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**

ENVIRONMENTAL STEWARDSHIP'S RESPONSES TO LCRA'S OBJECTIONS AND MOTION TO STRIKE TESTIMONY

TO THE HONORABLE ADMINISTRATIVE LAW JUDGES:

Environmental Stewardship files this Response to LCRA's objections and motion to strike portions of the prefiled testimony offered by Environmental Stewardship. Environmental Stewardship requests the Honorable ALJs overrule the objections and deny the motion to strike. For support, Environmental Stewardship respectfully offers the following:

I. George Rice's opinions are reliable and based on sound methodology.

LCRA objects and moves to strike certain testimony offered by George Rice, arguing that it is unreliable under the *Daubert-Robinson* factors. But a close review of LCRA's arguments reveals that LCRA has misconstrued and misapplied the "reliability" factor under *Daubert.* Proper application of the reliability factor under *Daubert* reveals that Mr. Rice's testimony is reliable and based on sound methodology and reasoning. LCRA simply does not agree with Mr. Rice's conclusions, but that is not a proper basis for striking his testimony.

Texas Rule of Evidence 702's reliability requirement focuses on the principles, research, and methodology underlying an expert's conclusions.[1] *E.I. du Pont de Nemours*

[1] The trial court's role is not to determine whether an expert's conclusions are correct, but only whether the analysis used to reach those conclusions is reliable. *Kerr-McGee Corp. v. Helton,* 133 S.W.3d 245, 254 (Tex. 2004); *Exxon Pipeline Co. v. Zwahr,* 88 S.W.3d 623, 629 (Tex. 2002); *Gammill v. Jack Williams Chevrolet, Inc.*, 972 S.W.2d 713, 728 (Tex. 1998). The trial court scrutinizes only the

& Co. v. Robinson, 923 S.W.2d 549, 557 (Tex. 1995). Under this requirement, expert testimony is unreliable if it is not grounded "'in the methods and procedures of science'" and is no more than "'subjective belief or unsupported speculation.'" *Id.* (quoting *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579, 90 (1993)). In applying this reliability standard, the trial court does not decide whether the expert's conclusions are correct; rather, the trial court determines whether the analysis used to reach those conclusions is reliable. *Gammill v. Jack Williams Chevrolet, Inc.*, 972 S.W.2d 713, 728 (Tex. 1998).

Some of the relevant factors that can be considered when assessing the reliability of expert testimony are the following:

(a) The extent to which the theory has been or can be tested.[2]

(b) The extent to which the technique relies on the expert's subjective interpretation.[3]

(c) Whether the theory has been or could be subjected to peer review or publication.[4]

(d) The technique's potential rate of error.[5]

(e) Whether the underlying theory or technique has been generally accepted as valid by the relevant scientific community.[6]

---

scientific theory and methodology. *TXI Transp. Co. v. Hughes*, 306 S.W.3d 230, 239 (Tex. 2010); *Mack Trucks, Inc. v. Tamez*, 206 S.W.3d 572, 578 (Tex. 2006); *Exxon Pipeline Co. v. Zwahr*, 88 S.W.3d 623, 629 (Tex. 2002); *Southland Lloyds Ins. v. Cantu*, 399 S.W.3d 558, 563 (Tex. App.—San Antonio 2011, pet. denied).

[2] *Daubert v. Merrell Dow Pharms.*, 509 U.S. 579, 593 (1993); *Cooper Tire & Rubber Co. v. Mendez*, 204 S.W.3d 797, 801 (Tex. 2006); *Robinson*, 923 S.W.2d at 557; *see, e.g., Tex. Workers' Comp. Ins. Fund v. Lopez*, 21 S.W.3d 358, 364-65 (Tex. App.—San Antonio 2000, pet. denied) (P's expert introduced articles demonstrating that his theory had been subjected to reliable testing).

[3] *Robinson*, 923 S.W.2d at 557; *see, e.g., Lopez*, 21 S.W.3d at 364-65 (expert's causation testimony was based on objective criteria).

[4] *Daubert*, 509 U.S. at 593; *Robinson*, 923 S.W.2d at 557. However, publication is not a prerequisite for scientific reliability in every case. *Havner*, 953 S.W.2d at 727.

