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2008 SEP 15 10 55 AM '08
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September 15, 2008

**VIA FACSIMILE 512-239-3311 (w/out exhibits) AND
FEDERAL EXPRESS OVERNIGHT MAIL (original and 11 copies)**

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Re: P & L Dairy
TCEQ Docket No. 2008-0569-AGR

Dear Ms. Castañuela:

Enclosed for filing is one original and 11 copies of the Reply by the City of Waco to the Executive Director's Response to Hearing Requests in the above-entitled matter.

Very truly yours,

NAMAN HOWELL SMITH & LEE, L.L.P.

By:


Kerry L. Haliburton

KLH/kd
Enclosure

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TEXAS
COMMISSION
ON ENVIRONMENTAL
QUALITY
2008 SEP 16 AM 10:05
CHIEF CLERKS OFFICE

TCEQ DOCKET NO. 2008-0569-AGR

APPLICATION BY PETER HENRY
SCHOUTEN AND NOVA DARLENE
SCHOUTEN d/b/a P & L DAIRY
FOR MAJOR AMENDMENT TO
TPDES PERMIT NO. 0003675000

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BEFORE THE
TEXAS COMMISSION
ON ENVIRONMENTAL QUALITY

2008 SEP 16 AM 10:19
CHIEF CLERKS OFFICE

TEXAS
COMMISSION
ON ENVIRONMENTAL
QUALITY

**REPLY BY THE CITY OF WACO TO THE EXECUTIVE DIRECTOR'S
RESPONSE TO HEARING REQUEST**

TO THE HONORABLE MEMBERS OF THE
TEXAS COMMISSION ON ENVIRONMENTAL QUALITY:

The City of Waco ("City") files this reply to the Executive Director's response to request for a contested case hearing on the application of Peter Henry Schouten and Nova Darlene Schouten d/b/a P & L Dairy ("P & L Dairy"), for a major amendment of TPDES Permit No. WQ0003675000 and the draft permit that the Executive Director has issued to P & L Dairy based upon that application.

I. THE CITY OF WACO IS AN "AFFECTED PERSON"

The City is an "affected person" in this case. The geography of the waterways, the history and use of Lake Waco, and the City's water rights in the Lake make it hard to envision a stakeholder more affected by the permit at issue than the City of Waco. Under any applicable definition, and under every factor bearing on the definition, the City qualifies as an affected person and is entitled to a contested case hearing.

1. Background on North Bosque River Watershed

The North Bosque River to which P&L drains is an impaired water body. The North Bosque is categorized as an impaired water body because it contains excess nutrients, in particular, excess phosphorus. "The ED does not dispute there is an issue with nutrients in the North Bosque watershed."¹ Lake Waco is a sink for the River, and the manure, wastewater discharges and phosphorus pollutants from the River are deposited in the Lake. Therefore, the

¹ See ED's Response to Hearing Request, P. 5.

ED's position that the addition of nutrients in the watershed does not affect Lake Waco is simply untenable.²

It is undisputed that the City has vested property rights, duties, and economic interests in Lake Waco. Those interests are not minor or inconsequential; nor are they shared responsibilities. To the contrary, the City, to the exclusion of all other persons, holds the right to divert and use 78,970 acre-feet of water per year from Lake Waco for municipal use. Additionally, the City, unlike any other entity, is charged with the responsibility of supplying drinking water to approximately 160,000 citizens residing in proximity to the Lake.³ It supplies drinking water by the exercise of its water rights, and by thereafter treating the water to meet state and federal standards. It then delivers the treated drinking water to customers throughout the City and region. As the sole supplier of drinking water to approximately 160,000 citizens, the City has the duty to provide its customers with safe and palatable water.

The City has an investment of tens of millions of dollars in its public water supply system. Because of the pollutants in the North Bosque, the City spends over \$250,000 per year to attempt to reduce the offensive taste and odor in its drinking water. Every increase in the output of manure and wastewater upstream causes increased expenses in treatment of the water in the Lake. Moreover, the continuing *increase* in manure and wastewater discharges has taxed the City beyond its capability to alleviate the foul taste and odor caused by the decay of the algae overgrowth caused by the phosphorus discharges from CAFOs such as P&L Dairy. Because the City has reached its limits, the City is now planning for the installation of additional treatment systems that are costing it as much as \$50 million. Clearly, the City's unique and vital interest in and responsibilities relating to the water quality of Lake Waco is not "an interest common to members of the general public." That the River is impaired, that it dumps into Lake Waco, and that the City is compelled to mitigate, eliminate or avoid effects of any additional pollution to

² *City of Waco v. TNRCC*, 83 S.W. 3d 169 (Tex.-App.- Austin 2002, pet. denied).

³ See Affidavit of Richard B. Garrett, P.E., attached as Exhibit D to the City's Hearing Request, at 2.

Lake Waco establishes, as a matter of law, that it has a personal, justiciable interest in the matter affected by P & L Dairy's permit application. As such, the City is an affected person.

Even the Austin Court of Appeals has recognized conditions of the Lake and activities by dairies supporting the prospect that the City will be adversely affected by activities of the dairies. Specifically consider *City of Waco v. Texas Natural Resource Conservation Commission*, which is a case in which the court was called upon to consider issues relating to water quality in the North Bosque River watershed. 83 S.W.3d 169 (Tex. App. –Austin 2002, pet. denied). In that case, the court stated:

The water quality of Lake Waco, which is a “sink” for any dissolved pollutants in the Bosque River, has been affected. Numerous dairy operations are located northwest of Waco in Erath County in the Bosque River watershed. The dairies must seek confined animal feeding operation (CAFO) permits from the TNRCC because the agricultural waste from their operations, which becomes dissolved in runoff or is otherwise discharged, ultimately discharges into the river.

83 S.W.3d at 172. The court further stated:

During the 1980s, the dairy industry expanded greatly in the North Bosque River watershed. Erath County became the leading county in the state for milk production. This reflects a trend in the dairy industry away from small, geographically scattered dairies toward large-scale, clustered dairy operations. In early 2001, the TNRCC estimated that there were 41,000 milk cows concentrated along the Bosque River watershed. The waste produced by these concentrated operations has impaired the water quality of the adjacent stretches of the North Bosque River. The TNRCC has identified the primary source of the pollution to be phosphorus, which is a nutrient found in animal waste. The large amounts of phosphorus in the water have caused excessive growth of algae and other aquatic plants, which in turn potentially cause distaste and odor in drinking water and, under certain circumstances, contribute to the depletion of dissolved oxygen.

83 S.W.3d at 173. The cumulative effect of those cows, which is contributed to by P&L, clearly has the potential to impact Lake Waco. Without addressing each individual permit, the cumulative effects cannot be remedied.

