

**SOAH Docket No. 582-22-0489
TCEQ Docket No. 2021-0755-MWD**

**Application from Kendall
West Utility, LLC for New
Texas Pollutant Discharge
Elimination System Permit
No. WQ0015787001**

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**Before the State Office
of
Administrative Hearings**

PROTESTANTS' EXCEPTIONS TO THE PROPOSAL FOR DECISION

**TO THE HONORABLE ADMINISTRATIVE LAW JUDGE and to the
COMMISSIONERS of the TEXAS COMMISSION ON ENVIRONMENTAL QUALITY:**

Protestants Willis Jay Harpole, Michael Dillinger, Tom Tucker, Clint McNew, and Heather McNew submit the following exceptions to the Proposal For Decision (PFD) filed by the Administrative Law Judge (ALJ) relating to the application by Kendall West Utility, LLC for Texas Pollutant Discharge Elimination System (TPDES) Permit No. 0015787001 in Kendall County, Texas (the Draft Permit).

I. INTRODUCTION

In consideration of the exceptions and arguments set forth herein, Protestants respectfully request that the ALJ amend the PFD to recommend denial of the application and the Draft Permit. Should the ALJ not amend the PFD, Protestants request that the Commissioners of the Texas Commission on Environmental Quality not adopt the ALJ's Order as presently proposed and attached to the PFD and adopt a revised Order denying the application and the Draft Permit.

II. STANDARD OF REVIEW

The PFD, amendments to the PFD, and the order accompanying the PFD must be solely based on the record before the ALJ and include an explanation of the basis for the decision or amendment. Tex. Gov't Code § 2003.047(m). An ALJ may amend his PFD in response to exceptions, replies or briefs filed by parties to a contested case hearing. 30 T.A.C. § 80.259. If the ALJ does not amend the PFD, the Commission may modify the ALJ's order or proposed findings of fact and conclusions of law if the Commission determines that: (1) the ALJ improperly applied or interpreted the law, agency rules or policies, or prior administrative decisions; (2) the ALJ based his decision on a prior administrative decision that is incorrect or should be changed; or (3) a finding of fact contains a technical error requiring correction. Tex. Gov't Code § 2001.058(e).

III. THE DRAFT PERMIT, THE RECEIVING WATERS, AND THE HEARING

The Draft Permit, WQ0015787001, in its final phase would allow the Applicant to discharge 490,000 gallons per day of municipal sewage wastewater via Outfall 001 to an unnamed tributary, thence to Masters Lake, thence to Frederick Creek, thence to Lake Oz, thence to

Frederick Creek, thence to Upper Cibolo Creek in segment 1908 of the San Antonio River Basin and via Outfall 002 to an unnamed tributary, thence to Smith Investment CO. Lake No. 1, thence to Smith Investment Co. Lake No. 3, thence to Frederick Creek, thence to Lake Oz, thence to Frederick Creek, thence to Upper Cibolo Creek in Segment No. 1908 of the San Antonio River Basin. ED-10. The final effluent limitations in the Draft Permit allow the Applicant to discharge municipal sewage wastewater containing 5 mg/l carbonaceous biochemical oxygen demand, 5 mg/L total suspended solids, 1.9 mg/L ammonia nitrogen, and .5 mg/L total phosphorus. ED-10. The Draft Permit also requires that the effluent contain a minimum dissolved oxygen of 6.0 mg/L and does not set a limit on total nitrogen. *Id.*

The receiving waters for the Draft Permit are pristine Texas Hill Country streams and ponds characterized by clear water, high dissolved oxygen, low nutrients, and high aquatic life use. PR-LR-1 at 10. The receiving waters have background concentrations of total phosphorus of 5 µ/L, total nitrogen of .05 to .27 mg/L, and dissolved oxygen of 6.7 mg/L. The clean and clear water is an important resource in the area and is used for fishing, swimming, and other water activities. PR-WH-1 at 3. The receiving waters provide water for wildlife in the area and are home to several species. *Id.* The following photographs depict the pristine nature of the receiving waters and the fish that live in them.



Figure 1. In the picture on the left, a man holds a bass caught in Masters Lake. PR-WH-8. The photograph on the right is of Masters Lake cottage and the high quality water of Masters Lake. PR-WH-7.

The contested case hearing for the Draft Permit was held on February 24–25, 2022 before the State Office of Administrative Hearings and the honorable Administrative Law Judge Robert Pemberton via Zoom videoconference. Protestants were represented by Bill Bunch; the TCEQ Executive Director was represented by Stefanie Skogen; and the TCEQ Office of Public Interest

Council was represented Pranjal Mehta. The Applicant, Kendall West Utility, LLC, did not appear at the contested case hearing, though Canyon Lake Water Service Company appeared at the contested case hearing and advocated for the issuance of the Draft Permit.

On the first day of the contested case hearing, the ALJ heard testimony from Protestants' witnesses Calvin Chapman P.E., a geology and groundwater expert; Jay Harpole, a Protestant who lives and owns property on the receiving waters; and Dr. Lauren Ross, a water resources specialist. The ALJ also heard testimony from Canyon Lake's witness Thomas Hodge, president of Canyon Lake's parent company SJWTX; and Matthew Uliana, a groundwater expert. On the second day, the ALJ heard testimony from Canyon Lake's witness Robert Callegari and James Machin. The testimony ended with the TCEQ Executive Director's witnesses, TCEQ employees, Gordon Cooper, Jeff Paull, and Gunnar Dubke. All parties submitted written closing arguments on March 23, 2022, and the ALJ published the Proposal for Decision on May 25, 2022. The PFD recommended approving the application and issuing the Draft Permit.

IV. GENERAL EXCEPTIONS TO THE PROPOSAL FOR DECISION

The PFD in this case rests on a misunderstanding of the Clean Water Act's mandate to protect existing water quality and prevent degradation of existing water quality, 33 U.S.C. §§ 1251(a), 1313(d)(4)(B); 40 C.F.R. § 131.12, as well as a disregard of the largely undisputed scientific evidence submitted by the Protestants demonstrating that the Draft Permit will degrade the water quality of the receiving waters in violation of federal and state law. When applying the law to the facts in the record, here, it must be found that the Clean Water Act and TCEQ regulations are violated by the Draft Permit based on the undisputed and overwhelming evidence that was not refuted by the Applicant or TCEQ's Executive Director with substantial evidence. And considering the record as a whole, the Applicant and TCEQ's Executive Director failed to meet their evidentiary burden to show by a preponderance of the evidence that the Draft Permit meets all applicable standards and should be issued.

The Clean Water Act and Applicable Legal Standards

Congress enacted the federal Clean Water Act to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters," that is to maintain water quality, and set a goal to eliminate wastewater discharges by 1985. 33 U.S.C. § 1251(a). The mandate to "maintain the chemical, physical, and biological integrity" of our nation's waters is the direct source for both EPA's and TCEQ's antidegradation rules, and thus interpreting those rules must start with this overall purpose of the Clean Water Act.

The U.S. Environmental Protection Agency's (EPA) adopted antidegradation rules to require that existing instream water uses be protected and that water quality in high quality waterbodies "be maintained and protected." 40 C.F.R. § 131.12. In accordance with the Clean Water Act and EPA rules, TCEQ adopted its own Tier 1 and Tier 2 antidegradation rules that respectively read "existing uses and water quality sufficient to protect those existing uses must be maintained" and "no activities subject to regulatory action that would cause degradation of waters that exceed fishable/swimmable quality are allowed...degradation is defined as a lowering of water quality by more than a *de minimis* extent." 30 T.A.C. § 307.5.

The *de minimis* exception in TCEQ's Tier 2 antidegradation rule, which does not exist in the EPA rule, must be interpreted consistent with the Clean Water Act and EPA regulations. For the interpretations to be consistent, the *de minimis* exception must be read to allow for no lowering of water quality as "quality shall be maintained and protected." 40 C.F.R. § 131.12. As the EPA explains in its primary guidance document on this issue "such activities as new discharges or expansion of existing facilities would presumably lower water quality and would not be permissible." U.S. ENVIRONMENTAL PROTECTION AGENCY, WATER QUALITY STANDARDS HANDBOOK: CHAPTER 4: ANTIDEGRADATION 9 (2012).