[5] *Daubert*, 509 U.S. at 594; *Robinson*, 923 S.W.2d at 557; *see, e.g., Lopez*, 21 S.W.3d at 364-65 (confidence level in studies was 95%, within the acceptable range required under *Havner*).

(f) The nonjudicial uses of the theory or technique.[7]

Mr. Rice's testimony satisfies most, if not all, of the above factors. First, Mr. Rice's opinions are based on the Groundwater Availability Model (GAM), a model that has been used by all parties to this proceeding. Mr. Rice ran two GAM simulations, one using the older version of the GAM and another using the newer version.[8] He explained how he tested the reliability of the GAM. *Environmental Stewardship Exhibit 100*, 14:22-28. Based on his run of the GAM simulation, he determined that the GAM predicts that pumping will cause the discharge of groundwater to streams to decrease with time, which is consistent with what groundwater discharges would be expected to do in response to pumping. *Environmental Stewardship Exhibit 100*, 14:16-20.

LCRA misstates that Mr. Rice admitted in his testimony that "the predictions related to groundwater-surface water interaction in the former GAM are not reliable," and then, relies on this misstatement to support its argument that his opinions are unreliable. *LCRA Objections and Motion to Strike*, p. 2. But this is simply not an accurate representation of Mr. Rice's testimony. To the contrary, he testifies that the trends predicted by the GAM are reliable. *Environmental Stewardship Exhibit 100*, 14:18-20. He explains in his testimony how he determined the reliability of GAM predictions: he examined the response of the old GAM to changes in: pumping rates, pumping duration, and the location of pumping relative to the Colorado River to see whether the GAM predictions made sense, and then, he performed the same analysis with the newer GAM.

---

[6] *Daubert*, 509 U.S. at 594; *Volkswagen of Am., Inc. v. Ramirez*, 159 S.W.3d 897, 910 (Tex. 2004); *Robinson*, 923 S.W.2d at 557.

[7] *Robinson*, 923 S.W.2d at 557; *see, e.g.*, *Lopez*, 21 S.W.3d at 364-66 (expert's theory had been used to develop better clothing to protect workers from lung disease); *Waring v. Wommack*, 945 S.W.2d 889, 892 (Tex. App.—Austin 1997, no writ) (test performed by accident-reconstruction engineer had nonjudicial uses).

[8] Environmental Stewardship is filing a Motion to Supplement Prefiled Testimony, along with its Responses to Objections. The motion seeks admission of supplemental testimony offered by both Mr. Rice and Mr. Trungale. In his prefiled supplemental testimony, Mr. Rice further explains that GMA 12 has released a new pumping file for the GAM simulation, and Mr. Rice has used this information to again confirm that his opinions are based on reliable methodology. After running a GAM simulation with the new pumping file, Mr. Rice has confirmed his initial conclusions and opinions.

The results were the same, and they both made sense. *Environmental Stewardship Exhibit 100, 14:22-28* & *Exhibit 102*.

Mr. Rice acknowledged that the old GAM is not reliable for purposes of predicting the *amount* of groundwater that is discharged to the streams. That is, the old GAM is not reliable for purposes of quantifying the groundwater discharge to surface water. But he explains that the new GAM is more reliable for this purpose than the old GAM: "the new GAM predicted that the groundwater discharge to the Colorado River was between about 20,000 and 23,000 acre-feet per year. This is within the range of the measured discharge values." *Environmental Stewardship Exhibit 100*, 14:40-42. While Mr. Rice expresses hesitation in relying on the new GAM for quantifying, with specificity, the amount of groundwater discharged into the streams, he explains that the newer GAM is the best methodology available, and the trends predicted by the GAM are reasonable and supported by the measured range of discharge values.[9] *Environmental Stewardship Exhibit 100*, 14:41-44.