P&L Dairy seeks to increase its herd size by 410 cows, which is a 70% increase in its current herd size. This will result in an *increase* of about 22 million pounds of wet manure per

year.⁴ In that way, the City of Waco is potentially affected and thereby has a justiciable interest in the TCEQ's consideration of a major permit amendment, such as P&L's.

2. Enactment of Major Sole Source Impairment Zone Constitutes Legislative Recognition That City Will Potentially Suffer Harm

The ED states that "the CCH process for one particular permit application is not the proper forum for addressing cumulative water quality issues in the North Bosque watershed." This position is inconsistent with applicable law.

Concern over water quality in the impaired River system is not limited to the Courts, and is not merely a matter of slight interest for the City. In fact, the Texas Legislature recently passed new laws evidencing a legislative recognition of the heightened concern associated with dairy activity in the Lake Waco watershed.

In 2001, the Texas Legislature enacted a statute written to protect the Lake Waco Watershed from dairy activity, creating a major sole source impairment zone (hereinafter "MSSIZ").⁵

The legislation provides that a "major sole source impairment zone" means a watershed that contains a reservoir:

- (1) that is used by a municipality as a sole source of drinking water supply for a population, inside and outside of its municipal boundaries, of more than 140,000; and
- (2) at least half of the water flowing into which is from a source that, on the effective date of this subchapter, is on the list of impaired state waters adopted by the commission as required by 33 U.S.C. Section 1313(d), as amended:
 - (A) at least in part because of concerns regarding pathogens and phosphorus; and
 - (B) for which the commission, at some time, has prepared and submitted a total maximum daily load standard.

⁴ City of Waco Public Comments (Nov. 9, 2007), pg. 2 (each cow produces about 150 pounds of wet manure per day). Attached hereto as Exhibit A.

⁵ See Subchapter L of Chapter 26 of the Water Code, Sections 26.501 to 26.504.

The North Bosque River Watershed (sometimes referred to herein as “the Lake Waco Watershed”), comes within that definition. Therefore, that watershed constitutes and falls within the definition of a MSSIZ. To wit, Lake Waco is used by the City of Waco as a sole source drinking water supply; the population served by the drinking water supply from Waco is approximately 160,000; and more than 1/2 of the water flowing into Lake Waco comes from the North Bosque River, which, as set out above, is on the list of impaired waterways designated as impaired for phosphorus. So, both Lake Waco and the North Bosque River are within a MSSIZ. In fact, Lake Waco is the *only* reservoir in Texas which triggers the additional dairy CAFO permitting protections and requirements applicable in a MSSIZ.⁶

There can be no doubt that Lake Waco was the specific reservoir that the legislature intended to protect. They acknowledged as much after passing House Bill 2912, which enacted Subchapter L.⁷

The very purpose and effect of the MSSIZ is to recognize those areas and waterways which are particularly vulnerable to degradation from dairy activities. One legislator who was active in the passage of the house Bill enacting the MSSIZ provisions recently affirmed that fact in a letter to the Commissioners of the TCEQ.⁸

One of the protections is the requirement for individual permitting. That requirement presents a substantial departure from practices in effect before the legislation was enacted. Before the MSSIZ legislation, a general permit for dairy expansion was allowed. With the MSSIZ legislation, the TCEQ may not issue a general permit to P&L Dairy or to any dairy CAFO within the MSSIZ. Both Section 26.503(a) and Section 26.503(d), prohibit the issuance of a general permit to a CAFO located in a MSSIZ. The legislature, in clear and precise language, required

⁶ 27 Tex. Reg. 6666

⁷ See House Committee on Environmental Regulation Interim Report 2002 excerpts attached as Exhibit B. On page 4.3, the Committee notes that HB 2912 “established a regulatory approach for dealing with runoff and managing waste from dairy operations in the Lake Waco watershed.”

⁸ See letter from Representative Jim Dunnam, attached as Exhibit C.

that all permits in the North Bosque River watershed be processed as individual permit applications. Accordingly, the TCEQ is prohibited from issuing a general permit to P&L.⁹

This change is significant because an “individual permit” application provides for public input and the opportunity for a contested case hearing. An integral part of the individual permitting process is notice and opportunity for affected persons to be heard. In contrast, consideration of a general permit did not provide for public input or the opportunity for a hearing. Without a doubt, this is one of the reasons that the City of Waco along with the Texas Association of Dairymen, Texas Farm Bureau, and many other interested parties joined together in endorsing passage of the bill.¹⁰ The Texas Association of Dairymen even commented that the bill was the subject of a “delicate compromise” between affected parties.¹¹

P & L Dairy is one of the closest permitted CAFOs to Lake Waco.¹² If the City is denied affected person status, then the TCEQ will have completely negated the effect of Subchapter L, rendering it meaningless. Further, the interested persons who endorsed HB 2912 will have been severely misled.

Inherent in that change is a heightened level of scrutiny and review of discharge permits. The clear rationale for that change was recognition of the need for additional protections from dairy operations for Waco’s drinking water supply. The effect of that rule is necessarily to subject dairies within those MSSIZs to a more stringent process relating to permits. In that way, the clear purpose and effect of the newly imposed permitting process involves a recognition of prior impacts and continued potential impacts from dairy CAFOs on Waco’s water supply. The legislation was enacted to mitigate those impacts to Lake Waco.

Again, these restrictions apply to all dairy CAFOs operating within the zone; no distance limit is placed within the zone, and no exemption for particular dairies was created based on the

⁹ *Id.*

¹⁰ See letter to Members of the Texas Legislature, attached as Exhibit D.

¹¹ See TNRCC Response to Public Comments for Two TMDLs for Phosphorus in the North Bosque River, attached as Exhibit E.

¹² See Map attached as Exhibit F.

distance of a particular dairy from Lake Waco. Instead, per the legislation, all dairy CAFOs within the MSSIZ are subject to the more stringent rules and restrictions. In that way, the Legislature clearly expressed concern about the continued potential impact from such waste generated and discharged within the watershed, no matter where generated within the watershed. P&L Dairy is within that legislatively-established zone.

The new subchapter to Chapter 26 of the Water Code was passed as part of the comprehensive “sunset” legislation enacted in 2001 which reauthorized the Commission’s existence. As a result of that process, the Commission adopted various rules to implement the new legislation. The Commission’s comments made in the context of proposing and adopting these rules underscore the importance of protecting the North Bosque River watershed and Lake Waco and underscore the context in which the MSSIZ legislation was enacted. Among the comments expressed by the Commission was the following:

The North Bosque River is currently the only area identified as a major sole-source impairment zone, and the [Texas State Soil and Water Conservation Board] requests notification of other areas that may be so designated in the future.¹³

These comments highlight the importance and effect of the legislation and its purpose in protecting the City’s water supply. That protection is neither superfluous nor provided in a vacuum. To the contrary, the additional protection to the Watershed was specifically sought and specifically provided *because* of dairy CAFO operations upstream from Lake Waco. That is apparent from the history of the legislation, the language of the legislation and the actual effect of the legislation. The need for additional protection is further evidenced by the Commission’s own comments.

