ADVANCE SHEET HEADNOTE
September 30, 2024

2024 CO 63

No. 23SA258, *In Re the Application for Water Rights of Lazy D Grazing Association* **— Water Law — Expert Testimony — Nontributary Groundwater — Waters and Water Rights Subject to Appropriation — Statutory Interpretation — Presumptions and Burdens of Proof.**

The supreme court affirms the water court's decision that the Lazy D Grazing Association is authorized to withdraw and use the nontributary groundwater from the Upper Laramie Aquifer underlying the ranch it manages.

The Supreme Court of the State of Colorado
2 East 14th Avenue • Denver, Colorado 80203

2024 CO 63

Supreme Court Case No. 23SA258
Appeal from the District Court
District Court, Water Division 1, Case No. 20CW3113
Honorable Todd Taylor, Water Judge

In Re the Application for Water Rights of Lazy D Grazing Association in Weld County.

Opposers-Appellants:

City of Sterling and City of Fort Collins,

v.

Applicant-Appellee:

Lazy D Grazing Association,

and

Opposers-Appellees:

Basin Lands, LLC; Bijou Irrigation Company; Bijou Irrigation District; Cache La Poudre Water Users Association; City of Boulder; City of Englewood; City of Greeley, acting by and through its Water and Sewer Board; City of Thornton; L.G. Everist, Inc.; Northern Colorado Water Conservancy District; Mary Estabrook; State Engineer and Division Engineer for Water Division No. 1; and United Water and Sanitation District.

Judgment Affirmed
en banc
September 30, 2024

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JUSTICE HOOD delivered the Opinion of the Court, in which **CHIEF JUSTICE MÁRQUEZ**, **JUSTICE BOATRIGHT**, **JUSTICE GABRIEL**, **JUSTICE HART**, **JUSTICE SAMOUR**, and **JUSTICE BERKENKOTTER** joined.

JUSTICE HOOD delivered the Opinion of the Court.

¶1 In this appeal, we address whether a large ranch in northern Colorado has the right to use a vast deposit of a rare and valuable commodity in our increasingly arid state: groundwater. The water court sitting in Greeley determined that groundwater under the property managed by the Lazy D Grazing Association ("Lazy D") is nontributary; meaning, the water is not subject to the prior appropriation system and that Lazy D, as the overlying landowner, is entitled to use it.

¶2 The City of Sterling and the City of Fort Collins (collectively, "the Cities") opposed and now appeal that decision. They assert that (1) the State Engineer exceeded his authority in determining that the groundwater in question was nontributary and (2) the water court improperly presumed the truth of the State Engineer's findings, relied on sources not in evidence, and discredited expert evidence without justification.

¶3 We disagree with the Cities. In a thorough order, the water court largely got the law right, and the few errors it made were harmless. We therefore affirm the water court's decision that Lazy D is authorized to withdraw and use the nontributary groundwater from the Upper Laramie Aquifer underlying the ranch it manages.

I. Facts and Procedural History

¶4 Lazy D manages a nearly 25,000-acre ranch along the Colorado–Wyoming border ("the Ranch"). The Ranch has very little access to surface water for irrigation; it contains only seasonal streams. So in 2020, Lazy D sought a determination from the water court that the groundwater underlying the Ranch in the Upper Laramie Aquifer is nontributary as defined in section 37-90-103(10.5), C.R.S. (2024) (defining "[n]ontributary groundwater" as "groundwater, located outside the boundaries of any designated groundwater basins in existence on January 1, 1985, the withdrawal of which will not, within one hundred years of continuous withdrawal, deplete the flow of a natural stream . . . at an annual rate greater than one-tenth of one percent of the annual rate of withdrawal").

