶ In the *City of Bastrop* contested case, the ALJ addressed the proposed mitigation fund in the analysis of whether the effects of pumping would be unreasonable. *City of Bastrop*, SOAH Docket No. 952-15-3851, PFD at 31. Here, because LCRA did not propose a mitigation fund, there was none to analyze. Moreover, nothing in the *City of Bastrop* PFD suggested that a mitigation fund was required.

IV. ISSUES RELATING TO THE TRANSPORT PERMITS

Pursuant to District Rule 6.1, a transport permit is required to convey groundwater out of the District's boundaries, which are coextensive with the boundaries of Bastrop and Lee counties.²⁰⁷ LCRA's Applications initially requested transport permits to use the requested 25,000 acre-feet per year of groundwater anywhere within LCRA's water service area.²⁰⁸ LCRA subsequently amended its Applications to limit the place of use of the groundwater to its service area only within Bastrop, Lee, and Travis Counties.²⁰⁹ Therefore, transport permits are only required for LCRA's requested authorization to use groundwater in Travis County, the only place of use that is not within the District's boundaries.²¹⁰ The GM's Draft Transport Permits would authorize LCRA's requested place of use in Travis County;²¹¹ however, the Draft Transport Permits include a special provision which prohibits the transport of LCRA's authorized groundwater pursuant to a bed and banks permit or discharge of the groundwater into any surface water.²¹²

A. Whether LCRA's Transport Permit Applications Meet the Requirements of Section 6 of the District's Rules and Texas Water Code § 36.122(f).

The GM concluded that LCRA's applications for transport permits meet the requirements of Section 6 of the District's Rules and Code § 36.122(f), and the ALJs agree.²¹³ The Applications met each of the filing requirements under District Rule 6.2.

²⁰⁷ Tex. Spec. Dist. Code § 8849.004.

²⁰⁸ LCRA Exs. A-4, A-2 at 3.

²⁰⁹ LCRA Ex. 1 (Hofmann direct) at 21.

²¹⁰ Tex. Spec. Dist. Code § 8849.004; GM Ex. 9.

²¹¹ GM Ex. 7.

²¹² GM Ex. 7.

²¹³ GM's Closing at 51.

In reviewing a proposed transfer of groundwater out of the District, Code § 36.122(f) and District Rule 6.3 require the District to consider: (1) the availability of water in the District and in the proposed receiving area during the period for which the water supply is requested; (2) the projected effect of the proposed transfer on aquifer conditions, depletion, subsidence, or effects on existing permit holders or other groundwater users within the District; and (3) the approved regional water plan and approved District management plan. The GM properly considered each of the factors, none of which were directly challenged by any party. The analysis of the proposed effect of pumping, as set out above applies to the second factor, and no party alleges that the GM did not consider the approved regional water plan or district management plan.

As for the factor relating to the availability of water in the district and in the proposed receiving area during the period for which the water supply is requested, the District considered the 2016 Region K and Region G Water Plans.²¹⁴ The Region K and Region G Water Plans identify water supply shortages in the counties LCRA is requesting to serve (Lee, Bastrop, and Travis Counties) and project that there is sufficient water available for LCRA's planned withdrawals from the Simsboro Formation in the Carrizo-Wilcox aquifer underlying the District.²¹⁵

B. Draft Transport Permit Special Provision Relating to Discharge of Groundwater into a Surface Watercourse

LCRA requests removal of the special provision relating to the prohibition against discharge of the groundwater into a surface watercourse from the Draft Transport Permit, but the GM has declined to do so.²¹⁶ The ALJs find that the special provision should be removed from the permit because it is unnecessary, overbroad to accomplish the District's stated purpose, and unlawful as currently drafted.

²¹⁴ GM's Closing at 51.

²¹⁵ LCRA Ex. 13; GM's Closing at 51.

²¹⁶ GM's Closing at 49-50.

1. GM's Arguments

The GM testified that he included the special provision because he was concerned regarding water loss through evaporation or carriage losses.²¹⁷ Mr. Totten's prefiled direct testimony states, "there was no plan in the requested permit to prevent waste during the transport of water to the farthest areas in LCRA's service area."²¹⁸

The GM acknowledges that LCRA's subsequent limitation of its request to include only Travis County as a place of use outside of the District makes transportation of groundwater by use of a proposed bed-and-banks permit impossible because water cannot be conveyed upstream upriver from Bastrop County to Travis County.²¹⁹ However, the GM maintains that the special provision remains necessary because LCRA might choose to amend the permits in the future to change the place of use to areas downriver from Bastrop County.²²⁰ Therefore, he argues, the possibility of transport of the groundwater via the bed and banks is not foreclosed.²²¹ The GM will recommend the District include such a provision in all future transport permits.²²²

The GM's explanation for the proposed provisions evolved after the hearing on the merits. The GM continues to maintain in his briefs that inclusion of the provision is within the District's authority and duty to prevent waste of groundwater pursuant to chapter 36 of the Code. The GM elaborates on his original position (that LCRA did not state its plan to prevent waste during the transportation) by now stating conclusively, that discharge of *any* amount of groundwater into the bed and banks would constitute waste under chapter 36.²²³ To support his argument that discharge of groundwater in the bed and banks of a surface water body (watercourse) is *per se* waste, the

²¹⁷ GM Ex. 1 (Totten direct).