The PFD in this case misinterprets the Tier 2 "no more than *de minimis*" exception in part by requiring a showing of harm to a designated use, thereby collapsing the Tier 2 standard into the Tier 1 "protect . . . existing uses" requirement. Standard rules of statutory construction require that the Tier 2 standard must have a distinct and separate meaning than Tier 1. All the case law, and all of EPA's guidance make this same point. TCEQ's own Implementation Procedures are also in accordance with this point. By way of guidance and example, the Implementation Procedures explicitly recognize that consumption of even a small amount of "assimilative capacity" and even small increases in pollutant loadings of pollutants of concern" are likely to result in a lowering of water quality by more than a "trifling" or *de minimis* amount. ED5 at 63–64.

The PFD ignores the law and overwhelming science in the contested case hearing record. The evidence shows that in waterbodies like the pristine Texas Hill Country tributary targeted for wastewater discharge in this case adding even seemingly small amounts of nutrient pollutants can lower water quality by far more than a *de minimis* amount. However, TCEQ's practice, and the practice in the PFD here, has been to presume the opposite: that water quality is never lowered by more than a *de minimis* amount no matter how great the increase in key pollutants loadings are above baseline, pre-discharge conditions. Tr. Gordon Cooper pp. 196–97 (stating that in his fourteen years as a TCEQ employee he cannot recall ever concluding that a permit would lower water quality more than a *de minimis* amount).

TCEQ's practice of manufacturing an un rebuttable presumption that wastewater discharges never lower water quality more than a *de minimis amount*, no matter how great the difference between pre-discharge and post-discharge pollutant loadings and no matter the science showing that huge increases not only violate Tier 2 but also Tier 1's prohibition on harm to existing uses violates the law. This case is the time to correct this long-standing, illegal practice and begin protecting the high-quality waters of Texas. The PFD should be amended to do so based on the law and the un rebutted evidence, as summarized below.

Evidence Submitted by Protestants

In the receiving waters, and similar waterbodies in the Texas Hill Country, the naturally occurring background levels of key nutrients, phosphorus and nitrogen, are extremely low. These key nutrients play a critical role in the ecology of the waterbodies, and the native aquatic species found in the low-nutrient Texas Hill Country waters have evolved over eons under the current low nutrient conditions characterized by clear water and high dissolved oxygen. The addition of

even small amounts of phosphorus and nitrogen to pristine Texas Hill Country aquatic ecosystems will cause the waterbody to shift from an oligotrophic state, characterized by low algal biomass, low nutrient concentration, high water transparency, and assemblages of species adapted to very low nutrient conditions, to mesotrophic or eutrophic conditions which are characterized by nuisance algae growth, shifts in aquatic biological communities, murky water, hypoxic and anoxic conditions, and displacement of native aquatic life communities by higher-nutrient adapted species.¹

Protestants submitted four scientific studies demonstrating that degradation of water quality and impairment of high aquatic life use will occur when small amounts of nutrient pollution are added to pristine Hill Country streams. No conflicting studies were introduced and witnesses for the Applicant and the Executive Director could point to no such studies.

The first study submitted by Protestants published by the EPA in 2001 set out stream reference conditions for “Ecoregion IV,” an area containing the Edwards Plateau and characterized by short grass prairie and cool, clear streams. The receiving waters for the proposed discharge in this case is located within the Balcones Canyonlands of the Edwards Plateau subregion within EPA’s Ecoregion IV.² The EPA found that streams in the region are high quality oligotrophic streams with clear water, high dissolved oxygen, and excellent aquatic animal habitat with reference conditions of 0.09 mg/L for nitrite + nitrate, 0.18 mg/L for Total Kjeldahl Nitrogen, 0.27 mg/L for total nitrogen, and 8 µ/L for total phosphorus.³

Water quality tests conducted near the outfalls for the Draft Permit in the receiving waters show that baseline conditions for the receiving waters are consistent with the nutrient concentrations set out in the EPA study as characteristic of EPA Ecoregion IV. PR-LR-1 at 12. Witnesses for the Applicant and ED were unfamiliar with the baseline conditions for either nitrogen or phosphorus were likely to be for the receiving waters: they only knew that baseline phosphorus conditions in the receiving waters were likely below the level of detection in most TCEQ certified labs. Tr. Paull pp. 241, 245; Tr. Machin 135.

The EPA study went on to identify the threshold concentrations for nutrients that tip crystal clear, oligotrophic Hill Country streams to degraded mesotrophic conditions, identifying the thresholds at 0.7 mg/L total nitrogen and 25 µ/L total phosphorus.⁴

After the 2001 study, EPA recognized that more research was needed to before numeric nutrient criteria could be adopted by rule, so EPA and TCEQ funded a series of studies conducted by researchers at Baylor University and Texas A&M University. These subsequent studies in EPA Ecoregion IV studied the relationship between nutrient pollution and changes in water quality and corroborated EPA’s original findings in the 2001. The first study in the series was published

¹ Dodds et al., *Suggested Classification of Stream Trophic State: Distributions of Temperate Stream Types by Chlorophyll, Total Nitrogen, and Phosphorus*, 32 WATER RESOURCES 1455 (1998) (PR-LR-8).

² U.S. ENVIRONMENTAL PROTECTION AGENCY, AMBIENT WATER QUALITY CRITERIA RECOMMENDATIONS, INFORMATION SUPPORTING THE DEVELOPMENT OF STATE AND TRIBAL NUTRIENT CRITERIA, RIVERS AND STREAMS IN NUTRIENT ECOREGION IV (2001) (PR-LR-7).

³ *Id.*

⁴ *Id.* at 12.

in 2009 and found that 31 species of algae exhibited change in growth at total phosphorus concentrations between 0.015 mg/L and 0.025 mg/L.⁵

A 2018 study similarly concluded that declines in sensitive taxa occur at total phosphorus concentrations of 0.020 mg/L to 0.025 mg/L.⁶ The study found that “limiting surface water [total phosphorus] concentrations to <20 µ/L is necessary to ensure that natural [algae] assemblages persist within regional stream networks. The final study presented by Protestants was conducted in an area with similar conditions as EPA Ecoregion IV and emphasized the need to limit nutrient input in Texas streams and found that total phosphorus concentrations of 20 µ/L were needed to maintain natural algae assemblages and important native fish species.”⁷

The studies presented by Protestants are relevant to this case as the purpose of the studies was to identify nutrient concentrations that correlate to ecosystem changes, that is the studies looked at what level of total phosphorus will result in harm to or impairment of high aquatic life use (by way of die off and displacement of those native assemblages of species by more nutrient tolerant species). When the studies presented by Protestants are compared with the baseline conditions of the receiving waters and the conditions under the Draft Permit during critical low and no flow conditions, there is no doubt that the Draft Permit will lower water quality by more than a *de minimis* extent and impair any existing uses in violation of both Tier 2 and Tier 1 standards

Baseline conditions of the receiving waters contain around 5 to 8 µ/l total phosphorus, and scientific studies in the record demonstrate that the receiving waters are likely to experience shifts in algal growth and biological communities at levels of 20 to 25 µ/ total phosphorus. However, the Draft Permit allows the discharge of effluent containing 500 µ/l total phosphorus, levels one hundred times greater than the estimated baseline and twenty-five times greater than the level that will cause increased algal growth and shifts in the biological communities in the receiving waters.

Baseline conditions for total nitrogen in the receiving waters are in the range of 0.05 to 0.27 mg/L. The Draft Permit would allow total nitrogen levels in the receiving waters to reach a level of 3 to 10 mg/L during low flow conditions. The amount of total nitrogen that will be discharged due to the Draft Permit crosses the threshold of .7 mg/L set by the EPA, in a study in the record, delineating pristine oligotrophic streams and degraded mesotrophic streams.

The baseline dissolved oxygen concentration of the receiving waters is around 6.7 mg/L. The Draft Permit allows dissolved oxygen concentrations to be lowered to 5 to 4.8 mg/L—at or just

⁵ RYAN KING ET AL., DEVELOPMENT OF BIOLOGICAL INDICATORS OF NUTRIENT ENRICHMENT FOR APPLICATION IN TEXAS STREAM: § 106 WATER POLLUTION CONTROL GRANT #98665304 (2009) (PR-LR-9).

