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COMMISSION
ON ENVIRONMENTAL
QUALITY

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CHIEF CLERKS OFFICE

SOAH Docket No. 582-08-0202
TCEQ Docket No. 2007-1426-MWD

IN THE MATTER OF	§	**BEFORE THE STATE OFFICE**
APPLICATION OF HAYS COUNTY	§	
WATER CONTROL AND	§	**OF**
IMPROVEMENT DISTRICT	§	
NO. 1 FOR	§	
PERMIT NO. WQ 0014293001	§	**ADMINISTRATIVE HEARINGS**

PROTESTANT LANDOWNERS' REPLY TO EXCEPTIONS TO PROPOSAL FOR DECISION AND PROPOSED FINDINGS OF FACT AND CONCLUSIONS OF LAW

TO THE COMMISSIONERS OF THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY:

NOW COMES Protestant Landowners Alston and Barbara Boyd and Joel and Kim Stearns and submits this Reply to Exceptions to the Proposal for Decision and Proposed Findings of Fact and Conclusions of Law.

Protestant Landowners rely on and incorporate the Exceptions to Proposal for Decision and Proposed Findings of Fact and Conclusions of Law previously filed and those filed by the other protesting parties in this case. In this brief Protestant Landowners respond to some of the points raised in the Executive Director ("ED") and Applicant's Exceptions to Proposal for Decision. There are other exceptions asserted by the ED and Applicant not responded to in this brief but still objected to by Landowners.

A. Reply to ED and Applicant's Exceptions to Findings "Relating to the Use of Assimilative Capacity in the Analysis of de minimis."

The ED and the Applicant urge the Commission to reject the ALJ's findings regarding the assimilative capacity reductions in Bear Creek caused by the discharge.

(Proposed Findings 48, 49, 50, 55 and 56).[1] The ED and the Applicant claim that assimilative capacity loss should not be used for pollutants that have narrative criteria and not numeric criteria. ED's brief at page 4 and 5. The ED and Applicant cite no law or authority that prohibits looking at the percent change in assimilative capacity to determine the impacts from a discharge from nutrients. This method is in complete accordance with all relevant rules and statutes including the Clean Water Act, the EPA Implementing Regulations, the Texas antidegradation policy and the TCEQ Implementation Guidelines.

The TCEQ Implementation Guidelines suggest parameters to use in making the initial determination whether there is a potential for degradation to occur from a discharge, the first step before the full Tier II antidegradation analysis. "Proposed increases in loading are initially screened to determine whether sufficient potential for degradation exists to require further analysis...Increases in loading that use less than 10% of the existing assimilative capacity of the water body at the edge of the mixing zone are usually not considered to constitute potential degradation as long as the aquatic ecosystem in the area is not unusually sensitive to the pollutant of concern." The Guidelines then provide an equation that "*may* be used...[f]or constituents that have numerical criteria in the water quality standards." ED-10, page 32 (emphasis added). Nowhere in the Guidelines is it stated that the percent change of assimilative capacity is "applicable only to constituents with numeric criteria" as the ED asserts. ED Exceptions at page 4. The method used by

[1] Protestant Landowners excepted to Findings 55 and 56 in its Exceptions to Proposed Findings of Fact, because these findings relate to the assimilative capacity under the terms of the settlement agreement for which evidence was not presented in the hearing. Landowner's believe Findings 55 and 56 should be deleted, because there was no evidence presented on the impacts of the discharge under the settlement, not because the method of analyzing assimilative capacity for nutrients is not appropriate.

the Landowners' expert, Dr. Lial Tischler, and relied on by the ALJs is to compare the predicted nutrient concentrations in the creek with the discharge as a percentage of the available nutrient assimilative capacity of the creek without the discharge.

In defending their findings the ALJ cited to a Sixth Circuit Court of Appeals case that describes the importance of assimilative capacity in evaluating degradation as an "aid in analyzing the evidence." PFD at 13. The case points out that assimilative capacity is integral to antidegradation policy. "The EPA has previously indicated that the central purpose of the federal Tier II antidegradation regulations is to protect a water body's assimilative capacity, . . . a measurement of the amount by which its quality exceeds levels necessary to support fish, wildlife, and recreation.... [t]he EPA's prior guidance statements indicate that more than a ten percent reduction in assimilative capacity would be significant, and thus would not be *de minimis." Kentucky Waterways v. Johnson*, 2008 U.S. App., LEXIS 18802. The case does not distinguish or even mention differentiating between the criteria adopted for different pollutants by Kentucky, it just talks about the importance of protecting a water body's assimilative capacity.