²¹⁸ GM Ex. 1 (Totten direct) at 19.

²¹⁹ GM's Closing at 49.

²²⁰ GM's Closing at 49.

²²¹ GM's Closing at 49.

²²² GM's Closing at 49.

²²³ GM's Closing at 49; GM's Reply at 15-16.

GM relies on the definition of waste in the District's rules and Chapter 36, which provides that "waste" includes:

willfully or negligently causing, suffering, or allowing groundwater to escape into any river, creek, natural watercourse, depression, lake, reservoir, drain, sewer, street, highway, road, or road ditch, or onto any land other than that of the owner of the well unless such discharge is authorized by permit, rule, or order issued by the [TCEQ] under Chapter 26.²²⁴

The GM acknowledges that LCRA possesses an approved in-district permit from the District for the purpose of discharging groundwater into Lake Bastrop for power plant cooling purposes.²²⁵ However, the GM argues that his proposed special provision prohibiting LCRA from doing so in Travis County is not more restrictive than for that previous in-district permit, because that permit did not include a transport permit.²²⁶ His primary concern, he states, is with regional transport of water via a bed-and-banks permit.²²⁷

²²⁴ Tex. Water Code § 36.001(8)(E); *see also* District's Rules § 1.

²²⁵ GM's Reply at 15-16.

²²⁶ GM's Reply at 15-16.

²²⁷ GM's Reply at 15-16.

2. LCRA's Arguments

LCRA first argues that the special provision is unnecessary in these transport permits due to the physical impossibility of using any watercourse to transport water from Bastrop County to Travis County.²²⁸ Second, LCRA argues that the District does not have the enumerated authority to prohibit the transport of water in the bed and banks of a watercourse.²²⁹ Third, LCRA points out that it is authorized by the District to discharge water into Lake Bastrop by an already-issued permit.²³⁰ Therefore, LCRA states, the District is prohibited by section 36.122(c) of the Texas Water Code, from making more restrictive conditions on transporters than it does on in-district users.²³¹ Finally, LCRA cites various authorities to support its argument that transport of water in a watercourse is not, as the District asserts, *per se* waste.²³²

LCRA's first argument regarding whether transport of water in a watercourse constitutes waste is that the definitions of "waste" cited by the GM both require groundwater to "escape" into a watercourse to constitute waste.²³³ Permitted transport of groundwater does not meet the definition of "waste," LCRA contends, because when a permit to transport groundwater via bed and banks of a watercourse is obtained prior to discharge, the groundwater does not "escape."²³⁴ Instead, the transporter maintains legal possession and ownership of the groundwater for later diversion even after it is discharged.²³⁵

LCRA cites several cases to show that discharge of groundwater into a watercourse is not waste and that using the bed and banks of a watercourse is a lawful means of transporting

²²⁸ LCRA's Closing at 66-74.

²²⁹ LCRA's Closing at 66-74, citing various sections of ch. 36, Tex. Water Code.

²³⁰ LCRA Ex. 49.

²³¹ LCRA's Closing at 66-74.

²³² LCRA's Closing at 66-74.

²³³ LCRA's Closing at 66-74.

²³⁴ LCRA's Closing at 66-74.

²³⁵ LCRA's Closing at 66-74.

groundwater.²³⁶ The cases include: *City of Corpus Christi v. City of Pleasanton*, 276 S.W.2d 798, 800 (Tex. 1955) (holding that the transport of groundwater using the bed and banks is not waste under the 1925 statutory definition of “waste”); *Denis v. Kickapoo Land Co.*, 771 S.W.2d 235 (Tex. Civ. App.—Austin 1989, writ denied) (holding that a landowner has absolute ownership of groundwater under his land, even where the groundwater would normally percolate into a surface watercourse, but for a landowner intercepting it underground and then discharging it into the same stream for later diversion); *City of San Marcos v. Texas Comm’n on Environmental Quality*, 128 S.W.3d 264 (Tex. App—Austin 2004, pet. denied) (holding that effluent derived from privately owned groundwater, was abandoned once discharged to surface water, as distinguished from the holdings in *Corpus Christi* and *Denis* solely because effluent was not fungible with superior quality surface water); and *Edwards Aquifer Authority v. Day*, 369 S.W.3d 814, 822-23 (Tex. 2012) (recognizing that the Code specifically allows authorizations for a person to discharge privately owned groundwater into a natural watercourse and withdraw it downstream).