¶5 This requested designation prompted the interest of many other Colorado water users because nontributary groundwater isn't subject to Colorado's prior appropriation system, § 37-92-103(3)(a), C.R.S. (2024), and the party who owns the surface property over the water completely controls its use, § 37-90-137(4)(b)(II), C.R.S. (2024). Fearing that a nontributary designation would injure their existing water rights in the over-appropriated South Platte and Cache la Poudre River Basins, *see City of Thornton v. Bijou Irrigation Co.*, 926 P.2d 1, 71 n.66 (Colo. 1996), various individuals, municipalities, and nonprofit organizations opposed

Lazy D's application. Lazy D resolved its issues with all the opposers except the Cities, and the case moved to trial with only the Cities as opposers.

¶6 Before trial, the State Engineer published his determination of facts regarding the groundwater underlying the Ranch pursuant to section 37-92-302(2)(a), C.R.S. (2024). In relevant part, the State Engineer found that the Upper Laramie Aquifer beneath the Ranch is "predominantly confined"[1] (and therefore physically separated from the surface water) except along the southern edges of the property. In these unconfined portions, the aquifer sits beneath one permanent stream—Lone Tree Creek—and several intermittent streams. The State Engineer found that the aquifer is physically separated from Lone Tree Creek, as it sits significantly below the alluvium[2] of all intermittent streams. The State Engineer then found that

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[1] A "confined aquifer" is an aquifer bound both above and below by impermeable material. U.S. Geological Surv., *What is the difference between a confined and an unconfined (water table) aquifer?*, https://www.usgs.gov/faqs/what-difference-between-a-confined-and-unconfined-water-table-aquifer#:~:text=A%20confined%20aquifer%20is%20an,the%20top%20of%20the%20aquifer [https://perma.cc/7YX3-NKTJ]. Conversely, an "unconfined aquifer" contains no upper impermeable layer, resulting in the aquifer's water table sitting at atmospheric pressure. *Id.*

[2] "Alluvium" is the "clay, silt, sand, gravel, or similar detrital material deposited by running water"—the subsurface material under a surface stream. *Alluvium*, Merriam-Webster Dictionary, https://www.merriam-webster.com/dictionary/alluvium [https://perma.cc/V82Z-78ND]. Water flowing through a surface stream's alluvium is considered part of the surface stream. § 37-92-102(1)(b),

> [w]ithdrawal of groundwater from the Upper Laramie [A]quifer underlying the land claimed in the application will not, within one hundred years of continuous withdrawal, deplete the flow of a natural stream at an annual rate greater than one-tenth of one percent of the annual rate of withdrawal and therefore the groundwater is nontributary . . . .

¶7 During the trial, dueling experts testified. Lazy D's expert, Walter Niccoli, opined that the Upper Laramie Aquifer was completely hydraulically disconnected from surface streams, so withdrawal from the aquifer would have no effect on natural stream flow. The Cities' expert, Timothy Crawford, countered with his conclusion that a hydraulic connection did exist at points.

¶8 In its findings of fact, the water court acknowledged that the State Engineer's determinations were entitled to a presumption of truth under section 37-92-305(6)(b), C.R.S. (2024), which the Cities failed to rebut. The water court then found "by clear and convincing [evidence] that the groundwater in the Upper Laramie Aquifer is physically and hydraulically separated from the water in the overlying surface stream systems and their alluvium." And it determined as a matter of law that "Lazy D is . . . entitled to a decree for all nontributary

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C.R.S. (2024) (defining "natural surface stream" to include the stream's "underflow"); *see Underflow*, A Dictionary of Ecology (4th ed. 2010), https://www.oxfordreference.com/display/10.1093/acref/9780199567669.001.0001/acref-9780199567669-e-5800 (last visited Sept. 9, 2024) (defining "underflow" as "[t]he flow of groundwater in alluvial sediments, parallel to and beneath a river channel").

groundwater within the Upper Laramie Aquifer underlying its property." The Cities appealed.[3]

[3] The Cities presented the following issues in their opening brief:

