SOAH DOCKET NO. 582-25-01778
TCEQ DOCKET NO. 2024-0670-MWD

APPLICATION BY MUNICIPAL OPERATIONS, LLC FOR NEW TEXAS POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT NO. WQ0016171001	**§**	**BEFORE THE STATE OFFICE OF ADMINISTRATIVE HEARINGS**

PROTESTANTS' EXCEPTIONS TO THE PROPOSAL FOR DECISION

June 9, 2025

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TO THE HONORABLE COMMISSIONERS:

Protestants Greater Edwards Aquifer Alliance and the City of Grey Forest (collectively, "Protestants") file these Exceptions to the Proposal for Decision and urge the Commission to deny the Application by Municipal Operations, LLC ("Applicant" or "Municipal Operations") for new Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0016171001 (the "Application"). For support, Protestants respectfully offer the following:

I. Introduction

Protestants except to the ALJs' PFD because it improperly shifts the burden of proof with regard to several fundamental issues on which the Applicant unquestionably has the burden. Applicant presented no evidence indicating that the default hydraulic coefficient assumptions in the QUAL-TX model were sufficiently reliable to produce realistic results in Helotes Creek. Likewise, Applicant did not meet its burden of proof to demonstrate that that water quality sufficient to protect existing uses—including the existing aquatic life uses, recreational, and aesthetic uses in Helotes Creek and downstream—would be maintained with the Draft Permit. In fact, though Protestants presented unrefuted evidence

that portions of Helotes Creek that runs through Grey Forest exceed fishable/swimmable quality, no Tier 2 antidegradation analysis was performed. The PFD also improperly shifts the burden of proof with regard to whether the Draft Permit will protect groundwater quality and wildlife. The PFD also misstates the law and misapplies the evidence. For these reasons, the Draft Permit should be denied.

II. Burden of Proof

Though the PFD correctly recognizes that the burden of proof remains with the Applicant to show, by a preponderance of the evidence, that the Draft Permit meets all applicable requirements, at various times, the PFD improperly shifts the burden of proof to Protestants (COL 8). In applying TSWQS, the PFD indicates that it is Protestants who had the obligation to affirmatively disprove a specific element of the Application or Draft Permit, instead of the Applicant having to prove their case by a preponderance of the evidence. The distinction becomes apparent, because TCEQ Rules require any TPDES permit limitations to control all pollutants or pollutant parameters which "are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to" an exceedance of any TSWQS. 30 Tex. Admin. Code § 305.531(4), incorporating by reference 40 C.F.R. § 122.44, including 40 C.F.R. § 122.44(d)(1)(i). This means that, in practice, to rebut the prima facie presumption, Protestants need not demonstrate that the Draft Permit does not control a pollutant that will violate a TSWQS, but has a reasonable potential to cause or contribute to an exceedance.

The ALJs also improperly excluded evidence offered by the Protestants, namely the deposition Testimony of Paul Bertetti, offered pursuant to the plain and unambiguous

language of Texas Rule of Civil Procedure 203.6(b), which provides that, "[a]ll or part of a deposition *may be used for any purpose* in the same proceeding in which it was taken." Mr. Bertetti's February 10, 2025 deposition was well-attended by the parties in this matter. Counsel for the Applicant, Executive Director, and the Office of Public Interest Counsel were present, as well as counsel for Mr. Bertetti himself. Applicant was not prevented from conducting cross-examination of Mr. Bertetti on the testimony which had been elicited by counsel for GEAA. It was Mr. Bertetti's counsel who ended the deposition after Applicant's counsel insisted on attempting to force the witness to take positions on behalf of the Edwards Aquifer Authority—questions Mr. Bertetti's counsel described as harassing.

Applicant filed no request with the Court for relief seeking to ask Mr. Bertetti questions that would genuinely address the issues raised in questioning by GEAA's counsel. Instead, Applicant had waived its objection when Applicant's counsel waited more than one week and until the first day of the hearing on the merits to raise the objection by filing a motion to strike the deposition testimony of Mr. Bertetti. *See State Farm Fire & Cas. Co. v. Morua*, 979 S.W.2d 616, 621 (Tex. 1998). It was Mr. Bertetti's counsel, not Protestants' counsel who stopped the deposition. Thus, Applicant's motion at trial caused surprise, unfairness, and ambush to Protestants. The nature of this prejudice is discussed more below.

III. Discussion of Referred Issues

A. Issue A: Whether the Draft Permit is adequately protective of water quality, including surface water, groundwater, and drinking water wells.

1. DO Modeling

As an initial matter, the PFD mistakes the nature of Dr. Ross's testimony in several places. Dr. Ross did NOT testify that in her opinion, the actual velocity is only 0.075 feet per second—she testified that to convey the effluent in a flow condition predicted by the default stream width and depth, the *modeled* slope would need to be several orders of magnitude smaller than the actual, observed slope and the *modeled* water velocity would only be 0.075 feet per second. Dr. Ross testified that the *actual* velocity would be much higher, and Applicant's witnesses Mr. Price and Dr. Miertschin agreed that the estimate of velocity would be well over or easily one foot per second.[1] Thus, there is no dispute that the modeled velocity is likely more than ten times smaller than the actual velocity.

There was also no dispute that the *modeled* stream width was much higher than the *actual* stream width. Though Dr. Ross's estimate of stream width was given greater weight than others because of the reliable basis she provided, the PFD rejected it in favor of default characteristics on the reasoning that it amounts to only one measurement. But this is the culmination of a flawed analysis.