LCRA also cites to provisions of the Texas Water Code to support its position. LCRA notes that Texas Water Code § 11.042 specifically authorizes the use of the bed and banks of a watercourse to transport effluent derived from privately owned groundwater under subsection (b) or other water under subsection (c).²³⁷ LCRA argues that the legislative history for those subsections as well as TCEQ’s history of routinely granting permits to transport groundwater under those subsections support its position that such transport is not waste.²³⁸ LCRA mentions that LCRA has a bed and banks authorization from TCEQ for its Lake Bastrop Permit which uses groundwater permitted by the District.²³⁹ LCRA also mentions that Texas Water Code § 11.143 requires notice to a groundwater conservation district when a project contemplates the discharge of groundwater into a watercourse for use as an alternative to state surface water – which necessarily implies such discharges are allowed by law.²⁴⁰

²³⁶ LCRA’s Closing at 66-74.

²³⁷ LCRA’s Closing at 66-74.

²³⁸ LCRA’s Closing at 66-74.

²³⁹ LCRA Ex. 49.

²⁴⁰ LCRA’s Closing at 66-74.

Finally, LCRA argues that the transport of groundwater in the bed and banks of a watercourse cannot be waste because it does not involve more transportation losses than conveyance used by other users in the District - such as conveyance by pipes.²⁴¹ LCRA argues that certain of the District's permit holders experience losses of 20% or more conveying water in pipes, whereas LCRA estimates the losses of transport to be 10% for transport in the bed and banks of the Colorado River from Lake Travis to the Texas Coast.²⁴²

3. ALJs' Analysis

The ALJs find that the special provision should not be included in LCRA's permits. Groundwater districts have a duty to ensure that groundwater is put to beneficial use and have the authority to control waste of groundwater with rules and permit conditions.²⁴³ A district must consider whether an applicant for a well permit has agreed to avoid waste and achieve water conservation.²⁴⁴ The District argues that inclusion of special provision in LCRA's transport permit prohibiting all discharge of groundwater into a watercourse is necessary based upon these provisions and the definitions of "waste" found in Chapter 36 of the Texas Water Code and the District's rules. For reasons set out below, the ALJs disagree.

Further, the ALJs find that the special provision is unnecessary in the transport permits due to the physical impossibility of using a watercourse to transport water upstream from Bastrop County to Travis County. Additionally, even if the question were not mooted by LCRA's amendments to the transport applications, the ALJs find that, as drafted, the special provision is overbroad to accomplish the District's stated purpose of preventing waste of groundwater in transport. Finally, even if the provision was more narrowly tailored to address only waste of groundwater in transport, the provision would still be unlawfully restrictive, because there is no

²⁴¹ LCRA's Closing at 66-74.

²⁴² LCRA's Closing at 66-74.

²⁴³ Tex. Water Code §§ 36.101(a),

²⁴⁴ Tex. Water Code § 36.113(d)(6).

evidence in the record to support the GM's opinion that water transported via bed and banks would result in loss or waste.

a. The Special Provision Exceeds the District's Authority

The ALJs agree with LCRA that discharge of groundwater into a surface watercourse pursuant to a bed-and-banks permit is not waste. The GM argues that "waste" is defined in chapter 36 of the Code and the District's Rules to include any discharge of groundwater into a watercourse without a chapter 26 wastewater discharge permit. The ALJs disagree. Groundwater discharged under a bed-and-banks permit does not meet the definitions of "waste" relied upon by the GM because the definitions cited specifically require the "escape" of groundwater—meaning the owner has lost possession of it without putting it to beneficial use.²⁴⁵ A bed-and-banks permit holder maintains ownership and control over the water discharged pursuant to a bed-and-banks permit and can put the water to a beneficial use even after it has been discharged. Such discharges are authorized by the Texas Water Code.²⁴⁶ The legislative history of the bed-and-banks permit provisions, case law, and the historical permitting practice of the TCEQ and groundwater districts (including this District) clearly show that such discharges are not considered waste, as argued by the GM.

LCRA is no longer seeking to transport water out of the district via bed and banks, therefore, LCRA does not have the burden to show that hypothetical transport of water will result in waste. Nevertheless, LCRA introduced evidence to show that LCRA's most extreme hypothetical transport (from Lake Travis to the Texas coast), would incur fewer losses of groundwater than other existing users currently incur transporting water within the District.²⁴⁷ In contrast, the record does not show that the GM has made any analysis to justify his blanket

²⁴⁵ Tex. Water Code § 36.001(8)(E); *see also* § 1 of the District's Rules.

²⁴⁶ Tex. Water Code §§ 11.043, 153, 143. *See also* Tex. Water Code § 36.113(d)(5) (provision states that use of groundwater for certain purposes which involve groundwater discharge to surface watercourses is only scrutinized in a particular enumerated district, but otherwise not limited in any other areas).