The various points of contention offered by LCRA in their attempt to discredit Mr. Rice's methodology are irrelevant for purposes of a *Daubert-Robinson* reliability analysis. It is undisputed that the GAM can be run a number of different ways, and there is more than one GAM that can be used for purposes of predicting impacts of LCRA's proposed groundwater pumping. Indeed, a new pumping file was recently produced by GMA 12 to be used with the new GAM. Experts may disagree on the precise manner in which the GAM should be run. The fact that LCRA must rely on its own experts' prefiled rebuttal testimony in their efforts to explain why Mr. Rice's use of the GAM is flawed buttresses the point that the GAM is a reliable method for purposes of analyzing the impacts of LCRA's proposed pumping on natural resources. LCRA's experts simply

[9] Admittedly, Mr. Rice states in his testimony that the new GAM values are not necessarily "reliable." But his use of the word "reliable" is different from the legal "reliability" factor that is the subject of the *Daubert-Robinson* line of cases. Mr. Rice's use of the word is a colloquial use of the term, intended to acknowledge that the GAM cannot quantify, with specificity, the groundwater discharges to the streams, but it is nevertheless reliable for purposes of predicting trends.

disagree with Mr. Rice, but this does not discredit or render Mr. Rice's use of the GAM unreliable for purposes of reaching his opinions.

The methodology relied on by Mr. Rice is sound, has been used by the other parties in this matter, and is capable of being tested. Mr. Rice's methods cannot be accurately characterized as "subjective belief or unsupported speculation." *See Robinson*, 923 S.W.2d at 557. Indeed, LCRA does not argue otherwise. Instead, LCRA's arguments are based on a disagreement with Mr. Rice's conclusions. But in conducting a *Daubert* analysis, a trial court, or in this case, the ALJs, do not decide whether an expert's conclusions are correct; rather, they only determine whether the methods used to arrive at those conclusions are reliable, and in this case, they are. *Gammill*, 972 S.W.2d at 728.

For these reasons, LCRA's objections to Mr. Rice's testimony and to his Exhibits 102, 104, 105, 106, 107, 108, and 110 should be overruled.

II. Mr. Rice's testimony is not speculative.

LCRA takes issue with Mr. Rice's claim that climate change will result in hotter weather in Texas, which would probably cause reduction in recharge and probably less groundwater discharge to the river. LCRA argues that this testimony is speculative and lacks underlying data.

Mr. Rice's testimony includes a citation for the proposition that global warming will result in hotter weather in Texas; this is the underlying data. LCRA will have an opportunity to cross-examine Mr. Rice and explore whether this underlying data is sufficiently reliable to support Mr. Rice's proposition.

Further, it is widely recognized that hot weather contributes to droughts, and less precipitation results in less recharge. This is a basic principle. Again, LCRA will have an opportunity to explore the basis for this proposition on cross-examination of Mr. Rice.

III. Mr. Trungale's opinions are based on reliable methodology.

For the same reasons described above, in response to the objections to Mr. Rice's testimony, Mr. Trungale's opinions also satisfy the *Daubert-Robinson* standards for expert opinions. As with LCRA's objections to Mr. Rice's testimony, its objections to Mr. Trungale's testimony are best characterized as a disagreement with Mr. Trungale's

conclusions and with the way that he used the model to arrive at those conclusions. But LCRA offers no legal basis for concluding that Mr. Trungale's methodology is unreliable under the *Daubert-Robinson* standard.

As explained in Mr. Trungale's testimony, the WAM, or Water Availability Model, is a computer program that keeps track of how much flow is available for diversion at specified locations within river systems. *Environmental Stewardship Exhibit 200,* 7:3-6. There is no dispute that the surface water model (WAM Run 3) is a reliable model or method that has been adopted by TCEQ and used by a variety of entities, including LCRA. Mr. Trungale relied on this model to explain that the Colorado River, at Bastrop, is already over-appropriated. This means that TCEQ has granted appropriations in amounts that, if those appropriations were fully exercised, there would be little if any water left in the River.

The WAM model can be run a variety of different ways, as LCRA concedes in its objections. So, for instance, a "channel loss" feature can be used in running the model, as explained by LCRA. But the fact that the model can be run in a number of different ways does not render it unreliable. It simply means that LCRA has a different opinion regarding how the model should be run.