Rather than weigh the evidence, the PFD erroneously determines that whether the model is "conservative," using "critical conditions," or representing "worst-case scenario" is irrelevant. The dispute, however, is not a disagreement over "terminology"—the dispute

[1] Tr. Vol. 2, 151:10-11 (Price Cross); *id*. at 219:6-10 (Miertschin Cross).

goes directly to the Applicant's burden of proof in two important ways. The parties agree that the model does not represent *actual* conditions of the discharge point and route downstream, which means (1) if the model is not shown to be a conservative representation of the conditions at and below the outfall (it is not), then the Applicant and ED have failed to provide a basis for their bare conclusions that the TSWQS regarding DO will be achieved, and (2) if the model is not a conservative representation of the conditions at and below the outfall (it is not), then the Applicant and ED have failed to establish a basis for relying on the 0.2 mg/L DO "margin of safety" memo. The PFD reaches neither, because it erroneously determines whether the model is conservative is irrelevant.

As previously explained, neither the Applicant nor ED have disputed Dr. Ross's critique—that the default parameters do not necessarily match actual conditions in the receiving water. Importantly, neither did Applicant offer any evidence to demonstrate that the default assumptions approximated existing conditions or that approximated conditions would achieve similar modeling results as the default assumptions. Said another way, the Applicant made no attempt to verify if the default assumptions were reliable. Protestants thus produced sufficient evidence to rebut the prima facie presumption on this issue. Applicant was then tasked with producing additional evidence, that would amount to a preponderance of the evidence that the Draft Permit and proposed discharge would not contribute to a violation of TCEQ's DO standards.

Rather than verify the modeling results, Applicant relies entirely on whether the TCEQ has used the uncalibrated model with default assumptions in other permitting matters. But this fails to address the pivotal question presented. The question is not whether

the uncalibrated model or default assumptions have been used elsewhere (they could have been reliable approximations of other receiving waters) (FOF 39); the question is whether the Draft Permit and Applicant's proposed discharge will comply with TSWQS DO standards. As a result of this faulty analysis, the PFD places a more onerous evidentiary burden on the Protestants to demonstrate that the model could have been altered with site-specific alterations in order to show the default assumptions are unreliable, rather than requiring the Applicant to show the default assumptions are reliable. Thus, the PFD misstates the burden of proof. The Applicant failed to satisfy its burden. Applicant presented no evidence indicating that the default hydraulic coefficient assumptions in the QUAL-TX model were sufficiently reliable to produce realistic results regarding Helotes Creek.

Relatedly, the PFD determines that reliance on the 0.2 mg/L "margin of safety" memorandum is standard modeling practice. Again, the PFD's reasoning amounts to a shift in the burden of proof, that places a more onerous evidentiary burden on the Protestants to show that the memorandum has been rejected, rather than requiring the Applicant to provide evidence showing that the margin of safety is applicable, despite evidence that the default assumptions and uncalibrated model do not represent a reliable or a conservative prediction. The mere existence of the "margin of safety" memo does not constitute evidence that goes to its reliability in the case at hand. Nor does it answer the pivotal question presented: whether the Draft Permit and Applicant's proposed discharge will comply with TSWQS DO standards (FOF 41, 42, 43).

2. Nutrient Screening

The PFD again misapplies the parties' evidentiary burdens and gives short shrift to the evidence presented by Protestants. The PFD acknowledges that the IPs require compliance with narrative criteria in the TSWQS requiring that surface waters be maintained in an aesthetically attractive condition and that nutrients not cause excessive growth of aquatic vegetation that impairs existing, designated, presumed, or attainable uses of the water body. The Protestants offered evidence showing that baseline TP levels are 0.024 mg/L in Helotes Creek. Despite witnesses for all parties agreeing that an increase in TP from 0.02 mg/L to 0.15 mg/L would be mathematically significant, the PFD relies entirely on unsupported and erroneous information to draw the baseless conclusion that algal growth will not be proportional to the increase in TP concentration. Setting aside for a moment that the PFD's analysis—and the Applicant's evidence—fails to provide what amount or volume of algal growth would be expected at 0.15 mg/L and thus, there is no evidence to demonstrate it would not be proportional, the PFD mistakes the evidence on which it relies.

For example, the PFD points to statements by Mr. Price but has misunderstood the nature of those statements or otherwise not verified them. The 2007 Mabe publication he references actually reports the opposite of what Mr. Price provides with his testimony, that the calcium carbonate will "trap" the phosphorus (FOF 46). The Mabe publication compared streams receiving wastewater to streams not receiving wastewater and states:

> Substrates in the streams not receiving wastewater, where water velocities were relatively slow, were commonly covered by a thick layer of calcium

> carbonate precipitate. In contrast, substrates in streams where flow velocities were maintained by wastewater effluent generally were clear.[2]

Furthermore, though this publication drew some conclusions about fish species richness in wastewater streams, it draws no conclusions as to what levels of algae growth are excessive. To the contrary, it acknowledges that excessive nutrients from wastewater discharge can result in the growth of aquatic vegetation that causes a range of problems, including a loss of recreational and aesthetic value. Protestants rebutted the presumption that 0.15 mg/L would not impair existing uses. Dr. Ross testified that the concentration of total phosphorus in Texas Hill Country streams, like Helotes Creek, should be maintained at 0.02 mg/L to maintain natural algae assemblages, aquatic life, and protect existing uses. As a basis for this, she compared the characteristics in Helotes Creek to those she has observed in the Lower San Gabriel River and East Lick Creek, where the addition of wastewater effluent has demonstrate that thick algal mats impede the ability of the general public to swim, wade, fish, and otherwise recreate in the receiving waters. There has been no showing that 0.15 mg/L will not impair the recreational uses or violate the aesthetic standards in Helotes Creek. Therefore, the Applicant has failed to meet this burden.