²⁴⁷ LCRA's Closing at 66-74.

prohibition of all transport in a watercourse. Without any evidence to support the GM's conclusion that transporting groundwater out of the District in a watercourse pursuant to a lawfully obtained permit would result in loss or waste, the provisions are arbitrary and exceed the District's authority to prevent waste.

b. The Special Provision Is Unnecessary

The GM acknowledges the impossibility of transporting water in a watercourse upriver from Bastrop County to Travis County; however, the GM argues that the provision is necessary because LCRA may later seek to amend its transport permits to include a new place of use downriver from Bastrop County at some point in the future, which would open the possibility of LCRA transporting groundwater in a watercourse. This argument is unpersuasive. Any such amendment would be subject to the District's application and review process, and the GM could evaluate such a request on its actual, and not hypothetical, merits or failings.

The GM states that it is important to include the provision in these particular transport permits for fairness and consistency because the GM intends to bar transport via bed and banks for all new permits by including the provision in any new future transport permit. As discussed below, the ALJs conclude that the special provision in this matter is overbroad as drafted and unlawful absent any analysis or evidence that transport would result in loss or waste of groundwater.

c. The Special Provision Is Overbroad to Accomplish Its Stated Purpose

On its face, the provision appears to go beyond the District's stated purpose of simply preventing the waste of groundwater in transport and actually prohibits uses that the District allows within its boundaries. Under Code § 36.122(c) "a district may not impose more restrictive permit conditions on transporters than the district imposes on existing in-district users." The special provision language is significantly more expansive than simply prohibiting the transport of water in the bed-and-banks of a watercourse. It states:

Water withdrawn and transported under the permit must be put to beneficial use at all times, and may not be transported pursuant to a bed and banks permit *nor discharged to any surface water, as defined by Section 11.021 of the Texas Water Code, as amended (e.g., a stream, river, or lake (emphasis added).*

The special provision would not only prevent the transportation of water to Travis County pursuant to a bed and banks permit, it would also more broadly prevent the discharge and beneficial use of the groundwater *in* Travis County, by LCRA or any of its customers, after transport to Travis County. For example, by the plain language, this provision would disallow LCRA, or any of LCRA's customers, from using the groundwater for power plant cooling purposes in Travis County (as LCRA is currently authorized to do within the District's boundaries to use its Lake Bastrop Permit). This violates the prohibition in Code § 36.122(c) of a district imposing more restrictive permit conditions on transporters than the district imposes on existing in-district users.

V. CONCLUSION

The ALJs recommend issuance of the Revised Draft Operating Permits and the Draft Transport Permits with the following changes:

1. That Special Condition 1 of the Revised Draft Operating Permits be amended to read, "Prior to construction of a well authorized under Special Condition 3(b), Permittee shall enter into a monitoring well agreement approved by the District Board and Permittee;"
2. That the following language be removed from Special Condition (3)(a) of the Revised Draft Operating Permit: "and has complied with the terms and provisions of the Monitoring Well Agreement."

3. That the requirement that LCRA present end-user contracts or binding commitments be removed from the Revised Draft Operating Permits Special Condition (3)(c)(iv) and replaced with the following language: “Permittee has assisted the District in adding any New Monitoring Wells that the District and Permittee agree are needed before Permittee may increase its pumping under Phase III.”
4. That the requirement that LCRA present end-user contracts or binding commitments be removed from the Revised Draft Operating Permits Special Condition (3)(d)(iii) and replaced with the following language: “Permittee has assisted the District in adding any New Monitoring Wells that the District and Permittee agree are needed before Permittee may increase its pumping under Phase IV.”
5. That Special Condition (4)(a) of the Revised Draft Operating Permit be amended to include a requirement that a “Monitoring Well System” include wells to monitor surface water;
6. That Special Condition 5 be amended to clarify that affected landowners may participate in the permit renewal process, including the determination of whether an amendment is necessary; and
7. That Special Provision 1, prohibiting discharge into a surface watercourse, be removed from the Draft Transport Permits.

In support of these recommendations, the ALJs propose the following Findings of Fact and Conclusions of Law.

VI. FINDINGS OF FACT

Background and Procedural History

1. The Lower Colorado River Authority (LCRA) is a conservation and reclamation district established by the Texas Legislature in 1934 that serves as a regional water supplier within its 35-county service area.
2. In 2015, as part of a goal to diversify its water supply and “drought proof” it, LCRA acquired groundwater rights beneath the Griffith League Ranch, an approximately 4,847.5-acre property owned by the Capitol Area Council, Inc. of the Boy Scouts of America.
3. On February 1, 2018, LCRA filed applications (Applications) for eight operating and transport permits with the Lost Pines Groundwater Conservation District (District). The applications for operating permits sought authorization to withdraw a total of 25,000 acre-feet per year of groundwater from the Simsboro Formation based on the groundwater rights it acquired at the Griffith League Ranch. The water was to be used for municipal, industrial, recreational, irrigation and agricultural purposes.