1. Whether the District Court for Water Division 1 (Water Court) erred in ruling C.R.S. § 37-92-305(6)(b) (Subsection 305(6)(b)) gives the Colorado State Engineer (State Engineer) authority to determine groundwater is nontributary.
2. Whether the Water Court, based on its interpretation and application of Subsection 305(6)(b), erred in ruling the burden of proof shifted from Applicant-Appellee Lazy D Grazing Association (Lazy D) having to prove its nontributary claims by clear and convincing evidence to the Cities having to prove the groundwater at issue (Subject Groundwater) is tributary.
3. Whether the Water Court, based on its interpretation and application of Subsection 305(6)(b), erred in the standard it applied to the Cities' rebuttal of the State Engineer's Determination of Facts, dated March 31, 2021 (State Engineer's Determination of Facts).
4. Whether the Water Court erred by speculating and relying on personal knowledge and information not in evidence.
5. Whether the Water Court determined the Subject Groundwater is nontributary based on faulty legal premises, inappropriate weight accorded to expert testimony and evidence, and is manifestly erroneous.

We combine these five issues into, essentially, four in our opinion.

II. Analysis

¶9 The Cities raise four primary challenges to the water court's order. After briefly detailing the relevant standards of review and our interpretive principles, we address each challenge in turn.

A. Standards of Review and Principles of Statutory Interpretation

¶10 "[W]e review questions of water law and 'the water court's legal conclusions de novo.'" *Wolfe v. Jim Hutton Educ. Found.*, 2015 CO 17, ¶ 9, 344 P.3d 855, 859 (quoting *City of Englewood v. Burlington Ditch, Reservoir & Land Co.*, 235 P.3d 1061, 1066 (Colo. 2010)). This includes questions of statutory interpretation. *See Antero Treatment LLC v. Veolia Water Techs., Inc.*, 2023 CO 59, ¶ 11, 546 P.3d 1140, 1145. In interpreting statutes, "[o]ur primary duty . . . is to give effect to the intent of the General Assembly, looking first to the statute's plain language." *Id.* (quoting *Vigil v. Franklin*, 103 P.3d 322, 327 (Colo. 2004)). In doing so, "we look to the entire statutory scheme in order to give consistent, harmonious, and sensible effect to all of its parts." *Chirinos-Raudales v. People*, 2023 CO 33, ¶ 13, 532 P.3d 1200, 1203 (quoting *Bill Barrett Corp. v. Lembke*, 2020 CO 73, ¶ 14, 474 P.3d 46, 49).

¶11 "[T]he water court's resolution of the factual issues presented will not be disturbed on appeal unless the evidence is wholly insufficient to support the decision." *City & Cnty. of Denver ex rel. Bd. of Water Comm'rs v. Middle Park Water Conservancy Dist.*, 925 P.2d 283, 286 (Colo. 1996).

B. The State Engineer's Authority to Determine That Groundwater is Nontributary

¶12 The Cities first contend that the State Engineer lacked the authority to determine that the groundwater in question was nontributary and, therefore, that the water court improperly gave this determination a presumption of truthfulness. While we agree that the water court erred, we see no basis for reversal.

¶13 As to the water at issue here, the "water judge shall consider the state engineer's determination as to such groundwater as described in section 37-92-302(2) in lieu of findings made pursuant to section 37-90-137" and then give those findings of fact a rebuttable presumption of truth. § 37-92-305(6)(b). Subsection 302(2)(a) is broad: It provides that for such groundwater, the State Engineer shall make "a determination as to the facts of such application," but it doesn't specify which facts the State Engineer may (or may not) determine. § 37-92-302(2)(a).

¶14 The Cities argue that subsection 305(6)(b)'s reference to findings in lieu of those made pursuant to section 37-90-137 imposes a limitation on subsection 302's broad mandate. They suggest that only those facts that the State Engineer is entitled to find under section 37-90-137—namely, whether there is unappropriated water available, whether the proposed well would materially injure the vested water rights of others, and whether the proposed well is within 600 feet from an existing well—are entitled to the presumption of truthfulness. § 37-90-137(2)(b)(I).