⁶ Jason Taylor et al., *Spatial, Temporal and Experimental: Three Study Design Cornerstones for Establishing Defensible Numeric Criteria in Freshwater Ecosystems*, 2018 J. OF APPLIED ECOLOGY 1, 2 (2018) (PR-LR-10).

⁷ Jason Taylor et al., *Nonlinear Response of Stream Ecosystem Structure to Low-Level Phosphorus Enrichment*, 2014 FRESHWATER BIOLOGY 1 (2014) (PR-LR-11). Additionally, nothing in the record suggests that the paper’s findings and conclusions do not apply in this case: to the contrary the paper’s discussion and citation to other research papers with similar results recognizes that the ecological impacts of phosphorus enrichment in naturally low phosphorus streams have a consistent pattern across ecoregions. Furthermore, the paper reads “our results may have applicability outside of our study region, as many indicator species for low-P and high-P conditions identified in the current study have been identified in other regional studies and at the national scale.”

below the level determined by TCEQ rule as necessary to maintain aquatic life uses. The Draft Permit will consume one hundred percent of the receiving water's assimilative capacity for dissolved oxygen.

The PFD disregards the overwhelming scientific evidence in the record that increasing total phosphorus and total nitrogen in the receiving waters to the degree that is proposed in the Draft Permit would increase total phosphorus and total nitrogen in the receiving waters to levels that would shift the ecology of the receiving waters to a different aquatic community with different species of algae, aquatic invertebrates, and fish, while also causing nuisance algae growth that will impair fishing and recreation uses. The PFD failed to address the scientific studies in the record that demonstrated the degradation of water quality that will occur as a result of nutrient pollution from the Draft Permit. Such studies were funded by TCEQ and other governmental entities and were carried out by experts from Baylor University, Texas A&M University, the U.S. Department of Agriculture, and other well-regarded institutions. Many are peer reviewed and none of them were disputed in the record.

In addition to the studies submitted by Protestants demonstrating that the Draft Permit will lower water quality by more than a *de minimis* extent and impair existing uses, Protestants also presented evidence demonstrating that the nutrient pollution allowed by the Draft Permit will cause nuisance algae growth in violation of Texas Surface Water Quality Standards. An EPA study described the effects of nutrient pollution, similar to what is allowed in the Draft Permit, as including harmful algal blooms, fish kills, anoxic zones, and increased cyanobacteria.⁸ These effects can lead to sick people, pets, and wildlife, contamination of food and water, depressions in property values, closed swimming and fishing areas, and impacts on the livelihoods of those living nearby.⁹ Protestants also presented photographs of a pristine stream, unaffected by wastewater with clear, oligotrophic water and of a stream impacted by nutrient pollution from wastewater effluent with eutrophic, algae choked water. PR-LR-6.

All the rigorous scientific studies introduced by Protestants point to the same conclusion: the increases in total phosphorus and total nitrogen in the receiving waters that would result from the Draft Permit under low flow conditions will result in a dramatic change in aquatic species composition and primary productivity. The Applicant and TCEQ's Executive Director offered no evidence contradicting the studies submitted by Protestants nor did they offer evidence of the current and predicted conditions of the receiving waters beyond the speculation of TCEQ employees. The overwhelming weight of the evidence presented at the contested case hearing demonstrates that if the application is approved and the Draft Permit is issued the water quality of the receiving waters will be degraded and existing water body uses will be impaired. Despite the weight of the evidence, the ALJ did not address these studies or the scientific evidence presented by Protestants in his Findings of Fact and Conclusions of Law, and his Findings of Fact consisted of conclusory statements that were devoid of factual analysis.

The Draft Permit and application for must be denied as a matter of law. Protestants do not ask the ALJ or Commissioners of the Texas Commission on Environmental Quality to change the

⁸ U.S. ENVIRONMENTAL PROTECTION AGENCY, A COMPILATION OF COST DATA ASSOCIATED WITH THE IMPACTS AND CONTROL OF NUTRIENT POLLUTION (2015) (PR-LR-12).

⁹ *Id.*

law regarding wastewater discharges. Protestants ask only that the ALJ and Commissioners of the Texas Commission on Environmental Quality apply the plain intent and meaning of the Clean Water Act, applicable federal regulations, TCEQ antidegradation rules, and Texas Surface Water Quality Standards to the undisputed facts in the record. Such an analysis requires that the application and Draft Permit be denied as the pollution that will occur as a result of the Draft Permit will lower water quality by more than a *de minimis* amount and fail to maintain existing uses of the receiving waters.

V. EXCEPTIONS TO SPECIFIC FINDINGS OF FACT AND CONCLUSIONS OF LAW

I. FINDINGS OF FACT

Issue A: Whether the Draft Permit is protective of groundwater.

21. The Draft Permit is protective of surface water quality, as found below, so it is also protective of groundwater quality.

The Draft Permit is not protective of groundwater quality as the Draft Permit is not protective of surface water quality as explained in Section IV of this document and as will be set out more fully in the following subsections. Furthermore, the leaky nature of the geology in the area and the age and construction of nearby groundwater wells creates a hydrologic connection between the surface water and groundwater. This connection allows a rapid influx of wastewater sewage into the groundwater, harming the groundwater quality. Tr. Chapman p. 32–34. Protection of the groundwater in this area is an important issue as many of the people living along the receiving waters, Mr. Harpole’s neighbors have groundwater wells as the sole source of water for their house. PR-WH-1 at 3. Mr. Harpole’s neighbors that depend on groundwater are particularly at risk from elevated levels of nitrates in their drinking water since the Draft Permit does not have a limit on total nitrogen. The Applicant and TCEQ Executive Director provided no evidence that the leaky geology and other factors, in light of the dangers posed by the wastewater to surface water, would not harm groundwater quality.

Issue C: Whether the Draft Permit includes adequate provisions to protect the health of the requesters and aquatic and terrestrial wildlife.

26. Protestants did not present evidence demonstrating that the Draft Permit will adversely affect human health, including the health of requestors.

Protestants presented evidence demonstrating that the Draft Permit will adversely affect human health, including the health of requestors. As set out in a 2015 EPA study, nitrogen and phosphorus pollution cause algal blooms. The algal blooms, in turn, lead to higher chlorination requirements for safe drinking water which increases the amount of disinfection by-products in

drinking water which in turn leads to increased cancer risks.¹⁰ Algal blooms can also cause an increase in cyanotoxins, and exposure to cyanotoxins can cause skin rashes, fevers, respiratory distress, gastrointestinal distress, and death.¹¹ As discussed in Section IV, Protestants presented four, unrefuted scientific studies demonstrating that the Draft Permit will allow nutrient concentrations high enough to cause algal blooms in the receiving waters. Neither the Applicant nor TCEQ's Executive Director presented any evidence rebutting the evidence presented by Protestants on the impacts of algal blooms caused by the Draft Permit on human health, nor did they rebut the evidence showing that the Draft Permit will cause algal blooms.

27. Protestants did not present evidence demonstrating that the Draft Permit will adversely impact aquatic or terrestrial wildlife.

Protestants presented evidence demonstrating that the Draft Permit will adversely affect aquatic and terrestrial wildlife. It is undisputed that "[n]itrogen and phosphorus pollution impel algal blooms, depress dissolved oxygen concentrations, kill fish, cloud water, and deplete desirable plant and animal habitat;" increased nutrients also cause a proliferation of cyanotoxins that harm pets and wildlife that drink the water.¹² As set out more fully in Section III, scientific studies presented by the Protestants show that total phosphorus levels above 20 µl in pristine Texas Hill Country Streams leads to changes in aquatic flora and fauna communities, specifically harming native algae and native fish species and causing an increase in algal growth. Neither the Applicant nor TCEQ's Executive Director presented any evidence rebutting the impacts of increased phosphorus and nitrogen on aquatic communities, evidence rebutting the negative impacts of algal blooms on aquatic communities, or evidence rebutting the scientific studies demonstrating the nutrient concentrations that cause such impacts.

28. The Draft Permit includes adequate provisions to protect the health of requesters and aquatic and terrestrial wildlife.