4. On February 21, 2018, LCRA resubmitted the Applications on different forms.
5. On August 20, 2018, the District's General Manager (GM) notified LCRA by letter that its Applications were administratively complete and that the Applications would be set for a public hearing. The letter also provided LCRA with the GM's Draft Operating Permits and Draft Transport Permits (collectively, Draft Permits.)
6. Following notice, the District held a public hearing on the Applications on September 26, 2018, and voted to contract with the State Office of Administrative Hearings (SOAH) to conduct a hearing on the Applications. Several persons disagreed with the issuance of the Draft Permits, and LCRA challenged some of the Draft Transport Permit provisions.
7. On December 18, 2018, SOAH Administrative Law Judges (ALJs) Michael O'Malley and Laura Valdez held a prehearing conference in Bastrop, Texas. At the prehearing conference, the ALJs admitted the following as parties: LCRA, the District, Aqua Water Supply Corporation (Aqua), Environmental Stewardship, City of Elgin (Elgin), and Recharge Water, LP (Recharge). A group of landowners represented by a single attorney was also admitted, and will be referred to as the Brown Landowners. Several self-represented litigants were also named parties.
8. Following a challenge to party status, the ALJs determined that many of the self-represented litigants, and some of the Brown Landowners, did not have a justiciable interest and struck them as parties. The remaining self-represented litigants were Peggy Jo and Marshall Hilburn, Walter Winslett, JC Jensen, Elvis and Roxanne Hernandez, Verna L. Dement, Catherine and Charles L. White, and Richard Martinez. Mr. Jensen and Mr. Martinez withdrew their protests, as did several of the Brown Landowners.
9. Aqua is a retail public utility with a service area in Bastrop, Caldwell, Fayette, Lee, Travis, and Williamson Counties that has a permit from the District authorizing the production of 23,627 acre-feet per year from 15 wells in the Simsboro Formation. Twelve of those wells are in two well fields near the shallow outcrop of the Simsboro. Aqua's three other wells are located on the south side of Highway 290, in the deeper downdip portion of the aquifer.
10. Elgin has a retail public utility that provides retail water utility service within its certificated service area. The city, which is located in the greater Austin area, expects continued and rapid growth. Elgin has four wells that are all partially or wholly completed within the Simsboro Formation. Two of Elgin's wells are in the outcrop area of the Simsboro Formation, with the wells screened partially in both the Simsboro and Hooper Formations. Its other two wells are located in the downdip and are entirely screened within the Simsboro Formation.
11. Recharge, formerly known as End Op, L.P., has operating permits from the District authorizing the production of 46,000 acre-feet from 14 wells, to be phased in, which it

acquired following years of litigation and a settlement. Seven of the permitted wells are to be located in Bastrop County, and seven are to be located in Lee County.

12. The Hernandezes' well is in the Calvert Bluff Formation, which overlays the Simsboro. The Brown Landowners' wells are located throughout the District.
13. The hearing on the merits was held October 15-22, 2019, before ALJs Ross Henderson and Rebecca S. Smith. The first four days of the hearing were held in Bastrop, Texas, and the last two took place at SOAH's hearing facility in Austin, Texas. Mr. and Mrs. Hernandez were the only self-represented litigants who prefiled testimony and participated in the hearing on the merits. The record closed on January 31, 2020, with the filing of reply briefs.
14. In its original Applications, LCRA stated that the water would be used throughout its 35-county service area. In its testimony, and at hearing, LCRA amended its request to only seek to use the water in Bastrop, Lee, and Travis Counties.
15. As an attachment to his reply brief, the GM provided a January 31, 2020 Revised Draft Operating Permit (Revised Draft Operating Permit) that made several changes to the Draft Operating Permit. No party objected to these changes.

Uncontested Texas Water Code Factors Relevant to Operating Permits

16. The Applications for Operating Permit included all of the information required by chapter 36 of the Texas Water Code (Code) and the District Rules.
17. LCRA intends to use the groundwater it produces to meet its existing and future water supply obligations.
18. Standard Provision No. 1 in the Revised Draft Operating Permits require that the water withdrawn be put to beneficial use at all times and prohibits the operation of a permitted well in a wasteful manner.
19. The District's Management Plan states that the District will endeavor to manage groundwater to meet demands on a sustainable basis.
20. The Revised Draft Operating Permits' production limits, requirements for pump-testing and monitoring, and a provision that LCRA is subject to future production limits allow the District to manage groundwater to meet demands on a sustainable basis.
21. LCRA's proposed use of water is consistent with the District's approved management plan.
22. LCRA has adopted water conservation and drought contingency plans pursuant to its policy to meet or exceed state water conservation requirements.

23. In its Applications and with its plans, LCRA has agreed to avoid waste and achieve water conservation.
24. In its Applications, LCRA agreed that reasonable diligence will be used to protect groundwater quality and that it will follow well plugging guidelines at the time of well closure.
25. LCRA does not have a history of non-compliance with District Rules or Chapter 36.