The Commission is obligated to carry out the Legislature’s intent as set out by statute. The effect and purpose of the legislation here was to afford additional protection to reservoirs within a MSSIZ by providing an opportunity to those impacted to participate in contested case hearings. The ED’s cursory and dismissive consideration ignores and operates to thwart the

Legislative action establishing MSSIZs. If the holder of rights in the reservoir is not affected, then the City, elected legislators, and everyone who endorsed or voted for HB 2912 were misled.

3. ED Offers No Evidence to Support Decision

The ED's opinion that the City is not an affected person is not based on any evidence. However, OPIC acknowledged that the City is in fact an affected person.

In OPIC's response to the City's hearing request, it stated that (1) Waco should be deemed an affected person and (2) the matter should be referred for contested case hearing.¹⁴

4. ED's Flawed Consideration of Distance Between P&L Dairy and Lake Waco Provides No Basis to Deny City's Request

The ED acknowledges the evidence submitted by the City in support of its request for a contested case hearing. The City's evidence extensively and specifically identifies how the City will potentially be harmed by issuance of the permit. Yet, the ED makes the remarkable statement that "the distance from the P & L Dairy to the City of Waco and Lake Waco weigh heavily against Waco's claim it is an affected person . . ." He also states, "if there is a discharge from the facility, assimilation and dilution should occur long before the water reaches Lake Waco."¹⁵

There is no support, scientific or otherwise, for the ED's assertions. And, even if the ED believed what he was saying, the assertions are specifically refuted by the City's experts.¹⁶ The sole support for the ED's conclusion is a **map** – which shows nothing more than the respective location of the P&L Dairy and the Lake.¹⁷ This assertion by the ED ignores the overwhelming amount of evidence, much of which was created by the TCEQ itself.¹⁸

The manner in which the ED considered distance is entirely arbitrary and does not include the required assessment of likely impact. If, as the ED suggests, 82-miles is a magic

¹³ *Id.* at 6666.

¹⁴ See The Office of Public Interest Counsel's Response to Request for Hearing, attached as Exhibit G.

¹⁵ Executive Director's Response to Hearing Request (Jan. 4, 2008), pg. 4 & 5.

¹⁶ See Exhibits A and D to Waco's Request for Contested Case Hearing.

¹⁷ See ED's Response at 5.

¹⁸ See Exhibit E.

distance beyond which discharges cannot make their way to the Lake, then none of the dairies upstream from P&L Dairy could possibly have an impact on Lake Waco. If the ED's position is adopted, then the Legislature, through the enactment of MSSIZ, passed legislation that is meaningless. Again, most of the dairies in the watershed are more than 82 miles from Lake Waco but still within the MSSIZ¹⁹ – that is a conclusion that neither the ED, nor the Commission, is authorized to draw. If the strict distance approach employed by the ED is adopted, then the ED is effectively allowed to arbitrarily draw circles around facilities and exclude from participation in the administrative process any person outside that circle, regardless of the effects imposed upon those people.

5. Evidence Establishes As a Matter of Law That City is Affected Person

The evidence submitted by the City of Waco in support of its request for a contested case hearing establishes, as a matter of law that the City of Waco is an “affected person” entitled to a contested case hearing. As set out above, there are substantial facts and circumstances which establish the City is uniquely and substantially affected by the requested major expansion by P&L Dairy.

The City supported its request for a contested case hearing with affidavits, scientific reports, EPA memos and prior determinations by the TCEQ itself.²⁰ Also included among the items to support its request for hearing were sworn affidavits of two Registered Professional

¹⁹ See Exhibit F.

²⁰ Included among the items submitted by the City is a study entitled “Existing Nutrient Sources and Contributions to the Bosque River Watershed” as conducted by Texas Institute for Applied Environmental Research and completed in September 1999. See Exhibit 2 of Wiland Affidavit attached to Waco's Request for Contested Case Hearing. That study confirms the following:

- The largest export coefficients (representing the amount of nonpoint source loading associated with a given land use) for phosphorus are associated with dairy waste application fields;
- Although only comprising approximately two percent (2%) of the total watershed area, dairy waste application fields were associated with 35% of the phosphorus loadings to the watershed, even when discharges from municipal waste water treatment plants were considered;
- Most dairy waste application fields in the watershed are found in the upper portion of the North Bosque River subwatershed.

Engineers.²¹ Those Engineers each state under oath that P&L's application, if granted, would adversely affect Waco's water supply.

The affidavits of Bruce L. Wiland, P.E. and Richard B. Garrett, P.E. establish that the City is affected by pollutants and runoff from P&L Dairy. These engineers cite scientific proof to support their opinions. For example, Mr. Wiland states in Paragraph 9 of his affidavit that:

The distance of P&L Dairy from Lake Waco does not eliminate these adverse effects because the primary mechanism for transport of these pollutants to Lake Waco is the very heavy rainstorms that occur in the North Bosque River watershed, and that wash the phosphorus and bacteria off the fields on which dairy waste and wastewater are applied, and that can transport these pollutants to Lake Waco in anywhere from a matter of hours to a few days.²²

In his affidavit, Mr. Wiland provides evidence of the potential effect on Lake Waco of runoff from P&L. Citing the Comprehensive Lake Waco Study prepared by Dr. Kenneth J. Wagner, Mr. Wiland states:

As described in Dr. Wagner's study, the phosphorus-laden runoff from the [land management units] and third-party fields, to which this permit would allow P & L Dairy's wastewater and manure to be applied in excess of agronomic need, would reach Lake Waco and the City's water supply during recurring periods of heavy rainfall before significant attenuation occurs to the nutrient loadings contributed by P&L. This problem is compounded by the fact that the draft permit prepared for P&L Dairy allows P&L to apply its wastewater to saturated fields, from which it naturally runs off into the North Bosque River, during rain events that exceed the capacity of its [retention control structures].²³

This is specific evidence of the potential adverse effects on Lake Waco of discharges from P&L Dairy. To qualify as an affected person, a party seeking a contested case hearing need not show that it will ultimately prevail on the merits. Rather, the party seeking a hearing need only show that it will potentially suffer harm or have a justiciable interest that will be affected.

²¹ Mr. Wiland's Affidavit was signed in April 2008, and is attached to Waco's hearing request as Exhibit A. Mr. Garrett's affidavit was completed on April 2008, and is attached to Waco's hearing request as Exhibit D.

²² City of Waco Request for Contested Case Hearing, Exhibit A, Affidavit of Bruce L. Wiland, P.E, Aff. pg. 4.

²³ *Id* at 4-5.

Grissom, 17 S.W.3d at 797. The facts in this case operate to make that showing as a matter of law.