In the holding of the *Kentucky Waterways* case, written as a concurring opinion, the Court found that that they could not approve the EPA's approval of a Kentucky regulation exempting certain categories of discharges from antidegradation review. "Because 131.12 [the Federal Rule implementing the antidegradation policy] protects assimilative capacity, we necessarily focus on how much assimilative capacity would be lost...[and] without the EPA first discussing its assimilative capacity loss estimates and explaining why it deems them insignificant" the Court could not evaluate the declaration of significant or insignificant degradation. *Kentucky Waterways* at 22. The court wanted

to see exactly what the EPA was estimating the changes in assimilative capacity were rather than relying merely on EPA's characterization of the changes as significant or insignificant.

The *Kentucky Waterways* rationale is very similar scenario to the situation presented in this contested case hearing, because the ALJs were asked by the ED and the Applicant to rely on subjective opinions and adjectives to describe the expected level of degradation that would occur due to the proposed discharge. Instead the ALJ's determined that the objective and quantitative analysis, presented by Dr. Tischler, using predicted changes in nutrient concentrations to assess the reduction in assimilative capacity is the more reliable evidence in this case for evaluating water quality degradation.

Applicant's position is that the only "usable standard" for nutrients is the "excessive vegetation standard," and that they provided sufficient evidence of meeting this standard through their expert's statements of opinion. Applicant's brief at page 1-2. Applicant's expert, James Machin, stated repeatedly that his opinion was not based on any quantitative analysis and that the *de minimis* requirement as regarding nutrients is a subjective determination only. Hearing Testimony Volume 2, page 252 line 1-7; page 255 line 7-14; Volume 3, page 14 line 11-13; page 19 line 12-25, page 20 line 1. Mr. Machin's subjective opinion on this issue carried little weight with the ALJ's because he also testified that he relied only on his own experience for his opinion, this is the only time he has testified as to Tier II antidegradation analysis, and in his engineering work this kind of analysis doesn't "come up very often, especially for nutrients." Hearing Transcript, Vol 3, page 126 lines 1-23.

The ED's antidegradation determination was also not reliable and properly rejected by the ALJs. The ED insists that for this discharge proposal whether the Tier II antidegradation standard is met for nutrients can be determined using the only general narrative criteria for nutrients: "There are currently no numerical nutrient criteria of the Texas Surface Water Quality Standards for waters of the state. Degradation is therefore determined according to 30 TAC 307.4(e) General Criteria." Landowner's Exhibit 13, ED's Response to Davis Family Interrogatories; Hearing Transcript Testimony of Lili Murphy, Vol 5, page 175 line 1-8. The 307.4(e) criteria state that nutrients from discharges shall not cause excessive growth of aquatic vegetation which impairs existing, attainable, or designated uses. The Tier II antidegradation policy, however, does not look to protection of uses, but instead whether the existing water quality will be degraded by the discharge. "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). Degradation to the extent where an existing use may be impaired is the analysis of the General Criteria and Tier I antidegradation. 30 TAC 307.4(e), 307.5(b)(1). Tier II antidegradation looks specifically to the precise change in water quality that will occur from the discharge, which is the analysis the Dr. Tischler presented to the ALJs.

The ED antidegradation review is also not reliable because the TCEQ Standards Reviewer, Ms. Lili Murphy, did not review for the phosphorous effluent limit that is in the draft permit, .15 mg/L calculated as a median. Instead Ms. Murphy's antidegradation review was based on a .1 mg/L daily average. Hearing Transcript Vol 2, page 190 line 25, page 191 line 1. This is not the effluent limit required by the draft permit and thus her

opinion cannot serve as evidence that the Tier II antidegradation policy is met by this draft permit.

Findings 48, 49, and 50 are reliable and accurate and should be adopted by the Commission.

B. Reply to ED's "Exceptions Relating to the Use of Trophic Status Changes in Capacity in the analysis of *de minimis*"

The ED excepts to the ALJ's findings regarding basic trophic categories for streams and classification of the receiving stream, Bear Creek, with the proposed discharge's resulting nutrient concentrations within the trophic categories. The ED's Response leaves the impression that Dr. Tischler himself invented trophic classifications for categorizing water quality. Rather, Dr. Tischler's information is sourced in the Environmental Protection Agency's published recommended boundaries for trophic classification of streams. Landowner's Exhibit 8, "Nutrient Conditions in Selected Streams of the Edwards Plateau of Central Texas; Relation to Biological Conditions and Implications for Nutrient Criteria Development" Jeff Mabe, United States Geological Survey, citing Environmental Protection Agency recommended trophic boundaries and classifying central Texas streams that receive wastewater discharge within the recommended trophic boundaries.

Because trophic classifications are commonly known and used the ED's own expert, Lili Murphy, easily explained in the hearing that trophic status is "a measure of productivity. And oligotrophic is the least productive, and eutrophic is the most productive as far as plant life." Hearing Transcript Vol 5, page 206 line 16-18.