The Draft Permit does not include adequate provisions to protect the health of requesters and aquatic and terrestrial wildlife. As explained in Sections V.I.C.26, 27, Protestants presented evidence, that was not rebutted by the Applicant or the TCEQ Executive Director showing that the nutrient pollution allowed in the Draft Permit will cause algal blooms that will harm human health and harm aquatic and terrestrial wildlife.

Issue D: Whether the Draft Permit is protective of water quality and the existing uses of the receiving waters in accordance with applicable Texas Surface Water Quality Standards.

33. The effluent limits in the Draft Permit will maintain the required DO levels in the respective receiving waters, and in turn the waters' respective aquatic life uses.

¹⁰ U.S. ENVIRONMENTAL PROTECTION AGENCY, A COMPILATION OF COST DATA ASSOCIATED WITH THE IMPACTS AND CONTROL OF NUTRIENT POLLUTION (2015) (PR-LR-12); *see also* PR-LR-1 at 14–19.

¹¹ *Id.*

¹² U.S. ENVIRONMENTAL PROTECTION AGENCY, A COMPILATION OF COST DATA ASSOCIATED WITH THE IMPACTS AND CONTROL OF NUTRIENT POLLUTION (2015) (PR-LR-12); PR-LR-1 at 14–19.

The effluent limits in the Draft Permit will not maintain the required dissolved oxygen levels in the respective receiving waters, and in turn the waters' respective aquatic life uses. The Draft Permit requires only that the effluent leaving the pipe have a dissolved oxygen level of 5.0 mg/L, however, this is different than the overall impact that the wastewater will have on dissolved oxygen in the receiving waters. The algal blooms caused by the nutrient levels in the Draft Permit will result in low dissolved oxygen concentrations in the receiving waters.¹³ Since the dissolved oxygen concentration models run by TCEQ did not take into account the nutrient pollution and resultant algal blooms, the dissolved oxygen will be lower than what will protect existing aquatic life uses. PR-LR-1 at 13–14 (explaining that TCEQ did not account for nutrients and algal blooms when setting the dissolved oxygen limits for the Draft Permit).

34. Protestants did not present evidence demonstrating that the effluent limits in the Draft Permit will allow nutrients that will cause “excessive growth of aquatic vegetation” that will impair an existing, designated, presumed, or attainable use, nor that the limits will fail to maintain receiving waters “in an aesthetically attractive condition.”

Protestants presented evidence demonstrating that the effluent limits in the Draft Permit will allow nutrients at levels that will cause “excessive growth of aquatic vegetation” that will impair an existing, designated, presumed, or attainable use, and that the nutrient limits in the Draft Permit will fail to maintain the receiving waters “in an aesthetically attractive condition.” The nutrient pollution allowed in the Draft Permit would increase algal blooms which would affect the aesthetic conditions of the receiving waters.¹⁴ Protestants also presented images that showed the difference between a clear, oligotrophic stream, much like the receiving waters in their current conditions versus a stream that has experienced eutrophication due to excessive nutrients in wastewater. PR-LR-6. The stream affected by nutrients from wastewater was choked with algae and excessive aquatic plant growth and was not aesthetically pleasing. *Id.* The scientific evidence submitted by Protestants and set out in Section IV shows that the concentrations of nutrients allowed in the Draft Permit are high enough to cause the above described nuisance algae growth. Neither the Applicant nor the TCEQ Executive Director provided any evidence rebutting the impacts on waterbodies associated with nutrient pollution from wastewater, and as will be discussed later, they presented no evidence rebutting Protestants' evidence showing that the excessive growth of aquatic vegetation and unattractive conditions would occur as a result of the Draft Permit.

35. The effluent limits in the Draft Permit will not cause “excessive growth of aquatic vegetation” that will impair an existing, designated, presumed, or attainable use, nor will they fail to maintain receiving waters “in an aesthetically attractive condition.”

The effluent limits in the Draft Permit will cause “excessive growth of aquatic vegetation” that will impair an existing, designated, presumed, or attainable use and will fail to maintain the receiving waters in an “aesthetically attractive condition.” As discussed in the preceding section,

¹³ U.S. ENVIRONMENTAL PROTECTION AGENCY, A COMPILATION OF COST DATA ASSOCIATED WITH THE IMPACTS AND CONTROL OF NUTRIENT POLLUTION (2015) (PR-LR-12); *see also* PR-LR-1 at 14.

¹⁴ U.S. ENVIRONMENTAL PROTECTION AGENCY, A COMPILATION OF COST DATA ASSOCIATED WITH THE IMPACTS AND CONTROL OF NUTRIENT POLLUTION (2015) (PR-LR-12); *see also* PR-LR-1 at 19.

the Protestants presented evidence demonstrating that the nutrient limits in the Draft Permit will cause eutrophication of the receiving waters and stream degradation from excessive algal blooms. Such degradation and excessive algal growth will impair the current high aquatic life uses, fishing uses, and contact recreation uses of the receiving waters. The excessive algal growth caused by the nutrient pollution allowed in the Draft Permit will cause conditions that impair all current uses of the receiving waters and cause aesthetically unattractive conditions. PR-LR-6 (showing a comparison of streams one pristine stream unaffected by wastewater and one stream affected by the nutrients pollution from wastewater and choked with excessive algal growth). The Applicant and TCEQ Executive Director failed to provide evidence to

36. The Draft Permit is protective of water quality and the existing uses of the receiving waters in accordance with the applicable Standards.

The Draft Permit is not protective of water quality and the existing uses of the receiving waters in accordance with the applicable Standards. As demonstrated by the evidence presented by Protestants', the Draft Permit will cause algal blooms that will cause low dissolved oxygen concentrations in the receiving waters and the level of phosphorus allowed in the Draft Permit is twenty-five times higher than the total phosphorus concentration predicted to cause major shifts in the aquatic biologic community. The Applicant and TCEQ Executive Director provided no evidence to rebut Protestants' evidence on the point, providing only unsubstantiated, conclusory statements.

Issue E: Whether the Draft Permit complies with applicable antidegradation requirements.

37. The existing water-quality uses of the receiving waters will not be impaired by the Draft Permit as long as Applicant complies with it, satisfying the Tier 1 antidegradation requirement.

The existing water quality uses of the receiving waters will be impaired by the Draft Permit in violation of the Tier 1 antidegradation requirement. As set out more fully in Section V.I.E.34 and Section IV, the amount of total phosphorus and nitrogen allowed in the Draft Permit will cause eutrophication of the receiving waters and increase nuisance algae growth. This will cause fish kills and make it dangerous and unpleasant for any sort of recreation, thus, impairing the high aquatic life uses, contact recreation uses, and fishing uses of receiving waters in violation of the Tier 1 antidegradation requirement. The Draft Permit will also cause shifts in aquatic species and algae assemblages, impairing the current high aquatic life use.

38. The Draft Permit will not cause a lowering of water quality by more than a *de minimis* extent in Frederick Creek, Masters Lake, or Smith Investment Co. Lakes Nos. 1 and 3 as long as Applicant complies with the Draft Permit, satisfying the antidegradation Tier 2 requirement.

The Draft Permit will cause a lowering of water quality by more than a *de minimis* amount in Frederick Creek, Masters Lake, and Smith Investment Co. Lakes Nos. 1 and 3 in violation of the

Tier 2 antidegradation requirement. The Draft Permit allows the Applicant to discharge municipal sewage wastewater containing levels of total phosphorus and total nitrogen that far exceed the amounts that have been documented in rigorous scientific studies to cause significant degradation of water quality, including nuisance algae growth.

Protestants presented several scientific studies, all of which support each other's conclusions, that show that increasing the levels of total phosphorus in pristine Texas Hill Country waterbodies causes increased algal growth, shifts in aquatic species assemblages, and harm to the aquatic ecosystem. A study by the EPA showed that when streams in Ecoregion IV reach 25 μL of total phosphorus and .7mg/L total nitrogen, the streams go from being clear and oligotrophic to algae choked and mesotrophic.¹⁵ Another study showed that in Ecoregion IV, that decline in the aquatic community occurs with total phosphorus concentrations between 15 and 25 μL .¹⁶ Two more studies found that total phosphorus limits in Texas Hill Country streams cannot exceed 20 μL without disrupting natural algae assemblages and important fish species.¹⁷

Applying these scientific studies to the Draft Permit and receiving waters demonstrates that the addition of total phosphorus and total nitrogen allowed in the Draft Permit will cause a lowering of water quality by more than a *de minimis* extent as a matter of law and impair the existing uses in violation of the Tier 2 and Tier 1 antidegradation standards.

