NOTICE: This document has been edited by Environmental Stewardship to omit materials not germane to its arguments in order to provide a document focused on surface water impacts and the findings of the ALJs related to that interest. By omitting some sections, the page and footnote numbering does not agree with the original document. Readers are referred to the original document for materials omitted and accurate citation of page and footnote numbering.

State Office of Administrative Hearings

Kristofer Monson
Chief Administrative Law Judge

March 31, 2020

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

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,

Ross Henderson
Administrative Law Judge

Rebecca S. Smith
Administrative Law Judge

RS/lc
Enclosure (including 2 CDs)

KEY FINDINGS from Proposal for Decision

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; (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;

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.

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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. EMPHASIS ADDED.

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] EMPHASIS ADDED

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] EMPHASIS ADDED

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 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]** EMPHASIS ADDED

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[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.

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]** EMPHASIS ADDED

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.

EMPHASIS ADDED

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 plan, 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. EMPHASIS ADDED**

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 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.** EMPHASIS ADDED

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[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

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] EMPHASIS ADDED

[117] GM Ex. 11 at 16.

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**. EMPHASIS ADDED

[191] LCRA Ex. 8A at 3-4.

[192] Tr. at 1594.

[193] District Rule 5.3.D(2).

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 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. EMPHASIS ADDED

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. EMPHASIS ADDED

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. EMPHASIS ADDED

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 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. EMPHASIS ADDED

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

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**

CONCLUSION

1. 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.

2. 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;

3. 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

FINDINGS OF FACT

1. 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.

2. Dr. Young's modeling showed that LCRA's proposed pumping will not unreasonably affect existing surface water resources.

3. **The modeling also showed that LCRA's proposed pumping, when combined with other pumping, has the potential to affect existing surface water resources**.

4. **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.** EMPHASIS ADDED

5. **The parties admitted at this hearing are affected persons, and have an interests beyond the general public**.

6. **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**.

7. 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.

8. **The portion of Special Condition 1 under which violation of the Monitoring Well Agreement is a permit violation should be removed from the permit.**