The PFD also relies on an erroneous finding (FOF 47). The PFD references the "Edwards rules" (presumably the rule found at 30 Tex. Admin. Code § 213.6) to compare the proposed 0.15 mg/L TP limit to other numeric limits for TP; however, this rule actually *prohibits* any new industrial and municipal wastewater discharges in the Edwards Aquifer

[2] *See* App. Ex. 20 at 000571, referencing App. Ex. 26 (the 2007 Mabe publication is not provided in full, but is *available at*: https://pubs.usgs.gov/sir/2007/5195/pdf/sir2007-5195.pdf).

Recharge Zone, meaning, the most strict TP standard already employed by TCEQ is *zero* discharge of any phosphorus. Additionally, while 30 Tex. Admin. Code § 213.6 does provide a minimum TP effluent limit within zero to five miles upstream from the Edwards Aquifer Recharge Zone, this is clearly a ceiling, not a floor. Likewise, while the IPs provide "typical" effluent limits for TP, they clearly require the TP effluent limit to be "based on reasonably achievable technology-based limits, with consideration of the sensitivity of the site." This necessarily involves basing the limit on site-specific factors. The PFD also runs afoul of the requirement that the site-specific *effects* be assessed, not simply the numeric parameter (explained more below). In short, the TCEQ Rules and the IPs require that the sensitivity of the site be assessed, and the Draft Permit must demonstrate the TP limit will not cause, have the reasonable potential to cause, or contribute to a violation of any TSWQS. The PFD cites to no reliable basis to draw such a conclusion. As such, the Applicant has failed to meet its burden.

3. Antidegradation Review

For all the reasons previously described as to the failures of the Applicant to demonstrate the discharge will meet the TSWQS regarding DO and nutrients, the antidegradation review also fails. The PFD also relies on an erroneous statutory and regulatory framework under which the antidegradation review is required (COL 11).

The Tier 1 antidegradation review, set forth in 30 Tex. Admin. Code § 307.5(b)(1), requires that existing uses and water quality sufficient to protect those existing uses must be maintained. For purposes of this regulation, "existing uses" includes the uses that the waters are capable of attaining in their current state, as well as water quality "that was

attained on or after November 28, 1975." 30 Tex. Admin. Code § 307.3(27). The PFD fails to determine the antidegradation review included an assessment of the recreational and aesthetic uses currently attained in Helotes Creek. This is a plain error in applying the required TSWQS, as the Applicant must demonstrate that those uses will be protected.

The Tier 2 review, set forth at 30 Tex. Admin. Code § 307.5(b)(2), requires that no activities that would cause degradation "of waters that exceed fishable/swimmable quality" are allowed unless it is shown to the Commission's satisfaction that the lowering of water quality is necessary for important social or economic development. Again, the PFD wholly ignores the evidence that Helotes Creek is used for recreational and aesthetic uses, including swimming and fishing, and this is because the antidegradation review did not include a Tier 2 review for Helotes Creek (FOF 51, 54). This alone amounts to plain error and justifies denial.

As the PFD stated, Protestants provided evidence of existing uses (and uses that were attained since 1975) with the prefiled testimony and exhibits of Mr. McEntire. This, and other prefiled testimony and exhibits were timely filed and served on other parties by the deadlines imposed in the procedural schedule. The evidence was offered and admitted at the hearing on the merits, when Mr. Kerry McEntire and other witnesses for Protestants were available for cross-examination. Protestants' evidence was provided to the other parties in time for the Applicant and ED to present additional evidence, had they any evidence that would have demonstrated that those aquatic life (which was improperly classified in light of the evidence), recreational, and aesthetic uses would be maintained under the Draft Permit. Contrary to what the PFD suggests, Protestants were under no

obligation to provide anything more or at a different time, and such a conclusion amounts to a shifting of the burden of proof. Mr. McEntire's testimony as to his use of Helotes Creek for fishing and swimming was uncontroverted.

Applicant bears the burden to demonstrate that the Draft Permit complies with the antidegradation requirements. Protestants have rebutted that presumption by showing that consideration of existing uses under both Tier 1 and Tier 2 analysis must include consideration of a higher aquatic life use, as well as recreational and aesthetic uses in Helotes Creek in the area of Grey Forest. It is not disputed that a Tier 2 antidegradation analysis was not performed where the evidence shows that, given the abundant diversity of aquatic and aquatic-dependent species, individuals swim, fish, and otherwise recreate in and on the water of Helotes Creek. The PFD acknowledges that the evidence does not establish the extent of Ms. Labrie's receiving waters assessment in Helotes Creek. She could not, for example, remember whether she assessed the portion of Helotes Creek that flows through the City of Grey Forest. The PFD makes the flawed assumption that this assessment is only performed to determine the aquatic life use, but it is not disputed that under the TCEQ's antidegradation standards, all existing uses must be protected. Given these failures, the Applicant has not met its burden of proof to demonstrate the Draft Permit complies with the TCEQ's antidegradation standards.