Unreasonable Effects on Groundwater or Surface Water Resources or Existing Permit Holders

26. The 2018 Central Carrizo-Wilcox Groundwater Availability Model (New GAM) provides a better tool to model the impact of LCRA's proposed pumping than does the 2004 Central Queen City-Sparta Groundwater Availability Model.
27. LCRA's expert Dr. Steven Young performed several model runs using the New GAM, factoring in well-design factors, such as pump settings, well constrictions, and location of well screens for Aqua's and Elgin's wells.
28. Under Dr. Young's modeling, LCRA's proposed pumping would not cause the water level in Aqua's or Elgin's wells to drop below the pump elevation.
29. The Special Conditions proposed by the GM in the Revised Draft Permit—in particular, the 36-hour pump test, the requirement that a groundwater monitoring well agreement be entered into, and the phased production tiers—will help ensure that LCRA's proposed use will not unreasonably affect existing groundwater resources or existing permit holders.
30. Dr. Young's modeling showed that LCRA's proposed pumping will not unreasonably affect existing surface water resources.
31. The modeling also showed that LCRA's proposed pumping, when combined with other pumping, has the potential to affect existing surface water resources.
32. Because LCRA's proposed pumping, when combined with other pumping, has the potential to affect existing surface water resources, the Revised Draft Operating Permits should be revised to require monitoring for effects on surface water resources.

Whether Granting the Applications is Consistent with the District's Duty to Manage Total Groundwater Production on a Long-Term Basis to Achieve an Applicable Desired Future Condition

33. The District is a part of Groundwater Management Area 12, which on April 27, 2017, adopted a desired future condition (DFC) for the Simsboro Formation of a District-wide average drawdown between January 2000 and December 2069 of 240 feet.
34. The DFC is also divided into DFCs for the counties in the District. For Bastrop County, the DFC is a county-wide average drawdown between January 2000 and December 2069 of 174 feet; for Lee County, the DFC is a county-wide average drawdown between those dates of 350 feet.
35. Modeled Available Groundwater (MAG) is the amount of water that the Texas Water Development Board's executive administrator determines may be produced on an average annual basis to achieve a DFC.
36. MAG is a factor for the District to consider when managing the DFC.
37. Granting the application, with the Special Conditions contained in the Revised Draft Operating Permit, is consistent with the District's duty to manage total groundwater production on a long-term basis to achieve the applicable DFC.

Whether the Conditions and Limitations in the Revised Draft Operating Permit Will Prevent Waste, Achieve Water Conservation, Minimize as far as Practicable the Drawdown of the Water Table or the Reduction of Artesian Pressure, or Lessen Interference Between Wells

38. LCRA's proposed wells will be located greater more than 100 feet away from the nearest property line and will be spaced at least 5,000 feet from the nearest Simsboro well not owned by LCRA.
39. LCRA's proposed wells will be located where the aquifer is deepest, in some of the most transmissive parts of the Simsboro in the District.
40. Because LCRA's proposed wells will be part of an aggregated system, LCRA will be able to adjust pumping among the wells to minimize reduction of artesian pressure.
41. Under the Revised Draft Operating Permits, the GM can restrict pumping if the 36-hour pump tests reveal that impacts from pumping are worse than anticipated.
42. The Special Conditions regarding the 36-hour pump tests, phasing, and monitoring wells in the Revised Draft Operating Permit will prevent waste, achieve water conservation, minimize as far as practicable the drawdown of the water table or the reduction of artesian pressure, or lessen interference between wells.

Other Issues

43. The District has not adopted policies of reducing the initial amount of water requested by an applicant or of requiring financial mitigation for production in Bastrop County.
44. The District has not adopted a policy of requiring spacing between wells of at least 5,000 feet as between all large volume wells, even those owned by the same owner.
45. Special Condition 15 in the Revised Draft Operating Permits, which requires LCRA to provide well design specifications before drilling, is within the District's authority and is appropriate.

Phasing Issues

46. Revised Draft Operating Permits Special Condition 3 provides for tiered phasing of production containing four phases.
47. Phase I, which requires LCRA to add new monitoring wells and to comply with the monitoring well agreement required in another special condition.
48. Phase II authorizes the withdrawal from two wells (Wells 7 and 8) of an aggregated annual amount of up to 8,000 acre-feet of water, with an aggregated maximum rate of withdrawal of 6,000 gallons per minute. LCRA would not be authorized to withdraw more water per year than the amount LCRA has a binding commitment to provide to an authorized place of use.
49. Under Phase III, the aggregated annual withdrawal amount could be increased to 15,000 acre-feet of water per year from four wells with an aggregated maximum rate of withdrawal of 10,000 gallons per minute. To move to Phase III, LCRA must show it has withdrawn 4,000 acre-feet per year from a combination of one or more of the aggregated wells during two consecutive twelve-month period and show binding commitments. LCRA must also show that the Estimated DFC Year Drawdown is less than the DFC for the Simsboro in effect when LCRA submits that information.
50. In Phase IV, the aggregated annual withdrawal may be increased to an amount not to exceed 25,000 acre-feet per year from all eight wells, with an aggregated maximum rate of withdrawal of 18,000 gallons per minute. To reach this phase, LCRA must show binding commitments and that it has withdrawn at least an aggregate amount of at least 11,250 acre-feet per year from a combination of one or more of the aggregated wells during three consecutive twelve-month periods. LCRA must also show that the Estimated DFC Year Drawdown is less than the DFC for the Simsboro in effect when LCRA submits that information.