Beginning with total phosphorus concentrations, background levels of the receiving waters regularly test below the detection limit of 20 μL for total phosphorus. PR-LR-1 at 11. However, the sampling of similarly located streams has shown that, during base flow conditions, the receiving waters likely have total phosphorus levels of 5 μL . The Draft Permit allows the Applicant to discharge wastewater containing 500 μL total phosphorus. ED10 at 2–4. This represents a level that is 100 times greater than the baseline of 5 μL and 25 times greater than the level of 25 μL that causes pristine oligotrophic streams in Ecoregion IV to degrade to mesotrophic streams, a significant degradation.¹⁸ The levels of total phosphorus allowed in the Draft Permit consume more than 100% of the assimilative capacity (the buffer between background concentrations and impairment) of the receiving waters for total phosphorus and will cause eutrophication, excessive algal growth, and shifts in aquatic communities.

Like the drastic increase in total phosphorus, the Draft Permit will increase total nitrogen concentrations in the receiving waters from a baseline range of 0.05 to 0.27 mg/L to a post discharge concentration of 3 to 10 mg/L. PR-LR-1 at 21. The post-discharge concentrations of

¹⁵ U.S. ENVIRONMENTAL PROTECTION AGENCY, AMBIENT WATER QUALITY CRITERIA RECOMMENDATIONS, INFORMATION SUPPORTING THE DEVELOPMENT OF STATE AND TRIBAL NUTRIENT CRITERIA, RIVERS AND STREAMS IN NUTRIENT ECOREGION IV (2001) (PR-LR-8).

¹⁶ RYAN KING ET AL., DEVELOPMENT OF BIOLOGICAL INDICATORS OF NUTRIENT ENRICHMENT FOR APPLICATION IN TEXAS STREAM: § 106 WATER POLLUTION CONTROL GRANT #98665304 (2009) (PR-LR-9).

¹⁷ Jason Taylor et al., *Spatial, Temporal and Experimental: Three Study Design Cornerstones for Establishing Defensible Numeric Criteria in Freshwater Ecosystems*, 2018 J. OF APPLIED ECOLOGY 1, 2 (2018) (PR-LR-10); Jason Taylor et al., *Nonlinear Response of Stream Ecosystem Structure to Low-Level Phosphorus Enrichment*, 2014 FRESHWATER BIOLOGY 1 (2014) (PR-LR-11).

¹⁸ U.S. ENVIRONMENTAL PROTECTION AGENCY, AMBIENT WATER QUALITY CRITERIA RECOMMENDATIONS, INFORMATION SUPPORTING THE DEVELOPMENT OF STATE AND TRIBAL NUTRIENT CRITERIA, RIVERS AND STREAMS IN NUTRIENT ECOREGION IV (2001) (PR-LR-8); *see also* PR-LR-1 at 10.

total nitrogen in the receiving waters will be at least four and a half times greater than the EPA estimated boundary of .7 mg/L between oligotrophic and mesotrophic streams, consuming more than 100% of the assimilative capacity of the receiving waters.¹⁹

In addition to degrading water quality through the input of phosphorus and nitrogen, the Draft Permit will decrease dissolved oxygen levels to such a degree that will cause a lowering of water quality by more than a *de minimis* amount. The sampling of nearby streams shows that the baseline for dissolved oxygen in the receiving waters is close to 6.7 mg/L. PR-LR-1 at 21. The Draft Permit would allow dissolved oxygen in the receiving waters to be lowered to 4.8 to 5 mg/L. ED10 at 2–4. This would lower dissolved oxygen by 2 to 3 times the amount suggested to be a threshold for *de minimis* effects by the TCEQ Implementation Procedures and would consume more than 100% of the assimilative capacity for dissolved oxygen without receiving further evaluation. ED5 at 65; ED5 at 64.

The Draft Permit will consume more than 100% of the receiving waters' assimilative capacity for total nitrogen and phosphorus and far out strip the concentrations that have been shown to cause severe degradation of aquatic habitat. Further, the Draft Permit will consume 100% of the assimilative capacity of the receiving waters for dissolved oxygen. Since the streams in the receiving waters are often low or no flow, there will be significant portions of the year where the water in Frederick Creek and the water entering the ponds and lakes will be 100% wastewater effluent, exacerbating the issues with high nutrient concentrations in the wastewater. These can be no doubt that the Draft Permit will push the receiving waters towards eutrophication, excessive algal growth, and major changes in the aquatic community; the Draft Permit will lower water quality by more than a *de minimis* extent in violation of TCEQ rules and the Clean Water Act.

Neither the Applicant nor the TCEQ Executive Director provided any evidence on the background conditions and current concentrations of nutrients in the receiving waters, nor did they provide any evidence to refute the scientific studies and evidence presented by Protestants that established the degradation that will occur as a result of the Draft Permit. Any analysis conducted by TCEQ employees was speculative and based on presumptions rather than actual data or supporting scientific research or reference documents. And the TCEQ Permit Review for Unclassified Waters by Standards Team contained no justification for the conclusion that the Draft Permit would not violate the antidegradation rules. PR-LR-15 at 2.

Furthermore, when questioned, TCEQ employees expressed a lack of knowledge of the substantive standards they were being asked to apply, instead relying on the TCEQ Implementation Procedures, and were generally unaware of the background conditions of the receiving waters and thus were unable to make an accurate assessment of predicted future conditions under the Draft Permit. Tr. Cooper at 188; Tr. Paull at 217–19. However, the Tier 2 antidegradation standard requires a comparison of baseline conditions, an analysis not conducted by TCEQ. Tr. Paull pp. 241, 245 (stating that he was unfamiliar with the baseline water quality conditions of the receiving waters and conducted no analysis to determine how much nutrient

¹⁹ U.S. ENVIRONMENTAL PROTECTION AGENCY, AMBIENT WATER QUALITY CRITERIA RECOMMENDATIONS, INFORMATION SUPPORTING THE DEVELOPMENT OF STATE AND TRIBAL NUTRIENT CRITERIA, RIVERS AND STREAMS IN NUTRIENT ECOREGION IV (2001) (PR-LR-8).

pollution would impair the receiving waters); ED5 at 63.

Moreover, the TCEQ Executive Director cannot hide behind purported compliance with the TCEQ Implementation Procedures to prove compliance with TCEQ regulations and the Clean Water Act, as the Implementation Procedures do not substitute for the actual regulations and provide room for additional analyses to be conducted as needed based on site specific factors. ED5 at 12 27–29, 45, 52, 63 (“this document should be interpreted as guidance and not a replacement to the rules”). In this case, site specific factors, such as the low background concentrations of nutrients, require more stringent effluent limits than are currently in the Draft Permit, and Protestants have provided undisputed scientific evidence showing that the Draft Permit will indeed degrade water quality. *Id.* at 27–29 (“additional factors for antidegradation review can be considered as appropriate to further address potential nutrient impacts of concern”) (“initial assessments can be improved and reconsidered”).

Additionally, Protestants’ discussion of assimilative capacity is relevant to the issue of degradation. While the assimilative capacity analysis may not be explicitly required for the Draft Permit, it is helpful to illustrate the absurdity of the Applicant’s and the TCEQ Executive Director’s claim that a Draft Permit that would consume more than 100% of a water body’s assimilative capacity does not constitute degradation; without some consideration of assimilative capacity and nutrient loading, Tier 2 antidegradation analysis is rendered meaningless as there would be no cause for alarm until harm occurs.

The ALJ in his Findings of Fact, for this section and all others, provided no reason for disregarding the scientific evidence presented by Protestants while preferring the speculative, incomplete, and unsupported analysis conducted by TCEQ staff that was not grounded in facts, science, or a legal framework that requires both protecting the chemical and biological integrity of our nation’s waters and interpretation of the *de minimis* standard as consistent with EPA’s unqualified prohibition of any degradation

39. The Draft Permit complies with applicable antidegradation requirements.

The Draft Permit fails to comply with applicable antidegradation requirements. The unrefuted and overwhelming evidence presented by Protestants shows that the Draft Permit will impair existing uses of the receiving waters and will cause a lowering of water quality by more than a *de minimis* amount in violation of the Tier 1 and Tier antidegradation standards.