Though the PFD spends some time on the recent decision issued by the Texas Supreme Court in *Save Our Springs All., Inc. v. Tex. Comm'n on Envtl. Quality*, No. 23-0282, 2025 WL 1085176 (Tex. Apr. 11, 2025), this comparison actually demonstrates that the antidegradation review performed in the case at hand does not comply with the

TSWQS, the antidegradation standards, or the IPs. In *Save Our Springs*, the Supreme Court found that the antidegradation assessment is an assessment of water quality as a whole; rather than affording decisive weight to numeric changes in any one water quality parameter. Additionally, the focus of the antidegradation assessment must be on the effect the lowering of water quality will have. Furthermore, the Supreme Court acknowledges that an assessment of water quality requires the assessment of numerous parameters:

> Other parameters—such as bacteria, phosphorus, nitrogen, turbidity, foam and froth, temperature, sulfate, chloride, pH, toxic pollutants, radioactive materials, taste and odor, suspended solids, oil, and grease—may also be considered in evaluating water-quality impact, along with "any other constituent that could lower water quality." And while the implementation procedures provide methods for individually evaluating these components, that process is consistent with TCEQ's whole-body approach because assessing overall health necessarily begins with an evaluation of the parts.

Save Our Springs, 2025 WL 1085176, at *10 (quoting the IPs). And yet, in assessing effects on Helotes Creek, the PFD and the antidegradation review rely on only limited parameters: DO, *E. coli*, and the erroneous finding that TP will be stricter than limits that apply in the Edwards Aquifer Recharge Zone (as previously explained, new discharges are *prohibited* in the Edwards Aquifer Recharge Zone). The PFD also makes an erroneous finding that the Applicant met its burden as to CECs and PFAS simply because there is no guidance from EPA for these contaminants with respect to TPDES permits. But this effectively amends the language the Supreme Court quoted in the IPs to: "any other constituent that could lower water quality, *but only if EPA has issued guidance as to that constituent*." There is no support for that reading.

Not only is this review improperly narrow as to the constituents/parameters, it is also contrary to *Save Our Springs*, because the PFD does not consider the effects, only the numeric parameters. *See Save Our Springs*, 2025 WL 1085176, at *10 (rejecting an approach that focuses on the numeric parameter and not on the *effect* the change in the parameter will have on water quality). The PFD sets aside Dr. Ross's testimony as to the expected changes in trophic state in Helotes Creek based solely on Mr. Price testifying that the trophic state is "difficult to understand" outside lakes in the Midwest. However, the IPs plainly recognize the trophic structure of freshwater streams and rivers as being relevant to assessing its aquatic life use attributes (Ex. ED-ML-6 (IPs) at internal page 15, citing Table 3 in 30 Tex. Admin. Code § 307.7(b)(3)(A)).

The IPs also direct TCEQ to assess eutrophication potential downstream of the discharge in freshwater streams and rivers as a part of the nutrient screening to assess the potential effects the discharge could have on the characteristics of the waterway (Ex. ED-ML-6 at 27). In fact, the IPs indicate that the nutrient screening for a 1.0 MGD or greater flow means the evaluation is typically performed a full 15 stream miles downstream of the discharge (Ex. ED-ML-6 at 47), that waterways that are sensitive to growth of attached vegetation are assessed as having a high potential for eutrophication (Ex. ED-ML-6 at 49), and that the presence of smaller riverine impoundments and perennial pools can also increase concern for eutrophication impacts (Ex. ED-ML-6 at 51). The evidence shows that the area of Helotes Creek that passes through the City of Grey Forest is only about two miles downstream of the proposed discharge, is sensitive to growth of attached vegetation, and contains perennial pools. In short, there is no basis in the TCEQ Rules or the IPs for

the PFD to ignore evidence of the potential effects of the discharge on the trophic status of Helotes Creek simply because Mr. Price is unaware that trophic states are relevant and can be assessed outside of lakes in the Midwest. The Applicant has failed to meet its burden of proof.

4. Toxicity Concerns

The Applicant and the ED largely ignored the presence of contaminants of emerging concern, including PFAS ("forever chemicals"), in the proposed effluent, arguing that, because specific regulatory standards have not been set for these chemicals, analysis of their impact on surface water, groundwater, and drinking water wells is "irrelevant." This analysis—and that in the PFD—is based on a mischaracterization of applicable TCEQ Rules, as previously described (FOF 53, 55, 56, 68). These errors are addressed in more detail in the section on effects to wildlife.

5. Surface Water, Groundwater, and Drinking Water Wells

The PFD's analysis is grounded on the conclusion that there is not enough evidence to conclude that the Toepperwein wells are in the Upper Trinity and thus, susceptible to contamination. This reasoning does not support FOF 59 or COL 10, and the conclusion suffers from two errors: first, the ALJs improperly excluded evidence relative to this precise issue when they excluded the deposition transcript of Paul Bertetti, as previously explained, a relevant excerpt is included as **Attachment A**. Mr. Bertetti testified as to his personal knowledge of the groundwater sampling he has conducted on groundwater wells in the area of Grey Forest. Regardless of whether the Toepperwein wells are in the Upper Trinity, Mr. Bertetti's sworn testimony is that he observed sampling from approximately

8-12 wells over the last five to six years from either the Upper Trinity or the Middle Trinity, some of which tested positive for PFAS, nutrients, or bacteria. In fact, Mr. Bertetti recollected that PFAS were detected in nearly all of the wells in the Grey Forest area. Though Mr. Bertetti has not identified a source of the contaminants, he did testify that PFAS are entirely man-made chemical compounds, meaning the source would, therefore, be anthropogenic. Furthermore, based on Mr. Bertetti's sampling experience, he has observed recharge occurring in a stream without any obvious recharge features, such as a fault or sinkhole.