51. Revised Draft Operating Permits Special Conditions (3)(c)(i) and (3)(d)(iii) require LCRA to show binding commitments to provide the requested withdrawal amount before advancing to the next phase.
52. The Regional Water Plans and LCRA's existing contract demonstrated there is a need for the water in the receiving area.
53. Pumping water without beneficially using it would violate the Revised Draft Operating Permit.
54. Therefore, there is not a compelling reason to include the requirement for binding contracts in Revised Draft Operating Permits Special Conditions (3)(c)(iv) and (3)(d)(iii).
55. The Revised Draft Operating Permits contain most of the changes LCRA proposed to the formula in the Draft Operating Permit's Special Condition 3, with the exception of which DFC should be considered in deciding whether LCRA can advance to the next phase of production.
56. Examining LCRA's pumping in relation to the DFC in existence at the time LCRA seeks to advance to the next tier of pumping, helps ensure that LCRA is not exempt from the effect of changes in conditions when it seeks to pump more water.
57. The reference to "the Desired Future Condition for the Simsboro Aquifer in effect when the Permittee submits the information" in Revised Draft Operating Permits Special Conditions (3)(c)(ii) and (3)(d)(ii) should be included in the issued permits.
58. Special Condition 5 of the Revised Draft Operating Permit Special Condition 5 provides that if LCRA files a renewal application, the GM and LCRA must evaluate "the data collected from the Monitoring Well System prior to the date of the application to renew to determine whether LCRA's pumping has resulted in substantially different impacts to groundwater resources than those predicted by the modeling relied upon [by] the District when the Permit was issued and jointly propose revisions to the Permit based on that data."
59. The parties admitted at this hearing are affected persons, and have an interests beyond the general public.
60. To protect their interests, Special Condition 5 should be clarified to provide that affected persons may participate in the permit renewal process, including the determination of whether an amendment is necessary.

Monitoring Wells

61. Special Condition 1 of the Revised Draft Operating Permit requires LCRA to enter into a Monitoring Well System Construction and Maintenance Agreement, approved by the District's Board, within 180 days after the Permit has been issued. Under this condition, LCRA would be required to construct and maintain the new monitoring wells, and a violation of the Monitoring Well Agreement would be a violation of the Permit.
62. Special Condition 4 of the Revised Draft Operating Permits sets out certain criteria for a monitoring well system. Wells in the system must be screened in the Simsboro Formation; must improve the spatial coverage of the monitoring well system; must be easily accessible for regular measurements; and must meet any other criteria agreed upon by the GM and LCRA.
63. Providing a flexible deadline, rather than a 180-day deadline, will better allow LCRA and the GM to take any new pumping into account.
64. Special Condition 1 should be amended to require LCRA and the GM to enter into a Monitoring Well Agreement before LCRA can construction of a well, rather than within 180 days of permit issuance.
65. Incorporating a Monitoring Well Agreement that does not yet exist into a permit adds a significant level of confusion to the permitting process.
66. The portion of Special Condition 1 under which violation of the Monitoring Well Agreement is a permit violation should be removed from the permit.
67. The GM incorporated LCRA's proposed changes to the 36-hour pump test into the Revised Draft Operating Permit.
68. Special Condition 15 of the Revised Draft Operating Permit requires LCRA to provide the GM with design specifications before drilling a well.
69. LCRA did not submit well design specifications with its Applications.
70. The GM is authorized to require LCRA to provide design specifications.
71. Revised Draft Operating Permits authorize "[a]ll beneficial uses authorized by Texas Water Code § 36.001(9)(A)-(B)."
72. LCRA, as a regional water provider, should have the flexibility to serve its customers for any lawful beneficial use and the revision offered by the GM allows for that flexibility.