Issue F: Whether the Draft Permit includes adequate protections to protect the requestors’ use and enjoyment of their property.

40. Protestants did not present evidence demonstrating that the Draft Permit will adversely impact Protestants’ use and enjoyment of their property.

Protestants presented evidence demonstrating the Draft Permit will adversely impact Protestants’ use and enjoyment of their property. As explained in the 2015 EPA study, the

likely eutrophication of the receiving waters due to the Draft Permit would result in additional algae, algal blooms, and reduced water quality.²⁰ The increased algae would reduce dissolved oxygen concentrations, cause fish kills, create odors, affect the aesthetic enjoyment of the receiving waters, potentially lower property values, and cause cyanotoxins that could harm pets that drink from the receiving waters.²¹ Protestants will be negatively impacted when the effects of the Draft Permit and the nutrient pollution manifest. Protestant Jay Harpole stated that the receiving waters are used for recreation, fishing, and swimming and that the clean, clear quality of the water was the main attraction. PR-WH-1 at 3. Mr. Harpole provided several photographs depicting the current pristine quality of the receiving waters. *Id.* Mr. Harpole also explained that every house near him has a well for its sole source of water, water which could be contaminated by the Draft Permit as discussed in Section V.I.A.21. *Id.* If the Draft Permit is issued, the main attraction of Protestants' property, the clean and clear water, will be ruined.

41. The Draft Permit includes adequate protections to protect the requestors' use and enjoyment of their property.

Based on the evidence presented by Protestants and testimony of Jay Harpole, discussed in the preceding section, the Draft Permit does not include adequate protections to protect the requestors' use and enjoyment of their property. The Draft Permit will create nuisance algae conditions that will lead to unsightly conditions, odors, and fish kills which will interfere with Protestants' ability to use the receiving waters for recreation and fishing and interfere with the aesthetic value and enjoyment of their property. Neither the Applicant nor the TCEQ Executive Director provided any evidence rebutting Protestants' evidence that the Draft Permit will adversely impact Protestants' use and enjoyment of their property, nor did they rebut Protestants' evidence, discussed in other sections, that the negative impacts associated with nutrient pollution from wastewater will occur as a result of the Draft Permit.

II. CONCLUSIONS OF LAW

10. The Draft Permit is protective of groundwater.

As discussed in Section V.I.A.21, the Draft Permit is not protective of groundwater as the Draft Permit is not protective of surface water, and the underlying geology of the region makes it likely that wastewater effluent from the Draft Permit will reach the groundwater.

14. The Draft Permit includes adequate protections to protect the health of requestors and aquatic and terrestrial wildlife.

As discussed in Section V.I.C., the Draft Permit does not include adequate protections to protect the health of requestors and aquatic and terrestrial wildlife.

17. The Standards define "water quality" in terms of certain criteria or attributes, some expressed numerically, others as narrative descriptions. 30 Tex. Admin. Code §§ 307.4,

²⁰ U.S. ENVIRONMENTAL PROTECTION AGENCY, A COMPILATION OF COST DATA ASSOCIATED WITH THE IMPACTS AND CONTROL OF NUTRIENT POLLUTION (2015) (PR-LR-12; *see also* PR-LR-1 at 19.

²¹ *Id.*

.7, .10.

Water quality is never explicitly defined by the Texas Surface Water Quality Standards, and under the Clean Water Act, water quality is defined as the “chemical, physical, and biological integrity” of a water body. 33 U.S.C. § 1251(a). Furthermore, the ALJ’s definition would read in a requirement to show harm under the Tier 2 antidegradation analysis, a requirement that is inconsistent with the rule and collapses the Tier 1 and 2 antidegradation analysis into the same inquiry.

20. The effluent limits in the Draft Permit will maintain the required DO levels in the receiving waters, and in turn the waters’ respective aquatic life uses.

As discussed in Section V.I.D.33, the effluent limits in the Draft Permit will not maintain the required dissolved oxygen levels in the receiving waters, and in turn the waters’ respective aquatic life uses, in that background levels of dissolved oxygen will be lowered more than a de minimis amount and in significant excess above the guidance outlined in the IPs for determining more than de minimis thresholds.

22. The effluent limits in the Draft Permit will prevent nutrients from causing “excessive growth of aquatic vegetation” that will impair an existing, designated, presumed, or attainable use. 30 Tex. Admin. Code § 307.4(e).

As discussed in Sections V.I.D.34, 35, the effluent limits in the Draft Permit will not prevent nutrients from causing “excessive growth of aquatic vegetation” that will impair an existing, designated, presumed or attainable use. The overwhelming and undisputed scientific evidence shows that the high aquatic life uses in the receiving waters will be impaired by the discharge both by causing an excessive growth of algae and shifts in species of algae.

23. The effluent limits in the Draft Permit will maintain surface waters in an “aesthetically attractive condition.” 30 Tex. Admin. Code § 307.4(b)(1).

As discussed in Sections V.I.D.34, 35, the effluent limits in the Draft Permit will not maintain surface waters in an “aesthetically attractive condition.”

24. The Standards do not contain any water-quality criteria addressed specifically to concentrations of phosphorus or nitrogen in the receiving waters, nor any criteria that are framed in terms of an oligotrophic/mesotrophic/eutrophic continuum or categories. 30 Tex. Admin. Code §§ 307.4, .7.

While the Texas Surface Water Quality Standards do not explicitly refer to the oligotrophic/mesotrophic/eutrophic categories, the Texas Surface Water Quality Standards do prohibit degrading pristine oligotrophic waterbodies to mesotrophic or eutrophic waterbodies that are choked with excessive algal growth and where native assemblages of species are displaced by more nutrient tolerant species, as shown by all of the scientific studies in the record. The Standards read “[n]utrients from permitted discharges...must not cause excessive growth of aquatic vegetation that impairs existing, designated, presumed, or attainable use.” 30 T.A.C. §

307.4. As Dr. Lauren Ross explained in her testimony, oligotrophic waterbodies have high quality clear water while eutrophic waterbodies are degraded and have high concentrations of algae. PR-LR-1 at 10.²² The oligotrophic/mesotrophic/eutrophic categories provide an appropriate and scientifically valid basis for determining whether the Texas Surface Water Quality Standards for nutrients are violated. The standards do specifically reference eutrophication of high-quality waters as something to be prevented, and the Implementation Procedures make clear that nitrogen and phosphorus are pollutants of great concern that pose a direct threat of degrading water quality in violation of the antidegradation rule.

25. The Draft Permit is protective of water quality and the existing uses of the receiving waters in accordance with the applicable Standards.

As discussed in Section V.I.D, the Draft Permit is not protective of water quality and the existing uses of the receiving waters in accordance with applicable Standards.

27. The Draft Permit, if complied with, will maintain existing uses and water quality sufficient to protect those existing uses. 30 Tex. Admin. Code § 307.5(b)(1).

As discussed in Section V.I.E.37, the Draft Permit, even if complied with, will not maintain existing uses and water quality sufficient to protect existing uses.

29. The Draft Permit, if complied with, will not cause a lowering of water quality by more than a *de minimis* extent in Frederick Creek, Masters Lake, or Smith Investment Co. Lake Nos. 1 and 3. 30 Tex. Admin. Code § 307.5(b)(2).

As discussed in Section V.I.E.38, the overwhelming evidence, and all of the scientific evidence, establishes that the Draft Permit, even if complied with, will cause a lowering of water quality by more than a *de minimis* extent in Frederick Creek, Masters Lake, and Smith Investment Co. Lakes Nos. 1 and 3.