¶15 But reading subsection 305(6)(b) within its larger context belies this interpretation. As relevant here, subsection 305(6)(a) provides that for determinations of water rights in *tributary* groundwater, "the water judge . . . shall consider the findings of the state engineer, *made pursuant to section 37-90-137*, which granted or denied the well permit *and* the consultation report of the state engineer or division engineer submitted pursuant to section 37-92-302(2)(a)." § 37-92-305(6)(a) (emphases added). The reference in subsection 305(6)(b) to findings *in lieu of* those made under section 37-90-137, when read against the reference in subsection 305(6)(a) to findings made *pursuant to* section 37-90-137, distinguishes the scope of the water judge's obligation to apply the presumption of truth based on the location of the water in question.[4] It doesn't curtail the State

[4] Specifically, the State Engineer makes findings in lieu of those made under section 37-90-137 in the context of *nontributary* groundwater because the adjudication of rights in nontributary groundwater doesn't imply that the applicant has an obligation to construct a well. *E. Cherry Creek Valley Water & Sanitation Dist. v. Rangeview Metro. Dist.*, 109 P.3d 154, 157 (Colo. 2005); *see also* § 37-90-137(6) ("Rights to nontributary groundwater outside of designated groundwater basins . . . may include a determination of the right to such water for existing *and future* uses." (emphasis added)). Accordingly, the applicant may not have the information necessary for the State Engineer to make the findings section 37-90-137 requires (such as the specific proposed location of a well). Instead, the State Engineer's findings are limited to the facts "of [the] application." § 37-92-302(2)(a). The facts "of [the] application," in turn, are limited to the facts "supporting the ruling sought." § 37-92-302(1)(a). A water court can't rule on an application for a determination of rights in nontributary groundwater if the facts of the application don't seek to establish that the groundwater is, indeed, nontributary. *See* § 37-92-305(11) (describing a water court's determination of

Engineer's authority to make findings (or the water judge's obligation to presume their truth) under subsection 302. The State Engineer is thus well within his right to determine the facts regarding whether groundwater is nontributary.

¶16 What the State Engineer can't do when an applicant files a petition for a determination of water rights with the water court, though, is make the final determination that groundwater is or isn't nontributary. In this instance, the State Engineer is authorized to issue only a "determination as to the *facts*" of an application for nontributary water rights, § 37-92-302(2)(a) (emphasis added), and the water court need give a presumption of truth only to "the state engineer's *findings of fact* contained within such determination," § 37-92-305(6)(b) (emphasis added). But whether "water underlying a particular parcel of land is nontributary . . . is a mixed question of fact and law," with the "characteristics of the aquifer" constituting facts and their application "to the legal standards of the Groundwater Management Act" constituting law. *Chatfield E. Well Co. v. Chatfield E. Prop. Owners Ass'n*, 956 P.2d 1260, 1271–72 (Colo. 1998).

¶17 Here, in addition to finding facts regarding the characteristics of the Upper Laramie Aquifer, the State Engineer found that "the groundwater is nontributary

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water rights in nontributary groundwater). Thus, the State Engineer has the authority to determine those facts under subsection 302(2)(a), and the water court is obligated to afford them a presumption of truth under subsection 305(6)(b).

as defined in section 37-90-103(10.5)"—a legal conclusion. And the water court gave this legal conclusion a presumption of truth when it uniformly applied the presumption to the entirety of the State Engineer's determinations. This was error. But this error was ultimately harmless because the water court went on to conclude that the groundwater underlying the Ranch was nontributary "even in the absence of this presumption." *See* C.A.R. 35(c) ("The appellate court may disregard any error or defect not affecting the substantial rights of the parties.").

C. Burden of Proof for Demonstrating the Groundwater at Issue is Tributary

¶18 Next, the Cities argue that in applying section 37-92-305(6)(b)'s presumption of truthfulness, the water court improperly shifted the burden of proof and required the Cities to prove that the groundwater underlying the Ranch was tributary.