Second, the PFD's analysis improperly shifts the burden of proof to Protestants to demonstrate that the wells are in the Upper Trinity or are susceptive to contamination, rather than requiring the Applicant demonstrating that they are not (FOF 60, 61). The PFD also shifted the burden of proof to Protestants to establish the effect of the fault on the flow of groundwater, in order to show that wells are susceptible to contamination. This is improper and an error.

B. Issue B: Whether the Draft Permit is protective of wildlife, including endangered species, in accordance with the TSWQS in 30 TAC Chapter 307.

The PFD misapplies the law. The PFD erroneously concludes that a lack of limits for PFAS or other CECs is not a basis for denying a permit. Contrary to the PFD, the IPs make clear that it is entirely within TCEQ's authority to deny a permit for failure to evaluate and limit any constituent that could lower water quality. Following the same logic, it is also within TCEQ's authority to provide a monitoring limit for PFAS or any other

contaminant that could lower water quality, but at a limit the agency still needs to determine.

Furthermore, the Applicant has not met its burden to show that the Draft Permit is protective of wildlife, including karst invertebrates (FOF 63, COL 12). Dr. Crago, relying on available studies regarding the toxicity of PFOS (a type of PFAS), testified for Protestants that the proposed discharge would contribute to an increased presence of anthropogenic contaminants in the Helotes Creek watershed downstream of the discharge point, which would reasonably be expected to lead to chronic toxicity to sensitive stage karst invertebrates. Applicant's own Endangered Species Habitat Assessment Report specifically states that "surface expression of karst invertebrate habitat was identified during the field visit."[3] The solution channels (S-07, S-08) identified in Applicant's report to be in the vicinity of the discharge route were noted to extend down vertically. On cross-examination, Mr. Price and Mr. Paulson admitted they did not know how far these solution channels were from the discharge route or the depth to which they extended below the level of Helotes Creek. The ED's witness, Ms. Labrie, conceded the solution channels could extend below the surface of the streambed. Thus, the testimony of Mr. Paulson and Mr. Price is inconsistent with the Applicant and ED's own evidence. As such, there is not a reliable basis for the PFD to conclude that the Applicant met its burden by a preponderance of the evidence as to protection of wildlife.

[3] App. Ex. 10 at APP000404.

IV. Conclusion

For the reasons set forth above, Protestants respectfully request that the Commission deny Municipal Operations' Application, because Municipal Operations has not met its burden and has not demonstrated that its Application meets the applicable statutory and regulatory requirements. Protestants further request such other and further relief to which they may be justly entitled.

Respectfully submitted,

/s/ Eric Allmon
Eric Allmon
State Bar No. 24031819
eallmon@txenvirolaw.com
Lauren Ice
State Bar No. 24092560
lauren@txenvirolaw.com
PERALES, ALLMON & ICE, P.C.
1206 San Antonio St.
Austin, Texas 78701
(512) 469-6000 (t) | (512) 482-9346 (f)

Counsel for Greater Edwards Aquifer Alliance and the City of Grey Forest

CERTIFICATE OF SERVICE

By my signature below, I certify that on June 9, 2025, a true and correct copy of the foregoing document was served upon the counsel of record listed below via electronic service.

/s/ Eric Allmon
Eric Allmon

FOR THE APPLICANT:
Helen S. Gilbert
John Manning
Barton Benson Jones, PLLC
7000 N. MoPac Expwy, Suite 200
Austin, Texas 78731
Telephone: (512) 565-4995
Telecopier: (210) 600-9796
hgilbert@bartonbensonjones.com
jmanning@bartonbensonjones.com

Sheridan Thompson
JST Law
sheridan@jst-law.com

FOR THE EXECUTIVE DIRECTOR:
Bradford Eckhart
Fernando Salazar Martinez
TCEQ Environmental Law Division
P.O. Box 13087, MC 173
Austin, Texas 78711-3087
Telephone No. 512-239-1283
Facsimile No. 512-239-0626
bradford.eckhart@tceq.texas.gov
fernando.martinez@tceq.texas.gov

FOR THE OFFICE OF PUBLIC INTEREST COUNSEL:
Josiah T. Mercer
TCEQ Office of Public Interest Counsel
P.O. Box 13087, MC 103
Austin, Texas 78711-3087
(512) 239-0579
josiah.mercer@tceq.texas.gov

ATTACHMENT A

SOAH DOCKET NO. 582-25-01778
TCEQ DOCKET NO. 2024-0670-MWD

APPLICATION BY MUNICIPAL OPERATIONS LLC FOR NEW TEXAS POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT NO. WQ0016171001	§	BEFORE THE STATE OFFICE OF ADMINISTRATIVE HEARINGS

REMOTE ORAL DEPOSITION OF

F. PAUL BERTETTI

FEBRUARY 10, 2025

REMOTE ORAL DEPOSITION OF F. PAUL BERTETTI, produced as a witness at the instance of Greater Edwards Aquifer Alliance and the City of Grey Forest, and duly sworn, was taken in the above-styled and -numbered cause on February 10, 2025, from 2:04 p.m. to 3:16 p.m., before Angela L. Mancuso, CSR No. 4514, in and for the State of Texas, reported by machine shorthand, the witness being located in San Antonio, Texas, pursuant to Notice and any provisions stated on the record.