Undisputed Draft Transport Permit Requirements

73. The Region K and Region G Water Plans identify water supply shortages in the in the counties LCRA is requesting to serve (Lee, Bastrop, and Travis Counties) and project that there is sufficient water available for LCRA's planned withdrawals.
74. In reviewing LCRA's Applications for Transport Permits, the GM considered the projected effect of the proposed transfer on aquifer conditions, depletion, subsidence.
75. In reviewing LCRA's Applications for Transport Permits, the GM considered the or effects on existing permit holders or other groundwater users within the District.
76. In reviewing LCRA's Applications for Transport Permits, the GM considered the approved regional water plan and approved district management plan.
77. Special Provision 1 prohibits LCRA from transporting water pursuant to a bed-and-banks permit and from discharging to any surface water.
78. Under the Draft Permits, transportation of groundwater by use of a proposed bed-and-banks permit would be impossible because water cannot be conveyed upriver from Bastrop County to Travis County, the only place of use outside the District.
79. Discharge of groundwater into a surface watercourse pursuant to a bed-and-banks permit is not waste.
80. Operating permits in the District do not prohibit discharge into surface water.
81. Special Provision 1 imposes more restrictive permit conditions on transporters than the District imposes on existing in-district users.

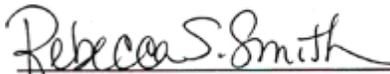
VII. CONCLUSIONS OF LAW

1. The District has jurisdiction to decide the issues raised by LCRA's Applications. Tex. Water Code ch. 36.
2. Notice was accomplished in accordance with chapter 36 of the Texas Water Code and District Rules.
3. LCRA's Applications are subject to the District Rules that were amended April 20, 2016.
4. Under the Standard and Special Conditions proposed by the GM in the Revised Draft Operating Permits, LCRA's Applications for Operating Permits conform to the requirements prescribed by chapter 36 of the Code and the District Rules. Tex. Water Code § 36.113(d)(1); District Rule 5.2D(1).

5. Modeled Available Groundwater is the amount of water that may be produced on an average annual basis to achieve a desired future condition. Tex. Water Code § 36.001 (25).
6. Under District Rule 8.2.B, a new non-exempt well with a maximum pumping capacity of greater than 1,000 gpm must be spaced at least 5,000 feet from the nearest well completed in the same aquifer unit and owned by a different well owner.
7. The District is not required to consider historic use in evaluating LCRA's Applications. Tex. Water Code § 36.116(b).
8. Neither the Texas Water Code nor the District Rules authorize the District to unilaterally impose a requirement that an applicant recreate a mitigation account to pay other well owners for the impacts from the applicant's drilling.
9. In reviewing LCRA's Applications for Transport Permits, the District considered the factors required by Texas Water Code § 36.122(f) and District Rule 6.3.
10. Texas Water Code § 36.001(8)(E) defines "waste" as including "willfully or negligently causing, suffering, or allowing groundwater to escape into any river, creek, natural watercourse, depression, lake, reservoir, drain, sewer, street, highway, road, or road ditch, or onto any land other than that of the owner of the well unless such discharge is authorized by permit, rule, or order issued by the commission under Chapter 26."
11. Authorized discharge pursuant to a bed-and-banks permit issued under the Texas Water Code is not "waste."
12. The District may not prohibit the transport of water via a bed-and-banks permit as part of its authority to control waste of groundwater under Texas Water Code § 36.101(a).
13. After weighing the factors under Texas Water Code § 36.113(d) and the District Rules, the District should approve the GM's Revised Draft Operating Permit and the Draft Transport Permit with the following changes:
 - a. That Special Condition 1 of the Revised Draft Operating Permits be amended to read, "Prior to construction of a well authorized under Special Condition 3(b), Permittee shall enter into a monitoring well agreement approved by the District Board and Permittee;"
 - b. That the following language be removed from Special Condition (3)(a) of the Revised Draft Operating Permit: "and has complied with the terms and provisions of the Monitoring Well Agreement;"

- c. That the requirement that LCRA present end-user contracts or binding commitments be removed from the Revised Draft Operating Permits Special Condition (3)(c)(iv) and replaced with the following language: “Permittee has assisted the District in adding any New Monitoring Wells that the District and Permittee agree are needed before Permittee may increase its pumping under Phase III;”
- d. That the requirement that LCRA present end-user contracts or binding commitments be removed from the Revised Draft Operating Permits Special Condition (3)(d)(iii) and replaced with the following language: “Permittee has assisted the District in adding any New Monitoring Wells that the District and Permittee agree are needed before Permittee may increase its pumping under Phase IV;”
- e. That Special Condition (4)(a) of the Revised Draft Operating Permit be amended to include a requirement that a “Monitoring Well System” include wells to monitor surface water;
- f. That Special Condition 5 be amended to clarify that affected landowners may participate in the permit renewal process, including the determination of whether an amendment is necessary; and
- g. That Special Provision 1, prohibiting discharge into a surface watercourse, be removed from the Draft Transport Permits.

SIGNED March 31, 2020.


REBECCA S. SMITH
ADMINISTRATIVE LAW JUDGE
STATE OFFICE OF ADMINISTRATIVE HEARINGS


ROSS HENDERSON
ADMINISTRATIVE LAW JUDGE
STATE OFFICE OF ADMINISTRATIVE HEARINGS