30. The Draft Permit complies with applicable antidegradation requirements.

The Draft Permit fails to comply with applicable antidegradation requirements. The PFD's legal analysis of antidegradation begins with an assertion that determining the meaning of "water quality" requires looking at the "larger statutory and legal context in which the term is used." PFD at 45. But the "larger" legal context defined by the ALJ is limited to state statutes and rules. The PFD goes on to acknowledge that while the Clean Water Act and EPA rules "may potentially inform" the interpretation of TCEQ rules, the PFD refuses to explore the Clean Water Act and EPA regulations, while also ignoring the Clean Water Act mandate to "maintain" the chemical integrity of our nation's waters. The PFD also ignores all of the applicable Clean Water Act antidegradation case law cited by Protestants, disregards the EPA rule that says TCEQ's rules must be at least as protective as EPA's antidegradation rule, 80 Fed. Reg. 51,020, 51,034 (Aug. 21, 2015), and ignores all of the EPA guidance referenced by Protestants.

²² See also Dodds et al., *Suggested Classification of Stream Trophic State: Distributions of Temperate Stream Types by Chlorophyll, Total Nitrogen, and Phosphorus*, 32 WATER RESOURCES 1455 (1998).

The PFD instead repeats the unfounded claim that Protestants seek to rewrite TCEQ rules by referencing federal statutes, rules, case law, and guidance. Rather, it is obvious that Protestants cite this law to assist interpretation of the TCEQ antidegradation rule – a rule that, by law, must be interpreted at least as protective as the federal law. Thus, while lamenting the vagueness of TCEQ rule terms like “lowering water quality” and “*de minimis*,” the ALJ has turned his back on the essential sources for *interpreting* the terms, not rewriting them. TCEQ’s relevant “enactments” could be written with more precision, but that does not make them in conflict with federal requirements *provided* they are interpreted and applied in a way that is consistent with the superior and binding federal law.

Standard rules of statutory construction call for avoiding a finding of conflict between state and federal law. State judges, including ALJs, do this all the time. This requires closely comparing the two overlapping laws, not running away from the controlling federal law. Yet the PFD incorrectly concludes that harmonizing the TCEQ rule with federal law would somehow “effectively augment or rewrite” the TCEQ rule and that only “textual” language in TCEQ rules and the Implementation Procedures may be consulted. PFD at 50. Then, in effect, the PFD cherry picks language in the Implementation Procedures, while wholly failing to explain how orders of magnitude increases in nitrogen and phosphorus are merely “*de minimis*.”

The PFD compounds the error by suggesting that having total phosphorus drop below the (incorrect) level of detection in TCEQ certified labs “within a mile of the discharge.” PFD at 51. The proper baseline starting point of pre-discharge conditions in the receiving waters is 5 µ/L, not 50 µ/L. Neither the Clean Water Act nor TCEQ rules permit the violation of water standards for a mile of stream flow below the discharge point. Even with small discharges without mixing zones, all of the water quality standards, including the antidegradation standards, must be met at the point of discharge, not a mile downstream. This paragraph in the PFD alone is an admission of rule violation, not compliance.

Furthermore, the fact that EPA approved TCEQ’s standards and did not object to the Draft Permit does not help this wholesale sidestepping of applicable and controlling federal law. The conflict comes not from the words of TCEQ’s rules but in their application of those rules to the evidence in this and other cases. EPA’s failure to object in advance of a public hearing or even public comment, and thus without consideration of any of Protestants’ evidence in the case, bears virtually no probative value.

The PFD also makes clear that the ALJ has committed the same legal error as others have done, as set out in the case law below – that is, the PFD collapses the Tier 2 antidegradation standard into the Tier 1 standard by requiring a showing of harm to a designated use. PFD at 48–50.

Starting with the Tier 2 antidegradation rule, the PFD ignores the fact that TCEQ’s witness, Mr. Cooper, admitted that in his 14 years of reviewing wastewater permits he has never once heard of TCEQ finding that a proposed discharge would degrade receiving water quality by more than a *de minimis* amount. Tr. Gordon Cooper pp. 196–97. This is a direct admission of what is supposed to be a narrow exception to the rule (no more than *de minimis*) swallowing the entire rule. It is the polar opposite of EPA’s guidance that “new discharges or expansion of existing facilities would presumably lower water quality and would not be permissible.” U.S.

Given this track record, and the specific testimony of TCEQ's witnesses, the TCEQ Executive Director has no credibility on the point of whether the *de minimis* standard has been met.

The *de minimis* standard must be consistent with, not an exception to, the prohibition on *any* water quality degradation. *De minimis* provisions are created through an "administrative law principle which allows an agency to create unwritten exceptions to a statute or rule for insignificant or '*de minimis*' matters." *Ky. Waterways Alliance v. Johnson*, 540 F.3d 466, 483 (6th Cir. 2008). The EPA and courts have recognized that *de minimis* exceptions are permissible under the Clean Water Act so long as they are limited in scope. In 2015, EPA wrote in its preamble to rule revisions that "[s]tates can use *de minimis* exclusions, as long as they use them in a manner consistent with the [Act] and § 131.12." 80 Fed. Reg. 51,020, 51,034 (Aug. 21, 2015). Accordingly, other states have included a *de minimis* exception in their anti-degradation rules and implementing policies. However, courts in other jurisdictions have held invalid the approach taken by the PFD here.

The D.C. Circuit Court of Appeals held that the implied *de minimis* provision authority is "narrow in reach and tightly bounded by the need to show that the situation is genuinely *de minimis* or one of administrative necessity." *Ala. Power v. Costle*, 636 F.2d 323, 361 (D.C. Cir. 1979) (analyzing the analogous federal Clean Air Act). Implementing a *de minimis* exception "is not an ability to depart from the statute, but rather a tool to be used in implementing the legislative design." *Id.* at 360. Where the potentially exempted activity furthers regulatory goals, authority to employ *de minimis* provisions "must be based on a fair reading of the specific statute, its aims and legislative history." *Id.* at 361. Accordingly, this authority only applies "when the burdens of regulation yield a gain of trivial or no value." *Id.* at 360–61.

A "determination of when matters are truly *de minimis* naturally will turn on the assessment of particular circumstances, and the agency will bear the burden of making the required showing," *Ky. Waterways Alliance*, 540 F.3d at 483 (citations omitted), and will "Depend[] on the water body's chemical, physical, and biological characteristics and the circumstances of the lowering of water quality, even very small changes in water quality could cause significant effects to the water body." 80 Fed. Reg. 51,020, 51,034 (Aug. 21, 2015).

In light of the case law on *de minimis* exceptions, there is no rational basis for the PFD's finding that the massive increases in total phosphorus and total nitrogen and drastic drop in dissolved oxygen in the receiving waters allowed by the Draft Permit will not lower water quality more than a "*de minimis*" amount.

The anti-degradation rule, for Tier 1 and Tier 2, are substantive rules, not procedural. The PFD's suggestion that TCEQ staff fully followed the Implementation Procedures, and thus it follows that the water quality standards are met is wrong as a matter of law.

TCEQ's Implementation Procedures explain that: "The effect of a proposed discharge is compared to baseline water quality conditions in order to assess the potential for degradation of

water quality.” ED5 at 63. Thus, to determine whether a change in water quality is permissible, or *de minimis*, reference points for baseline water quality must serve as a starting point, with the end point being post-discharge water quality. The PFD fails to make either determination, although there is some nod to establishing baseline water quality.

The baseline conditions to be used for determinations of degradation are defined in TCEQ’s rules as “the highest water quality sustained since November 28, 1975 (in accordance with EPA standards 40 C.F.R. § 131). 30 TAC § 307.5(c)(2)(B).²³ The Implementation Procedures provide that “[b]aseline conditions are estimated from existing conditions, as indicated by the latest edition of the Texas Water Quality Inventory or other available information, unless there is information indicating that degradation in ambient water quality has occurred in the receiving waters since November 28, 1975.” This is exactly what Dr. Ross did – estimate baseline water quality using TCEQ’s own database and other information, while experts for the Applicant and the Executive Director made no effort to examine relevant data or estimate background water quality. Similarly, only Dr. Ross compared this baseline water quality to estimated post-discharge concentrations for nitrogen, phosphorus, and DO. The difference between the two is enormous, not *de minimis*, and the scientific record in the hearing shows that real harm will result to the existing high aquatic life use in the receiving waters.