R E M O T E A P P E A R A N C E S

FOR THE WITNESS:

MS. DEBORAH C. TREJO
MR. WYATT CONOLY
KEMP SMITH LLP
2905 San Gabriel Street
Suite 205
Austin, Texas 78705
(512) 320-5466
deborah.trejo@kempsmith.com

FOR THE APPLICANT:

MS. HELEN S. GILBERT
BARTON BENSON JONES PLLC
7000 North MoPac Expressway
Suite 200
Austin, Texas 78731
(512) 565-4995
hgilbert@bartonbensonjones.com

FOR THE EXECUTIVE DIRECTOR:

MR. BRADFORD S. ECKHART
MR. FERNANDO SALAZAR MARTINEZ
TCEQ ENVIRONMENTAL LAW DIVISION
P.O. Box 13087, MC 173
Austin, Texas 78711-3087
(512) 239-1283
bradford.eckhart@tceq.texas.gov

FOR THE OFFICE OF PUBLIC INTEREST COUNSEL:

MR. JOSIAH T. MERCER
MS. JENNIFER JAMISON
TCEQ OFFICE OF PUBLIC INTEREST COUNSEL
P.O. Box 13087, MC 103
Austin, Texas 78711-3087
(512) 239-0579
josiah.mercer@tceq.texas.gov

FOR THE GREATER EDWARDS AQUIFER ALLIANCE AND THE CITY OF GREY FOREST:

MR. ERIC ALLMON
PERALES, ALLMON & ICE, P.C.
1206 San Antonio Street
Austin, Texas 78701
(512) 469-6000
eallmon@txenvirolaw.com

ALSO PRESENT:

Jordan Crago, Protestants' Expert
Ron Green, Protestants' Expert
Kaveh Khorzad
Gwyneth Lonergan, Allmon Legal Assistant
Richard Mott
Lauren Ross, Protestants' Expert
Sheridan Thompson

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REPORTER'S NOTE:

Quotation marks are used for clarity and do not necessarily reflect a direct quote.

"THE REPORTER: I am Angela L. Mancuso, Texas CSR 4514. I am located in Keller, Texas, and taking this deposition by machine shorthand. The witness is located in San Antonio, Texas."

P R O C E E D I N G S

(February 10, 2025, 2:04 p.m.)

THE REPORTER: Would counsel please state appearances.

MR. ALLMON: Yes, I guess I can go ahead as the one who has noticed the deposition. This is Eric Allmon. I'm here on behalf of Greater Edwards Aquifer Alliance and the City of Grey Forest.

MS. GILBERT: Helen Gilbert, on behalf of Applicant, Municipal Operations LLC.

MR. ECKHART: Brad Eckhart, on behalf of the Executive Director. With me is Fernando Salazar Martinez.

MR. MERCER: This is Josiah Mercer, on behalf of the Office of Public Interest Counsel. I have Jennifer Jamison with me as well.

MS. TREJO: This is Deborah Trejo, representing Paul Bertetti, not a party to this matter.

MR. CONOLY: This is Wyatt Conoly, also representing Paul Bertetti, not a party to this matter.

(Witness sworn by reporter)

F. PAUL BERTETTI,

having been first duly sworn, testifies as follows:

EXAMINATION

BY MR. ALLMON:

Q. Good afternoon, Mr. Bertetti. How are you?

A. Good, sir. How are you today?

Q. Doing well. Thank you for taking time out of your day to be here with us.

Have you been deposed before?

A. No, I have not.

Q. Okay. Just a few things. If I ask a question that you don't understand, please feel free to ask me to clarify. I want to try and make sure, as much as possible, that we're on the same page as the question I'm asking, so that it matches up with the answer you provide.

And I know -- sometimes we have to be careful, particularly on Zoom, not to talk over each other. It just makes the court reporter's job a bit easier.

And this isn't a marathon. So feel free at any point, if you need a break, to let me know. I don't anticipate this will be a long deposition, so that may be moot. But if you need a break, just let me know. I would only ask that you not seek a break while we have a question pending. If you could ask -- if you could wait

for a point there when we're in between questions, that would be appreciated.

So could you state your name for the record?

A. Yes. My name is Franklin Paul Bertetti. I go by Paul Bertetti.

Q. Okay. And who do you work for?

A. I work for the Edwards Aquifer Authority.

Q. And what's your position?

A. I'm the Senior Director of Aquifer Science Research and Modeling at the Edward Aquifer Authority.

Q. And how long have you been in that position?

A. I've been in this position for approximately six years.

Q. Okay. Did you hold another position with the Edwards Aquifer Authority?

A. I did. I started out as the research manager.

Q. And how long were you in that position?

A. Approximately one year.

Q. Okay. And what are your responsibilities in your current position?

A. I manage the Aquifer Science Research Program and the staff associated with aquifer science. I also manage our modeling program and the staff associated with the modeling program.