6. City Is An Affected Person and Meets All Other Criteria For A Contested Case Hearing; So Hearing Request Should Be Granted

Aside from the considerable evidence provided by the City to support its request for a contested case hearing, the ED does not dispute that the City's request substantially complies with the requirements of 30 T.A.C. § 55.201.²⁴ Since the City is an affected person and has otherwise met all other criteria required to obtain a contested case hearing, the Commission should grant the City a contested case hearing.

II. DISPUTED, RELEVANT, AND MATERIAL ISSUES OF FACT.

The City agrees with the Executive Director that the fact issues that he has numbered 1 - 4 in his Response to Hearing Request are disputed, relevant, and material issues of fact that were raised during the comment period and not withdrawn, and that they should be referred to SOAH for evidentiary hearing. This agreement with the Executive Director on these four issues is based on the City's assumption that all of the subsidiary issues encompassed in the corresponding "factual bases of dispute" that the City identified in describing its disputes with the Executive Director's Responses to Comments will be encompassed by referral of these four issues.

The City disagrees with the Executive Director's evaluations and recommendations regarding non-referral of other issues that the City specified in its Request for Contested Case Hearing. These additional disputed factual issues that should be referred to SOAH are listed below - numbered to begin with the number 5 (to pick up where the Executive Director leaves off) and also referring, in parenthesis, to the Executive Director's enumeration in his Response to Hearing Request and to the corresponding Response to Comment ("RTC") number.

5. (ED #8; RTC #7) Whether third party fields should be considered land management units.

²⁴ Executive Director's Response to Hearing Request, pg. 4.

The Executive Director has failed to respond to the factual dispute regarding how application of wastewater to third party fields would not be under the control of P & L Dairy when P & L is the one that controls the pumps needed to deliver the wastewater to third party fields. A fact issue exists as to whether a field receiving wastewater is controlled by the dairy.

6. (ED #10; RTC #11) Whether a stage/storage table should be required as part of the permit application.

This is an issue of fact. If it can be shown that the process for calculating the water balance does not meet the rule requirements, that issue is relevant and material to the decision on the application. The rules require that the control facility be designed to contain all manure, litter, and process wastewater including the runoff and direct precipitation from the design rainfall event. A factual issue exists as to whether the water balance and RCS can be properly sized without a stage/storage table. The City contends that to prepare an accurate water balance and to properly size the RCS, a stage/storage table must first be prepared.

7. (ED #11; RTC #12) Whether the applicant has included adequate information on settling ponds in the permit application.

A fact issue exists as to whether the settling ponds are designed to meet the claimed forty percent removal rate. The City contends that they are not. There is no evidence that forty percent is an attainable removal rate and there is no evidence that P & L Dairy has designed the settling basin to achieve this removal rate. These issues are relevant and material to the decision on the application.

8. (ED #12; RTC #17) Whether the Applicant has operational plans for the process of enlarging its RCSs.

A fact issue exists as to whether the method of construction will allow for all runoff to be contained. The City contends that there are not adequate controls during construction to contain all runoff. If it can be shown that P & L Dairy's proposed construction cannot be conducted without changing the assumptions that went into the water balance and NMP, the potential for

environmental harm during enlargement is significant and this is relevant and material to the decision on the application.

9. (ED #13; RTC #18) Whether the permit application includes adequate descriptions of structural controls.

The Executive Director's reply does not address the City's assertion that there is a failure to provide an adequate description of structural controls. The adequacy of the structural controls is an issue of fact and is relevant and material to the decision on the application.

10. (ED #14; RTC #21) Whether the RCS Management Plan is subject to public comment and ED review prior to the permit being issued.

The Executive Director's reply does not address the City's assertion that it is a necessary requirement to determine if the RCS has been properly sized. The rules require that an RCS management plan be implemented by the dairy operator and does not give an allowance for delay. A factual issue exists as to whether an RCS management plan that meets the requirements has been developed and whether it can be implemented prior to expansion of the RCSs. It is not clear whether the ED disputes the City's contention that an RCS management plan has not been prepared, but the ED does contend that an RCS management plan cannot be completed until the RCSs are expanded and modified. The City disputes this contention. The City contends that an RCS management plan can be prepared for the existing RCSs even if a new one must be developed after the modified RCSs are constructed. The proper sizing of the RCS is an issue of fact and is relevant and material to the decision on the application.

11. (ED #17; RTC #28) Whether the draft permit should require more than a single annual sample of wastewater and a single annual sample of manure from the RCS.

The fact that the current CAFO rules do not contain such requirements is no justification for refusal to obtain findings regarding the efficacy of such limited sampling as this permit requires. The rules are minimum requirements and do not preclude additional permit

requirements if they are shown to be warranted. Further, the City specifically makes the case that additional requirements are warranted because the practice of the dairies is to remove accumulated sludge by agitating the RCSs, not when the surface is calm. Also, moisture content of manure varies and a single annual sample cannot be representative. A factual issue exists as to whether the samples allowed by this permit will be “representative.”

12. (ED #18; RTC #29) Whether the draft permit potentially allows over 90% of the phosphorus generated by the facility to be land applied on third party fields in the North Bosque watershed.

The Executive Director’s reply does not respond to the City’s comment. The rules require that land application shall not cause or contribute to a violation of water quality standards. A factual issue exists as to whether application to third-party fields will contribute to a violation of the water quality standards. The ED states that there are no limits on the amount that dairies can apply to third-party fields and implies that the phosphorus is being properly managed. The City contends that application of over 90% of the phosphorus generated by this facility to third-party fields with less oversight than that afforded LMUs is not proper management of phosphorus and will contribute to a violation of the water quality standards. If it can be shown that nutrient runoff would not be reduced, this issue of fact is relevant and material to the decision on the application.

13. (ED #19; RTC #30) Whether the Applicant is legally required to remove 50% of the solid manure from the watershed.

Again, the Executive Director would have referral of this fact issue denied based solely on his reading of the Texas Water Code and Subchapter B. However, his response ignores the legal principle that the federal Clean Water Act, EPA regulations implementing it, and the federally approved TMDL “trumps” state law under supremacy doctrine. Moreover, the Executive Director’s response ignores the fact that Texas Water Code § 26.503(b)(2) and the implementing provision in Subchapter B merely provide the TCEQ with waste application *options* to pick from in the circumstances of individual CAFO permitting. When, as in this

instance, a dairy's use of in-watershed waste application would conflict with the TMDL and water quality attainment, that option should be precluded. The factual issue here is whether the water quality standards can be met if the Applicant does not remove 50% of the solid manure from the watershed. The City contends that the water quality standards cannot be met. This contention is borne out by the water quality modeling conducted on this watershed.

14. (ED #20; RTC #31) Whether land application on LMUS that exceed 200 ppm for phosphorus should be prohibited.