“Degradation is defined as a lowering of water quality by more than a *de minimis* extent, **but not to the extent that an existing use is impaired.**” 30 TAC § 307.5(b)(2) (emphasis added). *De minimis* is therefore necessarily a lowering of water quality *less* than the amount that would impair existing uses. The PFD’s and TCEQ’s approach reads the separate Tier 2 review and “*de minimis*” standard out of the rule. The Ohio Supreme Court held invalid an identical interpretation of Tier 2 by its state agency, noting that “[t]heir attempt to equate degradation of existing water quality with an interference with an existing use not only creates a redundancy but also renders [the regulatory text] inconsistent. *Columbus & Franklin Cnty. v. Shank*, 600 N.E. 2d 1042, 1055 (Ohio 1992). By collapsing the Tier 2 analysis into the Tier 1 analysis, the PFD errs as a matter of law.

The Austin Court of Appeals’ unpublished opinion in the 2014 case of *Robertson County: Our Land, Our Lives (RCOLOL) v. TCEQ*, briefly referenced in the PFD, makes a strong case for finding a Tier 2 violation in this case. No. 03-12-00801-CV, 2014 WL 3562756 (Tex. App.—Austin July 17, 2014, no pet.). The *Robertson* case involved an amendment to a permit for discharge of “once through” power plant cooling water plus an intermittent discharge of stormwater runoff. *Id.* at *1. Here, we have a new permit. The amended discharge was to a reservoir specifically built as a power plant cooling water reservoir, not to a pristine Hill Country stream.

The court properly set out the standards and procedure for the Tier 2 anti-degradation analysis:

Thus, stated generally, to determine whether the proposed regulated activity will result in degradation of water quality, TCEQ rules require a comparison of the baseline water-quality conditions with the conditions that will exist once the permitted activity begins. If this comparison shows no change in water quality, a

²³ This date is based on the effective date of the 1975 federal anti-degradation regulations.

water-quality improvement, or a *de minimis*—i.e., “trifling” or “negligible”—lowering of water quality, the anti-degradation policy is not implicated. If, however, the comparison shows a loss in water quality that is more than *de minimis*, the activity will not be allowed absent a showing that the loss is necessary for important economic or social development.

Id. at *8. Here Applicant and TCEQ witnesses and the PFD made no effort to determine baseline or post-discharge conditions for total phosphorus, total nitrogen, dissolved oxygen, or algae growth.

Similarly, there are no underlying findings of any kind in the PFD or the Final Order on “the conditions that will exist once the permitted activity begins” as to total phosphorus total nitrogen, other than the conclusory, ultimate finding required by Tier 1 and Tier 2 review.

In *Greater Yellowstone Coalition v. EPA*, 2013 U.S. Dist. LEXIS 59661 (D. Idaho 2012) the plaintiff challenged EPA’s approval of Idaho’s Clean Water Act anti-degradation rules defining “degradation” and exemption from review of *de minimis* levels of discharge. In granting EPA’s motion to remand the case for further proceedings, the court was explicit in holding that Idaho’s interpretation of its *de minimis* exemption had to be consistent with “no degradation” and protective of Tier 2 waters and their “assimilative capacity.” The court first described Tier 2:

[Tier 2] applies when “the quality of the waters exceed levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water.” 40 C.F.R. § 131.12(a)(2). The capacity of a water body to absorb pollution from a new use and yet still maintain the water quality necessary to support fish, wildlife, and recreation is known as its “assimilative capacity.” *Ky. Waterways Alliance v. Johnson*, 540 F.3d 466, 471 n.4 (6th Cir. 2008). Tier 2 water bodies have an assimilative capacity. Under the EPA’s regulations, a pollution increase that would decrease a water body’s assimilative capacity would need to be justified by the necessity of the pollution for achieving important economic and social development. *Id.*, see 40 C.F.R. § 131.12(a)(2).

Id. at *4–5. The court then explained that the Idaho rule automatically exempted discharges from Tier II anti-degradation review if the additional pollution from a new activity would consume 10% or less of the “assimilative capacity” of a water body. *Id.* at *3. Also, the Idaho rule defined “degradation” and “lower water quality” as “a change in a pollutant that is adverse to designated or existing uses.” During its review, “EPA explained to Idaho that ‘it is important that the definition of degradation does not imply that uses must be adversely affected before a proposed change in water quality triggers an anti-degradation review.’ ” *Id.* at *14. The court allowed the remand with the understanding that “degradation means a change in a pollutant that reduces water quality” and not one that “is adverse to uses.” *Id.* at 5. This holding directly conflicts with the PFD’s construction of the Tier 2 rule and its consideration of the applicable evidence in this case.

The PFD also fails to address the analysis and reasoning set out in Judge Guerra Gamble’s letter of opinion in *SOS v. TCEQ*, Cause No. D-1-GB-19-003030, 459th Judicial District Court of

Travis County, Texas, Letter Ruling (Oct. 29, 2020). While the ALJ may consider this ruling “nonbinding” because it is on further appeal, it makes no effort to address the legal analysis set out by Judge Guerra Gamble.

Finally, the PFD ignores the recent U.S. Supreme Court decision in *Maui County v. Hawaii Wildlife Fund*, 140 S. Ct. 1462 (2020). There EPA argued that the Act only required a permit for pollutant discharges directly to public surface waters and not to discharges that were allowed first cross land or flow through the subsurface. The Court explained that “to follow EPA’s reading would open a loophole allowing easy evasion of the statutory provision’s basic purposes. Such an interpretation is neither persuasive nor reasonable.” *Id.* at 1467. The same can be said of the PFD’s and TCEQ’s previous construction of the Tier 2 standard; it would essentially eliminate the Clean Water Act’s mandate that the “chemical, physical and biological integrity” of high-quality waters “maintained.” In doing so, it would invite cities and developers to target these waters for waste disposal services even where, as here, there are feasible alternatives to discharge. Just as the Supreme Court refused to defer to a statutory construction that was hostile to the Clean Water Act’s language and intent, reviewing courts are likely to continue to hold that the Tier 2 “no more than de minimis” exception can no longer be allowed to swallow the rule.

VI. CONCLUSION

Protestants have shown above that the PFD turns a blind eye to the Clean Water Act and applicable federal case law, rules, and rule interpretation guidance, as well as to the recent decision of Travis County District Judge Maya Guerra Gamble that addresses the same issues presented in this case. Instead, the PFD doubles-down on the TCEQ Executive Director’s approach of ignoring the science and the law by proclaiming that answering the question of when water quality is lowered more than a *de minimis* amount is, in the absence of numeric criteria established by rule, too “mushy” and a “feeling” for TCEQ experts to which neither SOAH nor any court may second guess. This is a rather stark abandonment of the requirement that decisions in contested cases must demonstrate reasoned decision making in accordance with the governing law and be accompanied by findings of underlying facts and ultimate facts and be made with a rational connection between the two based on applicable law.

Protestants have shown that the PFD also ignores the overwhelming and mostly undisputed evidence in the case demonstrating the proposed discharge will violate both Tier 1 and Tier 2 standards for nutrients and dissolved oxygen. This evidence establishes that the Draft Permit will degrade water quality to an extent that violates TCEQ regulations, EPA regulations, and the Clean Water Act. To summarize, Protestants have demonstrated that (1) If approved, the discharge would lower water quality by more than a *de minimis* amount by increasing phosphorus in the receiving waters by 100 times, from a baseline of 5 µ/l to a post-discharge level of 500 µ/l, thereby violating the Tier 2 antidegradation standard; (2) This same increase in phosphorus in the receiving waters would violate the Tier 1 standard prohibiting impairment of the designated high-aquatic life use, as set out in all of the scientific research submitted into the record by Protestants and undisputed by the ED or the Applicant; (3) If approved, the discharge would lower water quality by more than a *de minimis* amount by lowering dissolved oxygen in the receiving waters from a baseline range of 6 to 6.7 mg/l to a post-discharge level of 5 mg/l, thereby violating the Tier 2 antidegradation standard.

The PFD makes no effort to explain how such enormous increases in critical pollutants constitute a no more than a “trifling” lowering of water quality. In the pursuit of the Holy Grail of clean water, such increases are “merely a flesh wound.”

As a matter of state and federal law and policy the Draft Permit must be denied as it would, among other problems, fail to protect the existing uses of the receiving waters and lower water quality by more than a *de minimis* amount.

Respectfully Submitted,

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CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing document has been forwarded via electronic mail to counsel for the parties as indicated below on this 14th day of June, 2022.

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