Q. And what type of activities does the Aquifer

Science Program engage in?

A. In general, we conduct research to better understand and characterize the aquifer system. That includes our Groundwater Quality Monitoring Program, field-based research activities, inter-formational flow research, and vulnerability research.

We also conduct research at our Field Research Park, where we're looking at various land management activities and their potential influence on aquifer recharge and groundwater quality.

Q. And I think you said that you had some supervision authority over a program other than the Aquifer Science Program?

A. Correct. We have a team of modelers. That's another set of our staff that also contributes to both modeling our research activities but also the general aquifer water numerical model. We also model -- the team also conducts research to support the Edwards Aquifer Habitat Conservation Plan Incidental Take permit renewal process that is currently underway.

Q. Okay. I'm going to go ahead and share my screen, just to try and orient us a little bit here. Do you have before you now a map?

A. I do.

Q. Do you recognize this?

A. Yes. It looks like an outline of the Edwards Aquifer and its components, along with the EAA jurisdictional boundary.

Q. Okay. Do you see an area marked as Artesian Zone here?

A. I do. It appears to be a beige color on the map.

Q. And what does -- when we talk about the artesian zone of the Edwards Aquifer, what is that?

A. Generally, the artesian zone refers to the component of the aquifer that is underground and confined. It's a confined nature in which it has multiple layers of geological units above the aquifer units in that area, and as result, recharge from the recharge zone builds up pressure within the artesian zone.

Typically, we have artesian-related wells, when they penetrate the aquifer system in that area. "Artesian" refers to water levels that are greater than the elevation of the aquifer, the uppermost aquifer strata. If the artesian pressure goes above the surface, then you can have a flowing artesian well.

An example of a flowing artesian component would be, like, Comal Springs, in which water is flowing out of the aquifer system due to the artesian pressure

in the aquifer.

Q. And I see an area depicted as the Recharge Zone there as well. Do you see that?

A. Yes, sir.

Q. And what's the recharge zone of the aquifer?

A. Recharge zone is the area where Edwards Aquifer rocks are exposed at the surface. Typically, it is the area in which the aquifer receives recharge.

Q. And I also see the Contributing Zone there.

Can you describe what the contributing zone represents?

A. The contributing zone is the area north of the recharge zone, where other unit rocks outcrop, for instance, the Glen Rose Limestone. Runoff from precipitation and spring discharge in the contributing zone typically contributes to flowing streams that cross the recharge zone, and that contributes to recharge in the Edwards Aquifer system.

Q. As we look at the Edwards Aquifer, what kind of behavior do we see in terms of the speed with which water can flow in the Edwards Aquifer?

A. The rate of flow in the aquifer varies quite a bit. It can be as much as a few thousand feet per day to a few tens of feet per day. That's quite variable, depending on where in the zone that you are and what

part of the aquifer that you're in.

Q. Does that have any consequences for the dilution of contaminants within the aquifer?

A. I'm not sure the rate of flow has consequences for dilution as much as the rapidity of recharge and nearness of the surface to the flow of the zones might impact -- and the nature of the aquifer matrix might impact its ability to dilute or filter water.

Q. How does the nature of the aquifer matrix influence the ability or the nature of contaminants to dilute in the aquifer?

A. The aquifer is a karstic system in which there are significant secondary porosity and conduits that form, as a result of dissolution of limestone in the recharge zone, components like sinkholes and fractures and fault depressions, and also additional porosity due to dissolution of limestone enable for infiltration into the rock. Infiltration in those channels or conduits can be relatively rapid.

Q. When you talked about additional infiltration in addition to that from some of the conduits you mentioned, so if one were looking at a stream and didn't see any type of obvious recharge feature such as a fault or a sinkhole, can there still be infiltration occurring within that stream?

A. Yes.

Q. And how would that happen?

A. A lot of recharge occurs in fractures within the rock and force essentially secondary porosity that's available. Often those are covered by silt or other components, so they're not directly visible in streambeds.

Q. Now, as we look in, say, the contributing zone, what types of -- what aquifers are there that would be at the surface in the contributing zone that lay underneath the Edwards members?

A. The majority of the contributing zone, although it varies depending on location, is composed of the Glen Rose Limestone, both the upper and lower units, also exposures of the Edwards Limestone and other rocks.

Q. Are those elements of the Trinity Aquifer?

A. The Glen Rose Limestone makes up parts of the Trinity Aquifer, yes.

Q. What's the difference between the upper and the middle and the lower portions of the Trinity Aquifer?

A. The Upper Trinity Aquifer is composed primarily of the Upper Glen Rose unit. The Middle Trinity Aquifer is primarily composed of the Lower Glen Rose unit and the Cow Creek Limestone, which lies

underneath the Lower Glen Rose.

Q. And is the behavior of groundwater in the Upper Trinity similar to that that we've discussed in the Edwards Aquifer?

A. For the most part, yes.

MS. TREJO: Excuse me. I just want to go on the record to make a general objection that Mr. Bertetti is not disclosed as an expert witness in this case, and you are asking him to opine on a lot of things which he's not a disclosed expert witness to do. So I'd like to just have that as a recurring objection throughout.

I don't know -- I mean, there has been no qualification. I don't believe he's been noticed or identified as an expert witness in this matter. So I'm not -- I'm not sure that any of this is admissible, but -- and I'm not a party -- we're not a party in this matter, but I am concerned with you asking him a whole series of questions about his opinions on things, when, you know, that is not a role he is serving.