The trophic classifications provide an objective standard against which to measure the degradation of water quality due to this proposed discharge. In this case, the ALJs found Dr. Tischler's explanation and method to be reliable and persuasive in analyzing the impacts from this discharge for potential degradation. Findings 44, 45 and 51 are accurate and should be adopted by the Commission.

C. Reply to ED's Exception to Finding of Fact 41: "An increased concentration of a limiting nutrient in a stream will increase the growth of algae; the growth of algae will lower DO levels in a stream."

This finding is completely accurate and supported by ample evidence in the record, from both the Executive Director itself and the other expert witnesses in the case: "Q: Do the nutrients in wastewater always cause an increase in algal growth in the receiving water? A: I would assume that initially, some growth would occur." ED 8, Prefiled Testimony of Lili Murphy, page 15 line 9-11. "When a surface water body is nutrient limited, any addition of nutrients (TP and TN) will result in aquatic plant growth that will use all of the added nutrients." Landowners' Exhibit 1, Prefiled Testimony of Dr. Lial Tischler, page10 line 20-22. This finding is supported by the evidence and should be adopted by the Commission.

D. Reply to Applicant's briefing on Notice

The ALJ's point out to the Commission that a determination will have to made whether adopting terms of the settlement agreement into the draft permit will constitute a major amendment under 30 TAC 305.62. Incorporation of the settlement agreement terms into the permit will result in operation of an irrigation disposal system on 201 acres of land that was not described in the notice for this permit. Operation of an effluent irrigation disposal system may be a "material change in the pattern or place of discharge"

and thus not a minor amendment. 30 TAC 305.62(c)(2). Because at the time of notice for this permit only direct discharge was identified as the disposal method the landowners adjacent to the proposed irrigation areas were not identified or notified. The Commission should seriously consider and determine whether a major amendment is required if the settlement provisions are incorporated as permit terms.

The other notice issue pointed to by the ALJ's is whether the reliance on nutrient removal in Pond 6B requires classification of this wet pond as a wastewater treatment unit. PFD at 29. Applicant's expert testified as to the necessity for Pond 6B for nutrient removal sufficient to limit downstream impacts and stated he would have to revise his opinion of the discharge's impacts if Pond 6B were not being used. Hearing Transcript Vol. 2, page 260 lines 8-12; Applicant's Exhibit 7, prefiled testimony of James Machin, page 10 line 1-18. Applicant's expert also provided a paper on the uptake capabilities of a wet pond like Pond 6B as evidence supporting his opinion that the pond will efficiently remove nutrients from the discharge. Applicant's Exhibits 14 and 15. Applicant's experts modeled impacts to Bear Creek with the discharge point above and below Pond 6B and found that the impacts to dissolved oxygen were too severe if the discharge were below the pond. Landowner's Exhibit 72. Although it was not initially identified in the notice as a treatment unit evidence from this hearing indicates that Pond 6B should be identified as a wastewater treatment unit, and that residents within the development have come to rely on this pond as a recreational amenity. Public notice that this pond is being used to remove nutrients from the wastewater effluent would inform the public's use of the pond.

E. Adoption of the Settlement Agreement Terms Into the Proposed Permit

In its Exceptions to the ALJ's Proposal for Decision the Office of Public Interest Counsel points out that the settlement terms, as drafted in the settlement agreement, are not enforceable as permit terms. Protestant Landowners support OPIC's suggested changes to the settlement terms to make them enforceable and final terms, except as to the discharge conditions (see below). Protestant Landowners also support OPIC's recommendation to require the wastewater treatment to .1 mg/L phosphorous and 6 mg/L total nitrogen for all wastewater regardless of the disposal method planned to be used.

Adoption of the permit terms as enforceable parameters that will avoid degradation of Bear Creek by more than a *de minimis* amount must include adopting 350,000 gallons per day as the Final Phase maximum discharge allowed; and limiting discharge to conditions where Bear Creek is flowing at a rate of 14 cubic feet per second measured at the USGS gauging station. Without limiting the discharge conditions to times when Bear Creek is flowing 14 cfs or greater the proposed discharge will cause greater than *de minimis* degradation to Bear Creek and violate the antidegradation policy.

PRAYER

For the reasons described above and presented in its Exceptions to Proposal for Decision and Proposed Findings of Fact and Conclusions of Law, Protestant Landowners request that the Commission deny issuance of the draft permit or modify the permit to include the provisions of the draft settlement agreement in clear and enforceable terms and limit the discharge conditions to the minimum flow in Bear Creek of 14 cfs at the USGS gauging station, and order issuance of any applicable notices resulting from the changes to the draft permit.

Respectfully submitted,

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Certificate of Service

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I hereby certify that a true and correct copy of the Reply to Exceptions to Proposal for Decision and Proposed Findings of Fact and Conclusions of Law was served on the following counsel/parties of record by regular U.S. mail, facsimile, and/or hand-delivery on December 22, 2008.

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