In fact, Environmental Stewardship is filing, along with this Response to Objections, supplemental prefiled testimony. Within that supplemental prefiled testimony, Mr. Trungale explains that he has re-run the model, after making an adjustment recommended by Leonard Oliver—one of LCRA's rebuttal witnesses. After adjusting the model and re-running it, Mr. Trungale's conclusions remained the same: flow standards are not being meet at recommended frequencies, and the LCRA groundwater pumping permit would result in further reduction in these attainment frequencies. This further illustrates that the methods used by Mr. Trungale are reliable and sound; they have been and are subject to testing. Mr. Trungale's opinions cannot be characterized as subjective or unsupported speculation.

The various contentions LCRA makes in support of its argument that Mr. Trungale's opinion is unreliable are simply irrelevant to a *Daubert* analysis. They

represent a disagreement with Mr. Trungale's opinions, not a legal challenge to the reliability of the methods used by Mr. Trungale.

Moreover, some of the contentions by LCRA are simply inaccurate. For instance, LCRA argues that Mr. Trungale relied on a GAM output that Mr. Rice did not rely on in his testimony. *LCRA Objections*, p. 9. This is inaccurate. A review of Exhibit 104, included with Mr. Rice's prefiled testimony, reveals that Mr. Rice provided and relied upon the same data that Mr. Trungale used for his analysis.

Finally, LCRA relies on the rebuttal testimony of Mr. Bryan Cook as a basis for its argument that Mr. Trungale's conclusions regarding environmental flow impacts are overstated and flawed and that he failed to look at the details regarding those environmental flow impacts. A review of Mr. Cook's testimony reveals that he believes that a small reduction in habitat, resulting from flows dropping below base-average values, would not have a meaningful impact to Blue Sucker spawning. In other words, LCRA's argument appears to be that Mr. Trungale failed to show how failure to meet flow targets would impact Blue Sucker spawning.

What LCRA fails to appreciate, however, is that it is not Mr. Trungale's burden to quantify impacts to Blue Sucker spawning or demonstrate how those impacts will be exacerbated. That task or analysis has already been done, and it resulted in flow recommendations that were adopted by the Senate Bill 3 Colorado Bay and Basin Expert Science Team and the Bay and Basin Stakeholder Advisory Group. *Environmental Stewardship Exhibit 200*, 10:6-8. The objective of the flow recommendations was to maintain a sound ecological environment and to mimic natural patterns.

The adopted recommendations included subsistence flow guidelines, with the goal that subsistence flows be met 100% of the time. Base flow targets were also developed to ensure adequate habitat conditions, including variability. For base flows, which provide for variable instream habitat conditions, the recommendation was that base-dry and base-average flow magnitude occur 80 and 60 percent of the time. In other words, the advisory group that developed the flow recommendations already determined that anytime base-

average flows fall below the 60% threshold, there should be concern for the Blue Sucker. The 60% threshold was intended to ensure a healthy ecological environment and habitat.

Mr. Trungale relied on these flow recommendations, and the analysis by the various experts that came up with the recommendations, to reach his opinion that a reduction in frequency of meeting base-average flow targets during the spawning period of the Blue Sucker will impact the Blue Sucker. LCRA's and Mr. Cook's criticism, therefore, appears to be with the flow recommendations that were made by the advisory group and the basis for those flow recommendations. This is not the forum, however, to challenge the recommendations made by the advisory group. Until those recommendations change, Mr. Trungale's reliance on those flow recommendations was sound and reliable.

IV. Mr. Trungale's opinions are not conclusory.

Finally, LCRA challenges Mr. Trungale's testimony that reductions in flow in the Colorado River will lead to less inflows downstream into Matagorda Bay. LCRA claims that this statement is conclusory and lacks a foundation.

Mr. Trungale's explanation that a decrease in water upstream in the Colorado River will result in less inflow downstream into Matagorda Bay is not conclusory and requires no foundation. This is an expression of a basic principle: less water upstream results in less water downstream. LCRA will have the opportunity to cross-examine Mr. Trungale, and at that time, LCRA can explore the basis for Mr. Trungale's opinion, if necessary.

For the reasons described above, Environmental Stewardship requests that the objections to Mr. Trungale's prefiled testimony and Exhibit 202 be overruled.