¶19 "All ground water in Colorado . . . is presumed to be tributary absent clear and convincing evidence to the contrary." *Colo. Ground Water Comm'n v. N. Kiowa-Bijou Groundwater Mgmt. Dist.*, 77 P.3d 62, 70 (Colo. 2003). Lazy D, as the party asserting that the groundwater beneath its Ranch is nontributary, from start to finish had the burden of persuasion before the water court. *See Stonewall Ests. v. CF&I Steel Corp.*, 592 P.2d 1318, 1320 (Colo. 1979) (relying on *Safranek v. Town of Limon*, 228 P.2d 975, 977 (Colo. 1951)). Section 37-92-305(6)(b)'s presumption didn't change this. *See Bd. of Assessment Appeals v. Sampson*, 105 P.3d 198, 205 (Colo.

2005); *People v. Gallegos*, 692 P.2d 1074, 1078 (Colo. 1984). That presumption regarding the truthfulness of the State Engineer's findings of fact in this context merely "imposes upon the party against whom it is directed the burden of going forward with evidence to rebut or meet the presumption." CRE 301; *see also Schenck v. Minolta Off. Sys., Inc.*, 802 P.2d 1131, 1133 (Colo. App. 1990) ("[A] presumption 'disappears' . . . 'when direct and credible evidence supports a contrary conclusion.'" (quoting *City & Cnty. of Denver v. DeLong*, 545 P.2d 154, 157 (Colo. 1976))). If the opposing parties, here the Cities, rebut the factual presumption by providing direct and credible evidence supporting a contrary conclusion, the water court must then analyze both parties' evidence in evaluating whether the applicant has satisfied its burden of persuading the water court by clear and convincing evidence that the groundwater is nontributary.

¶20 At trial, Crawford presented evidence that contradicted the facts found by the State Engineer. For example, Crawford testified that the static water level in several wells along Spring Creek, a permanent stream southwest of the Ranch, was higher than the base of the nearby alluvium, indicating a hydraulic connection between the Upper Laramie Aquifer and Spring Creek. This expert evidence directly and credibly rebutted the claim that the Upper Laramie Aquifer is completely hydraulically disconnected from the groundwater, so the Cities

presented evidence sufficient to rebut the presumption. *See Schenck*, 802 P.2d at 1133.

¶21 The water court's statement that "opposers have not rebutted the presumption that the Engineer's findings of fact are true" was, therefore, erroneous. But the water court applied the presumption correctly in practice: The court treated the presumption as rebutted, assessed the credibility of both parties' evidence, and then concluded that Lazy D had satisfied its burden of persuasion that the groundwater was nontributary by clear and convincing evidence. Contrary to the Cities' argument, the water court never shifted the burden of persuasion to the Cities to prove that the groundwater was tributary. Accordingly, the water court's error here, too, was harmless.

D. The Water Court's Reliance on Personal Knowledge and Information Not in Evidence

¶22 The Cities insist that the water court improperly relied on scientific information that wasn't in evidence. We disagree.

¶23 A court may not consider information outside of the record in reaching its ultimate conclusions, *see, e.g.*, *Anderson v. Lett*, 374 P.2d 355, 357 (Colo. 1962); *Prestige Homes, Inc. v. Legouffe*, 658 P.2d 850, 853–54 (Colo. 1983), unless such information is "not subject to reasonable dispute," CRE 201(b). In *Prestige Homes*, for example, we determined that the court of appeals acted improperly by using medical treatises not in evidence to conclude that "an electric shock caused by

contact with a 220 volt power line can cause serious injury without leaving a visible burn mark" when the parties' experts disputed this fact. 658 P.2d at 853–54.

¶24 But courts may, and often do, consider treatises and other secondary sources to understand the subject matter underlying complex cases. *See, e.g.*, *Colo. Ground Water Comm'n*, 77 P.3d at 69 (referencing the Colorado Geological Survey's Ground Water Atlas's statistic that "[g]round water supplies approximately eighteen percent of our state's water needs" as background); *Upper Black Squirrel Creek Ground Water Mgmt. Dist. v. Goss*, 993 P.2d 1177, 1182 n.5 (Colo. 2000) (incorporating by reference a scientific paper that provided a detailed "explanation of the hydrological interrelationship between tributary ground water and surface water" into our background description of Colorado's water law governance).