As the City has argued, the mere fact that the CAFO rules would allow such a practice by a CAFO in some locations in other instances does not mean that the Executive Director is free to be so lenient when it will conflict with the TMDL and interfere with attainment of the water quality standards for the River. The rules require that application of waste not exceed the agronomic need of the crop. The factual issue here is whether soil containing greater than 200 ppm P is in excess of the agronomic needs of the crop. The City contends that soil containing greater than 200 ppm P is in excess of the agronomic needs of the crop.

15. (ED #21; RTC #35) Whether the rules require the Applicant to submit records of crops and crop yields to be submitted to TCEQ.

This is an issue of fact. If it can be shown that the draft permit does not specifically require submittal of actual crop yields, as required, that issue is relevant and material to the decision on the application. The rules require that waste which is land applied be applied in accordance with an NMP. Allowable application rates in NMPs are based on the crop yields. The factual issue here is whether the TCEQ can determine the allowable application rates without the actual yield of harvested crops being reported to the TCEQ. The City contends that it cannot and therefore the crop yields must be reported to TCEQ.

16. (ED #22; RTC #37) Whether it should be required that the NMP address the full five years of the permit term rather than just the first year of the permit.

This is an issue of fact. The issue of whether P & L Dairy has sufficient land to remain

sustainable for the entire permit term is relevant and material to the decision on the application.

Issues of Law. Upon referral to SOAH of each of these fact issues, the Commission should clarify that the SOAH Judge should also hear and decide, in his/her PFD, all related issues of law as described in of the City's Request for a Contested Case Hearing and listed in the City's explanation of its "legal basis of dispute" in the City's Request.

III. DURATION OF THE CONTESTED CASE HEARING.

Given the number and complexity of the issues that must be considered at the contested case hearing on this application, the City suggests that the maximum expected duration of the hearing should be specified as 10 months from the preliminary hearing to the date the proposal for decision is issued.

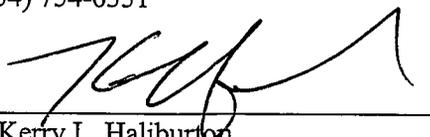
IV. PRAYER.

For all of the reasons explained herein, the City of Waco prays that the Commission will determine that it is an "affected person," grant its request for a contested case hearing on each of the disputed issues of fact identified herein, and refer the case to SOAH for a hearing and proposal for decision on each of the identified fact issues, any other fact issues that arise in the course of the hearing, and on all applicable issues of law and policy.

Respectfully submitted,

NAMAN, HOWELL, SMITH & LEE, L.L.P.
900 Washington, 7th Floor
P. O. Box 1470
Waco, Texas 76703-1470
(254) 755-4100
FAX (254) 754-6331

BY: _____


Kerry L. Haliburton
State Bar No. 08743400

ATTORNEYS FOR THE CITY OF WACO

CERTIFICATE OF SERVICE

I hereby certify that on this 15th day of September, 2008, true and correct copies of the foregoing Reply by the City of Waco to the Executive Director's Response to Hearing Requests have been served on the following persons in the manner indicated:

FOR THE APPLICANT:

Peter Henry Schouten, Sr.
Nova Darlene Schouten
P & L Dairy
3728 County Road 229
Hico, Texas 76457

Via Certified Mail

Amy Haschke
Enviro-Ag Engineering, Inc.
3404 Airway Boulevard
Amarillo, Texas 79118-1538

Via Certified Mail

FOR THE EXECUTIVE DIRECTOR:

Robert Brush, Staff Attorney
Texas Commission on Environmental Quality
Environmental Law Division, MC-173
12100 Park 35 Circle, Bld. A, 3rd Floor
Austin, Texas 78753

Via Federal Express Overnight Mail

James Moore
Texas Commission on Environmental Quality
Wastewater Permits Section, MC-150
P.O. Box 13087
Austin, Texas 78711-3087

Via First Class Mail

FOR OFFICE OF PUBLIC ASSISTANCE:

Bridget Bohac
Texas Commission on Environmental Quality
Office of Public Assistance MC-108
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Austin, Texas 78711-3087

Via First Class Mail

FOR THE CHIEF CLERK (Original and 11 copies)

LaDonna Castañuela
Texas Commission on Environmental Quality
Office of Chief Clerk MC-105
12100 Park 35 Circle
Austin, Texas 78753-1808

**Via Facsimile No. 512-239-3311 and
Via Federal Express Overnight Mail**

2008 SEP 16 AM 10:13
CHIEF CLERKS OFFICE

TEXAS
COMMISSION
ON ENVIRONMENTAL
QUALITY

FOR ALTERNATIVE DISPUTE RESOLUTION

Kyle Lucas
Texas Commission on Environmental Quality
Alternative Dispute Resolution, MC-222
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Austin, Texas 78711-3087

Via First Class Mail

OFFICE OF PUBLIC INTEREST COUNCIL

Blas J. Coy, Jr., Attorney
Texas Commission on Environmental Quality
Office of Public Interest, MC-103
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Kerry L. Haliburton

November 9, 2007

Via Hand Delivery

Ms. LaDonna Castañuela
Office of the Chief Clerk/MC-105
Texas Commission on Environmental Quality
12100 Park 35 Circle, Building F
Austin, Texas 78753

2007 NOV - 9 PM 12: 24
CHIEF CLERKS OFFICE
TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Re: Peter Henry Schouten, Sr. and Nova Darlene Schouten, dba P&L Dairy
Draft Permit for Major Amendment
TPDES Permit No. WQ0003675000
Public Comment

Dear Ms. Castañuela:

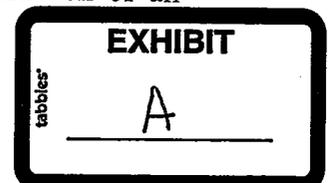
The City of Waco ("City"), the mailing address of which is P.O. Box 2570, Waco, Texas 76702-2570, phone number (254) 750-5640, fax number (254) 750-5880, hereby submits the following public comments on behalf of the City and as *parens patriae* on behalf of its citizens. Communications regarding these matters may be made to the City's retained legal counsel, Jackson Battle, Brown McCarroll, L.L.P., Suite 1400, 111 Congress Avenue, Austin, Texas 78701, phone number (512) 479-9757, fax number (512) 479-1101.

PUBLIC COMMENTS.

The TCEQ should not issue the proposed Permit No. 3675 to Peter Henry Schouten, Sr. and Nova Darlene Schouten (hereinafter referred to by the name under which they are doing business, "P&L Dairy"), because to do so with no conditions other than those in the draft permit and without compliance with the substantive and procedural requirements of state and federal law that are identified herein would be illegal, as well as damaging to the North Bosque River, Lake Waco, the City's drinking water supply, and the health and welfare of its citizens. The specific legal requirements that would be violated by the issuance of this permit follow.