Fact questions and what is the components of the members of one aquifer or another are well-established facts. But you are getting into an awful lot of opinions, so if I could just have a running objection as to the scope of the questions calling for

expert opinion.

MR. ALLMON: Of course. That's noted. We don't plan to present him as an expert in the case. The witnesses have already been filed. We're not presenting him as an expert witness. But I respect the objection.

Q. So as we look at the -- in your work, have you looked at what nature of connections may exist between the Upper Trinity and the Middle Trinity?

A. We have not done a lot of work to evaluate connections between the Upper and Middle Trinity Aquifer, no.

Q. Have you done work to look at connections between the Edwards Aquifer and the Upper Trinity?

A. Yes.

Q. And what's the nature of that work?

A. We are interested in learning the locations, the potential locations, and magnitude of water transfer between the Trinity Aquifer system and the Edwards Aquifer system.

Q. Okay. Now, I'm going to share another exhibit, just to orient ourselves to a particular area of interest.

Do you have before you now another aerial photograph?

A. I do. It's entitled Municipal Operations LLC, Map 2.

Q. And do you see here the city of Grey Forest outlined in yellow?

A. I do.

Q. Are you familiar with this area?

A. Partially. I'm not extremely familiar, but, yes, I'm aware of Grey Forest in that location.

Q. Has the Edwards Aquifer Authority done any groundwater well sampling in this area?

A. We have, yes.

Q. And what type of groundwater well sampling was done in this area?

A. We have sampled wells for a range of analytes that might be related to our research to look at the interactions between the Trinity and the Edwards Aquifers.

Q. And what were those analytes?

A. Typically, we sample for major ions, trace elements, minor elements, trace and minor elements. We also take field parameters at the sampling point, isotopes of water and carbon, in addition to nutrients, if applicable. We also sample for compounds of interest, (indiscernible), PFAS, or per- and polyfluoralkyl substances.

Q. Do you include sampling for bacteria?

A. Yes. Yes, we do.

Q. And that may well fit within one of the categories you described. I'm just not necessarily familiar with all of the terms.

A. No, I did not mention that.

Q. Okay. And roughly how many wells in this area have the Edwards Aquifer Authority conducted sampling in?

A. To the best of my knowledge, we have sampled on the order of eight to a dozen wells over the last five or six years, but I don't recall exactly the number. And I don't recall if they all would be within that Grey Forest area. They might be in the greater Grey Forest and Helotes region.

Q. Okay. Do you know what aquifer those wells were in?

A. It's difficult to say, exactly. Most of the wells are completed either in the Upper Glen Rose or the Middle Trinity, Upper Trinity or Middle Trinity, or some combination thereof. There is not a lot of well control in that area.

Q. Okay. When you say "not a lot of well control," what does that mean?

A. Many wells are drilled to a depth without a

lot of specific information on the units to which they are open and collect water from, and so it's very difficult to verify the actual unit, unless there is good recorded data.

Q. What types of contaminants were observed in those wells once you did the testing?

A. It depends on the well. Typically, we get responses for a range of major ions and metals, including some -- including results for almost all of our isotope results. From a contaminant standpoint or potential contaminant standpoint, we do see some hits for the PFAS compounds in many of the samples. Some of the metals might be classified as that. Most of those are naturally occurring.

Q. Did you come across any nutrients in the wells?

A. We did. Sometimes we have indications of nitrate, possibly phosphorus. I do not recall. I wouldn't characterize those as contaminants at this point.

Q. Okay. Did you come across any bacteria in any of the wells?

A. I believe there have been some results for positive coliform and/or E. coli in those wells. I don't recall the number or frequency.

Q. You mentioned coming across PFAS in some wells.

Did you-all make any considerations for what the source of that may be?

A. No.

Q. Okay. Do you have any -- did you draw any conclusions as to what the source of those PFAS might be?

A. We do not have specific information about the source of any PFAS. We're currently attempting to characterize the magnitude of the concentrations and the spatial distribution of PFAS in the system.

Q. Did you draw any conclusions as to what types of things might be the source of those PFAS?

A. There are many sources for PFAS. PFAS are man-made chemical compounds. But, no, we don't have any direct information on the source of PFAS in any of those wells.

Q. So if they're man-made, would it -- would you anticipate that the source would be of anthropogenic origin?

A. Yes.

Q. And did y'all make any effort to determine what types of sources there may be for bacteria that was observed?

A. No, not at this time. I believe some wells may have had counts that were high enough to do source tracking, but we have not done that to this point.

Q. Is that something that the district is considering?

A. We have -- we have considered it. We have not done that at this point.

Q. All right. Do you have any recollection as to where the PFAS were observed?

A. I believe for the wells that we sampled for PFAS, that PFAS are detected in nearly all the wells.

Q. So when you say "nearly all the wells," that's nearly all the wells here in the Grey Forest area?

A. Correct. There may be a well without direct results. I don't recall, explicitly. But typically wells in this region have detections of PFAS almost all the time.

Q. Have you done sampling for PFAS in other areas of the Edwards Aquifer?

A. Yes.

Q. And do you find PFAS in all areas of the Edwards Aquifer?

A. No.

Q. Is this the only area of the Edwards Aquifer where you have found PFAS?