¶25 The Cities identify ten instances in which the water court allegedly improperly relied on sources not in evidence. These references can be divided into two categories. The first category includes references that define geological terms[5]

[5] For example, the Cities protest the water court's citations to Encyclopedia Brittanica's definition of "claystone"; to a judicial guide on adjudicating groundwater, which provides definitions of various kinds of sedimentary rock; and to a report published by the U.S. Geological Survey comparing the sizes of various geological materials.

and are examples of perfectly acceptable background citations akin to those in *North Kiowa-Bijou* and *Upper Black Squirrel*.

¶26 The second category includes references to scientific documents that support Niccoli's (Lazy D's expert) interpretations (and therefore contradict the Cities' expert's interpretations) of scientific principles.[6] While at first glance the water court's use of these references may appear similar to the court of appeals' improper reliance on medical treatises in *Prestige Homes*, there is a key distinction. In *Prestige Homes*, the court of appeals took judicial notice of the treatises' scientific conclusions and relied on them as objectively true. 658 P.2d at 853. But the water court here didn't; it merely used the references as evidence of the weight of the scientific authority on the disputed facts. For example, in crediting Niccoli's opinion that withdrawals from the Upper Laramie Aquifer don't affect the aquifer's recharge rate, the water court explained that Niccoli's "explanation is consistent with other authority," and then quoted an article by Herman Bower and Thomas Maddock, III—*Making Sense of the Interactions Between Groundwater and Streamflow: Lessons for Water Masters and Adjudicators*, Rivers, Vol. 6, No. 1, at 28

[6] These challenged references include scientific and legal scholarship that supports the position that "the rate at which a surface alluvial system recharges the Upper Laramie Aquifer is unaffected by withdrawals from the aquifer," and a governmental publication that supports the principle that "an unsaturated zone between an aquifer and an overlying stream system causes the aquifer to be hydraulically disconnected."

(1997)—as an *example* of other authorities. The external references therefore don't independently form the basis for the water court's ultimate holding that the groundwater at issue was nontributary; the evidence that Niccoli presented does. These external references are acceptable, and the water court didn't err by including them.

E. Expert Testimony Under CRE 702

¶27 Finally, the Cities maintain that the water court violated CRE 702 by not making specific findings as to why Niccoli's testimony was more credible or reliable than Crawford's.

¶28 To be admissible, expert testimony must be both relevant and reliable. *Est. of Ford v. Eicher*, 250 P.3d 262, 266 (Colo. 2011). Trial courts are vested with broad discretion to determine the admissibility of such evidence. *Id.* We've held, however, that a trial court should make "specific findings" regarding the factors it considered in determining admissibility, including its CRE 403 considerations. *Id.*; *see also Bocian v. Owners Ins. Co.*, 2020 COA 98, ¶¶ 65–66, 482 P.3d 502, 516 (explaining that admissibility of CRE 702 evidence is based on the totality of the circumstances and consideration of a non-exhaustive list of factors). But once a court determines expert testimony is admissible, it is for the trier of fact to resolve any issues of credibility and to determine how much weight to accord the evidence. *See, e.g.*, *People v. Fasy*, 829 P.2d 1314, 1318 (Colo. 1992); *In re Marriage of*

Bookout, 833 P.2d 800, 804 (Colo. App. 1991). And neither CRE 702 nor caselaw requires the trier of fact to explain its considerations in this regard. Moreover, the water court thoroughly explained why it found Niccoli's testimony more credible than Crawford's; including, for example, that Crawford's answers during cross-examination contradicted the opinions he provided on direct examination and actually supported Niccoli's opinions.

¶29 Therefore, because neither party disputes the experts' qualifications or the admissibility of their testimony, there's no ground for reversal on that basis.

III. Conclusion

¶30 We affirm the water court's order and return this case to the water court for further proceedings consistent with this opinion.