- I. **The draft permit fails to comply with the TMDLs for phosphorus in the North Bosque River or otherwise ensure attainment of the water quality standards for phosphorus in the river.**
 1. **In the first place, P&L Dairy is a "new source" that has not demonstrated compliance with the specific requirements of 40 CFR § 122.4(i) as required by 30 TAC § 305.538.**

As a matter of law, P&L Dairy is a "new source" within the literal terms of the state and federal definitions in 40 CFR § 122.2 and 30 TAC § 305.2(23), because construction of all



sources at the site commenced after the first promulgation of the federal new source standards of performance for CAFOs on February 14, 1974. *See* 40 CFR § 412.15; 39 Fed. Reg. 5706 (February 14, 1974). The initial construction and operation of a dairy at the site commenced in 1993.

Beyond the matter of law that P&L Dairy has been a "new source" ever since it was constructed in 1993, the modifications of its two retention control structures ("RCSs") and the expansion of their total capacity, from 17.35 acre-feet to at least 27.24 acre-feet, creates a "new source" as the term is defined and explained in 40 CFR §§ 122.2, 122.29(a), (b) and 30 TAC §§ 305.2(24), 305.534(a), (b).

Also, the substantial expansion that P&L Dairy is seeking to have authorized under this permit is reason enough that the very specific water quality attainment demonstration required for a new source should be applied to it. If it is allowed to expand from 580 to 990 cows, its manure and wastewater production will, accordingly, increase more than 70%. Even if P&L Dairy were not otherwise a "new source," the 70% expansion that it is seeking authorization to undertake should make it a new source under the criteria for new source determination in 40 CFR § 122.29(b) and 30 TAC § 305.534(b), in that the resulting increase of the pollutant load is generated by processes that are "substantially independent" of existing sources – that is, the 410 additional cows that produce the additional manure and wastewater are sources that are quite independent of the existing 580 cows. Indeed, every one of these new cows is its own independent source of approximately 150 pounds of wet manure per day. By adding 410 new cows to the dairy, it will be increasing the amount of wet manure produced daily by over 30 tons (that is, by approximately 11,224 tons per year). Moreover, the expansions of the cow pens, milk barn, free stalls, and/or other animal confinement areas to accommodate the 410 additional cows constitute "new sources" as the term is defined and explained in 40 CFR §§ 122.2, 122.29(a), (b) and 30 TAC §§ 305.2(24), 305.534(a), (b).

All of these facts and circumstances, separately and collectively, add up to the need to classify P&L Dairy as a "new source" for purposes of holding it to the demonstration required by 40 CFR § 122.4(i):

- that pollutants load allocations have been performed for all pollutants causing violations of the state water quality standards;
- that there are sufficient remaining pollutant load allocations to allow for the discharge and still attain water quality standards; and
- that all existing dischargers into the segment are subject to compliance schedules designed to bring the segment into compliance with the applicable water quality standards.

The TCEQ may have made a global "load allocation" of sorts for soluble phosphorus loadings into Segments 1226 and 1255 of the North Bosque River when it accepted EPA's interpretation of its TMDLs for phosphorus in these two river segments. (*See* Table 1 in Mr. Cooke's 12/03/01 letter to Mr. Saitas, a copy of which is attached hereto as Attachment 1.)

There has been nothing even approaching, however, a demonstration that there are sufficient remaining pollutant load allocations of phosphorus discharged from CAFOs into these impaired segments to allow for the discharges from the P&L Dairy or any demonstration that the existing dischargers of phosphorus into the river are subject to compliance schedules. Most significantly to the present circumstance, as recognized by EPA in Footnote 2 to Table 1 in Mr. Cooke's 12/03/01 letter, the very general load allocation for phosphorus discharges performed by the TCEQ in the two TMDLs *did not include any allocation whatsoever for discharges from CAFO wastewater lagoons*. Also, no phosphorus load allocations were reserved for future CAFO expansions; all "Future Growth" was reserved for the municipal wastewater treatment plants discharging into the river.

2. **The draft permit issued to P&L Dairy fails to meet the most basic requirement of Clean Water Act § 301(b)(1)(C), as implemented in 40 CFR §§ 122.4(a), (d) and 122.44(d), that attainment of the state water quality standards be ensured.**

The several reasons for the failure of the draft permit to achieve the water quality standards for phosphorus are described below in subsections (a) – (d).

(a) The draft permit fails to require what was modeled in the TMDLs.

The key modeling assumptions for CAFOs in the TMDLs were as follows:

- watershed-wide waste production was limited to that from 40,450 dairy cows (the *actual* cow numbers in the mid-1990s);
- 50% of the solid manure (equating to 38% of the total manure and 89% of the solid collectible manure) from those 40,450 animals would be removed from the watershed;
- the amount of phosphorus in the animals' diet would be reduced to 0.4%;
- the phosphorus application rate would not exceed the "agronomic rate" on all fields in the watershed;
- the initial soil phosphorus concentrations in existing waste application fields were set at 200 ppm and, if the "agronomic" P application rate was intended to not exceed the crop removal rate, the soil P concentration in the existing fields would not climb above 200 ppm over time.
- the initial soil phosphorus concentrations in new waste application fields were set at 60 ppm and, if the "agronomic" P application rate was intended to not exceed the crop removal rate, the soil P concentration in any new field would not climb above 60 ppm over time.

The draft permit for P&L Dairy ignores all of these conditions that were modeled. Despite over 55,000 cattle currently permitted at CAFOs in the North Bosque River watershed, and approximately 9,600 more allowed at 48 unpermitted AFOs in the watershed (based on

TCEQ's January 2007 TMDL status report), the draft permit allows a 70% increase in the number of cows confined at the P&L Dairy without any offsetting decrease in the number of cows at CAFOs permitted elsewhere in the watershed. In fact, the CAFOs in the North Bosque River watershed are requesting that over 73,700 cows be authorized in issued permits and permit applications that are currently pending before the TCEQ. If all of these requested number of cows are authorized, this would result in an 82% increase over the number of cows modeled in the TMDL (not including AFOs).

This draft permit contains no limits whatsoever on the amount of phosphorus in the animal feed. As discussed later in these comments, it requires no removal of manure from the watershed.

The draft permit allows phosphorus to be applied (via wastewater application) at rates substantially beyond the "agronomic" phosphorus removal ("uptake") rate on all of the LMUs. This will cause the phosphorus concentrations in these fields to steadily increase (up to as high as 500 ppm), leading to increased phosphorus in the runoff from those fields.

Probably the most basic objection to this draft permit is that, by not requiring a NUP with a phosphorus *reduction* component until phosphorus concentrations in an LMU exceed 500 ppm [See Part VII.A.8(c)(4)], and by allowing phosphorus concentrations off-site in the watershed to build up to 200 ppm or higher, resulting in very substantial increases in phosphorus runoff from both on and off-site fields, this permit and any like it will work completely at cross purposes to any possible attainment of the TMDLs and water quality standards.