V. Conclusion and Prayer

For the reasons described above, Environmental Stewardship respectfully requests LCRA's objections and motion to strike the prefiled testimony and exhibits submitted by Environmental Stewardship be overruled and denied.

///

Respectfully submitted,

/s/ Marisa Perales
Marisa Perales
State Bar No. 24002750
Eric Allmon
State Bar No. 24031819
FREDERICK, PERALES, ALLMON & ROCKWELL, P.C.
1206 San Antonio
Austin, Texas 78701
512-469-6000 (t)
512-482-9346 (f)

ATTORNEYS FOR
ENVIRONMENTAL STEWARDSHIP

CERTIFICATE OF SERVICE

I certify that a copy of Environmental Stewardship's Responses to LCRA's Objections and Motions to Strike Testimony was served on all parties listed below on October 4, 2019.

/s/ Marisa Perales
Marisa Perales

Lyn Clancy Associate General Counsel Lower Colorado River Authority P.O. Box 220 H429 Austin, TX 78703 (512) 473-3378 (PH) (512) 473-4010 (FAX) lyn.clancy@lcra.org	LOWER COLORADO RIVER AUTHORITY
Emily W. Rogers Douglas G. Caroom Bickerstaff Heath Delgado Acosta LLP 3711 S. MoPac Expressway Building One, Suite 300 Austin, Texas 78746 erogers@bickerstaff.com dcaroom@bickerstaff.com	LOWER COLORADO RIVER AUTHORITY
Gregory M. Ellis Attorney at Law 2104 Midway Court League City, TX 77573 (713) 705-4861 (PH) (512) 236-5265 (FAX) (713) 705-4861 (CELL) greg@gmellis.law	LOST PINES GROUNDWATER CONSERVATION DISTRICT BOARD OF DIRECTORS
Natasha J. Martin Mary A. Keeney Hailey L. Suggs Graves, Dougherty, Hearon, & Moody 401 Congress Ave., STE 2700 Austin, TX 78701	

(512) 408-5727 (PH) (512) 536-9939 (FAX) nmartin@gdhm.com mkeeney@gdhm.com hsuggs@gdhm.com	LOST PINES GROUNDWATER CONSERVATION DISTRICT
Michael A. Gershon Attorney at Law Lloyd Gosselink Rochelle & Townsend, P.C. 816 Congress Avenue, Suite 1900 Austin, TX 78701-2478 (512) 322-5872 (PH) (512) 472-0532 (FAX) mgershon@lglawfirm.com	AQUA WATER SUPPLY CORP.
Donald H. Grissom Attorney Grissom & Thompson, LLP 509 W. 12 Street Austin, TX 78701 (512) 478-4059 (PH) (512) 482-8410 (FAX) don@gandtlaw.com	BROWN LANDOWNERS
Elvis and Roxanne Hernandez 644 Herron Trail McDade, TX 78650 (512) 321-1331 (PH) ranchozunzun@gmail.com	ELVIS AND ROXANNE HERNANDEZ
Verna L. Dement 9621 N. HWY 77 Lexington, TX 78947 (979) 773-4233 (PH) verna101@yahoo.com	VERNA L. DEMENT
Richard Martinez 701 Skyline Ridge Lookout Wimberley, TX 78676 (979) 236-0994 (PH) martinez_rik@hotmail.com	RICHARD MARTINEZ

J. Troupe Brewer Attorney Lloyd Gosselink Rochelle & Townsend, P.C. 816 Congress Avenue, Suite 1900 Austin, TX 78701-2478 (512) 322-5872 (PH) (512) 472-0532 (FAX) tbrewer@lglawfirm.com	CITY OF ELGIN
Paul Terrill Attorney 810 West 10th St. Austin, TX 78701 (512) 474-9108 (PH) (512) 474-9888 (FAX) pterrill@terrillwaldrop.com	RECHARGE WATER, LP
Stacey V. Reese Attorney 910 West Avenue, Suite 15 Austin, TX 78701 (512) 535-0742 (PH) (512) 233-5917 (FAX) stacey@staceyreese.law	RECHARGE WATER, LP