- (b) **The draft permit fails to implement in any way the TCEQ's commitment in its Implementation Plan for Phosphorus in the North Bosque River Watershed to facilitate establishment of commercial composting facilities in order to achieve the basic goal of the TMDLs "to remove from the North Bosque River watershed approximately 50% of the manure produced by dairies, and other facilities that manage large amounts of animal waste, within the watershed." (Implementation Plan, pp. 12-14)**

In order to be consistent with this commitment in the Implementation Plan (based on the modeled haul-out of 50% of all *solid* manure produced by the number of confined cows existing in the watershed in the mid-1990s), the permit would have to require P&L Dairy to haul out of the watershed over 89% of the *collectible* manure produced by its 990 cows.

Instead, this permit purports to attain the state water quality standards for phosphorus by relying on NMPs and CNMPs (both of which were described in the Implementation Plan as *additional, not substitute*, measures necessary for attainment of the TMDLs) and on application of manure to third-party fields (which works as a *disincentive* for a dairy CAFO to transport its waste to a compost facility or take it out of the watershed).

- (c) **By allowing all of the collectible manure from P&L Dairy's 990 dairy cows to be applied to third-party fields in the watershed, the Executive Director is drastically *increasing* the amount of phosphorus that will run off into the impaired river segments, not decreasing it.**

Under P&L Dairy's existing permit and the incorporated provisions of the 1999 version of the Subchapter B rules, a substantial amount of the collectible manure from its 580 cows would, as a practical matter, have to have gone to a composting facility or out of the watershed. Now, with the open invitation to spread the manure and a portion of the wastewater from 990 cows over third-party fields, this would result in manure and wastewater containing over 320 tons of phosphorus (as P₂O₅), over the course of the five-year term of this permit, being spread over approximately 867 acres of minimally-regulated third-party fields, at application rates exceeding the agronomic needs of the crops and severely elevating soil phosphorus concentrations. This does not even include the additional phosphorus application and land requirements that will be necessary to accommodate the additional wastewater that will eventually need to be exported during the term of this permit. The runoff of tons of phosphorus into the river from these 867 acres of waste disposal fields will increase each year and be extremely counterproductive to attainment of the water quality standards for phosphorus in the North Bosque River.

- (d) **The Executive Director has provided no technical justification for his assertions that the measures recited in this permit will attain the water quality standards for phosphorus and implement the TMDLs.**

In drafting this and other permits that have been published, the Executive Director effectively has thrown out the window all of the modeling, expertise, public participation, and other work invested over the course of the past ten years to prepare the phosphorus TMDLs and their Implementation Plan and instead resorted to little more than recitation of measures that, in virtually all instances, are little more than a paraphrase of the Subchapter B rules, which were never intended, nor previously represented by the TCEQ, to be enough to implement the TMDLs or attain water quality in the North Bosque River.

The Executive Director's conclusory statements in the Fact Sheet that the measures will ensure attainment of water quality standards and implement the TMDLs are supported by no modeling or any other technical analysis. No loading studies for the CAFO discharges into the River have been performed using these measures, nor has any load allocation been determined to remain for allocation to P&L Dairy. Indeed, all of the technically based requirements for formulation of a TMDL and an Implementation Plan to achieve water quality standards in an impaired receiving water that are contained in the Clean Water Act and in EPA's rules and guidance have been discarded in favor of the same kind of rough "let's try this and see what happens" approach that historically has brought water bodies like the North Bosque River to such sad conditions.

The third-party fields that will, inevitably, be relied on so heavily for waste disposal are not even identified. Neither the CNMP nor the Pollution Prevention Plan ("PPP") is part of the application. The TCEQ's rules do not require the Executive Director to have reviewed these

critical documents prior to permitting. Without any access to such information that is vital to assessment of the effects of the BMPs that are at the heart of this draft permit, there is no possible way for the Executive Director to assess the impact on water quality of the issuance of this permit – except to the extent that, as demonstrated herein, all logic indicates that applying the waste produced by 410 more cows to hundreds more acres of land in the North Bosque River watershed can only make matters much worse.

II. The Executive Director has failed to make any “BPJ” determination that the “BCT” standards for the control of pathogens have been met by the limitations imposed on the P&L Dairy by this permit.

The United States Court of Appeals for the Second Circuit held in *Waterkeeper Alliance, Inc. v. Environmental Protection Agency*, 399 F.3d 486, 518-19 (2d Cir. 2005), that the federal effluent limitations for CAFOs were deficient for failing to include “best conventional pollutant control technology” (“BCT”) based effluent limitations specifically designed to reduce the discharge of pathogens, including fecal coliform bacteria. Since EPA has not yet promulgated national effluent limitations for the pathogens discharged from CAFOs, the Clean Water Act commands the permit issuing authority, in this case the TCEQ, to employ its “best professional judgment” (“BPJ”) to set the required technology-based limitations on a case-by-case basis when each permit is issued. See Clean Water Act § 402(a)(1)(B); 40 CFR § 125.3(a)(2)(ii)(B).

In the case of the e-coli, fecal coliform, and other bacteria and pathogens that are part of the “conventional” pollutant load discharged from CAFOs, this requires case-by-case consideration of the BCT criteria specified in the Clean Water Act and the federal NPDES rules:

(d) In setting case-by-case limitations pursuant to § 125.3(c), the permit writer must consider the following factors:

* * *

(2) *For BCT requirements:* (i) The reasonableness of the relationship between the costs of attaining a reduction in effluent and the effluent reduction benefits derived;

(ii) The comparison of the cost and level of reduction of such pollutants from the discharge from publicly owned treatment works to the cost and level of reduction of such pollutants from a class or category of industrial sources;

(iii) The age of equipment and facilities involved;

(iv) The process employed;

(v) The engineering aspects of the application of various types of control techniques;

(vi) Process changes; and

(vii) Non-water quality environmental impact (including energy requirements).

40 CFR § 125.3(d)(2); Clean Water Act §§ 301(b)(2)(E), 304(b)(4)(B).

The TCEQ has considered none of these factors in evaluating any control technologies applied to P&L Dairy to control the bacteria and other pathogens that it discharges. Until it does so, and makes defensible record-based findings accordingly, no discharge permit can be issued to P&L Dairy.

III. The Executive Director fails to require any “third-party fields” that will be utilized by P&L Dairy for waste application to be identified in the application and fully regulated as LMUs.

Under both the federal and state CAFO rules, what makes land to which manure, litter, or wastewater is applied a “land management unit” (“LMU”) (TCEQ rules) or a “land application area” (federal rules) is *control* of the waste application measures. See the TCEQ definition of “LMU” at 30 TAC § 321.32(25) and the EPA definition of “land application area” at 40 CFR § 412.2(e).

The draft permit issued to P&L Dairy requires it to exert very substantial control over the waste application process at any third-party field on which it might choose to allow its manure or wastewater to be applied. Most significantly, Part VII.A.8(e)(5)(i) of the permit requires that there be a *written contract* between the permittee and the operator of any third-party field that includes the following requirements:

There must be a written contract between the permittee and the recipient that includes, but is not limited to, the following provisions:

- (A) All transferred manure, sludge, or wastewater shall be beneficially applied to third-party fields identified in the PPP in accordance with the applicable requirements in 30 TAC § 321.36 and § 321.40 at an agronomic rate based on soil test phosphorus. * * *
- (B) Manure or sludge must be incorporated on cultivated fields within forty-eight (48) hours after land application.
- (C) Land application rates shall not exceed the crop nitrogen requirement when soil phosphorus concentrations in zone 1 (0-6 inch incorporated; 0-2 or 2-6 inch not incorporated) depth is less than or equal to 50 ppm phosphorus.
- (D) Land application rates shall not exceed two times the phosphorus crop removal rate, not to exceed the crop nitrogen requirement, when soil phosphorus concentrations in zone 1 (0-6 inch incorporated; 0-2 or 2-6 inch not incorporated) depth is greater than 50 ppm phosphorus and less than or equal to 150 ppm phosphorus.
- (E) Land application rates shall not exceed one times the phosphorus crop removal rate, not to exceed the crop nitrogen requirement, when soil phosphorus concentrations in zone 1 (0-6 inch incorporated; 0-2 or 2-6 inch not

- incorporated) depth is greater than 150 ppm phosphorus and less than or equal to 200 ppm phosphorus.
- (F) Third-party fields which have had manure, sludge or wastewater applied during the preceding year must be sampled by a certified nutrient management specialist and the samples analyzed in accordance with 30 TAC § 321.36.
 - (G) A copy of the annual soil analyses shall be provided to the permittee within sixty (60) days of the date the samples were taken.
 - (H) Temporary storage of manure, sludge or wastewater is prohibited on third-party fields.

Not only does the permittee have to legally bind an operator of a third-party field to an enforceable contract that contains all such listed waste management provisions, the permit also makes sure that the permittee is motivated to enforce such contractual provisions by providing, in keeping with 30 TAC § 321.42(j), that “[t]he permittee will be subject to enforcement action for violations of the land application requirements on any third-party field under contract.” Draft Permit, Part VII.A.8(e)(5)(iii).

It is difficult to imagine what greater control of manure, sludge, and wastewater management practices on someone else’s waste application fields could be exerted by the permittee other than those contained in this permit, short of the permittee actually applying the waste itself, which is clearly not required to constitute “control.” Thus, these contractual requirements and legal responsibility on the part of the permittee all add up to a level of control which makes any third-party field that would be used under this permit an LMU, subject to all the requirements that the Subchapter B rules impose on LMUs, including:

- identification of the exact location and boundaries of the land application area in the submitted application and in the permit itself;
- coverage of all waste application to the field within the required NMPs and CNMPs;
- adherence to all requirements for vegetative buffers and filter strips, etc.;
- prohibition of nighttime application of manure or wastewater;
- weekly inspections of all facilities and equipment used for land application of manure and wastewater;
- compliance with all land application recordkeeping and reporting requirements in 40 CFR § 412.37 and 30 TAC § 321.46.

Imposition of the same extent of control measures on “third-party fields” as on LMUs is precisely what should occur. It defies all logic and sound environmental policy to create second-class waste application fields, and to allow manure and wastewater to be applied to such fields throughout the watershed without NMPs, NUPs, CNMPs, and the full panoply of protections

applicable to LMUs owned and operated by the permittees. To do otherwise, as this draft permit would allow, will simply, very counterproductively, expand enormously the land area in the watershed on which waste can be applied and from which pollutants will run off into the river, but without the accountability and management tools that existed even before Subchapter B was amended.

IV. This draft permit, and the process by which it was considered, violate the federal Clean Water Act, as interpreted in *Waterkeeper*, by not requiring all technical documents that demonstrate the methods by which the discharge of pollutants will be controlled at the CAFO to be submitted with the application, reviewed by the TCEQ, made available to the public, and incorporated into the permit.

In *Waterkeeper Alliance v. EPA*, 399 F.3d 486, 498-504 (2d Cir. 2005), the court held that the Clean Water Act required nutrient management plans (“NMPs”) to be (1) reviewed by the permitting authority before issuing a permit that authorizes land application discharges; (2) included in the NPDES permits; and (3) made available to the public both before any NPDES issues (in order that the public may meaningfully participate in the permitting process) and after (in order for the public to assist in enforcement).

All sections of the federal Clean Water Act cited by the Second Circuit as bases of its opinion apply to states as well as to EPA if the states are administering the NPDES permit program:

- § 402(b)(1)(A), 33 USC § 1342(b)(1)(A). The permitting authority must review NMPs to ensure compliance with effluent limitations.
- § 301(a) and (b), 33 USC § 1311(a) and (b). Effluent limitations must be included in NPDES permits.
- § 502(11), 33 USC § 1362(11). The terms of NMPs are “effluent limitations.”
- § 101(e), 33 USC § 1251(e). The public participation requirements apply to any state carrying out the NPDES program.
- § 402(b)(3), 33 USC § 1342(b)(3). Public hearings are required to be made available on permit applications.

Waterkeeper, 399 F.3d at 498-504.

All reasoning applied by the Second Circuit to hold that applicable sections of the Clean Water Act require NMPs to be reviewed by the permitting authority, incorporated into the permit, and made available to the public applies with the same force to the other site-specific technical plans and documented demonstrations of the methods by which the discharge of pollutants will be controlled at CAFOs permitted by the TCEQ, including:

- Comprehensive Nutrient Management Plans (“CNMPs”) (in the North Bosque River watershed);

- Nutrient Utilization Plans (“NUPs”);
- Pollution Prevention Plans (“PPPs”);
- Retention Control Structure (“RCS”) management plans (in the North Bosque River watershed);

Just as the NMPs required by the federal CAFO rule were found to be *effluent limitations* by the Second Circuit, so are each of these plans and documents required by Subchapter B “any restriction established by a State [or the Administrator] on quantities, rates, and concentrations of chemical, physical, biological, and other constituents which are discharged from point sources into navigable waters . . .” Clean Water Act § 502(11), 33 USC § 1362(11).

The Second Circuit’s recognition that “the only restrictions actually imposed on land application discharges are those restrictions imposed by the various terms of the nutrient management plan,” 399 F.3d at 502, is what caused the court to hold that the terms of the NMPs were effluent limitations that had to be reviewed by the permitting authority and included in any NPDES permit issue.

The State of Texas, however, goes further and imposes restrictions on land application discharges going beyond those in the federally required NMPs. The TCEQ protects against pollutant discharges from CAFOs by requiring, *inter alia*, NUPs (if LMUs are over 200 ppm phosphorous), CNMPs (if within the North Bosque River watershed), PPPs (which identify third-party fields), RCS management plans (in the North Bosque River watershed), additional RCS capacity (in the North Bosque River watershed), demonstration of no significant hydrologic connection between any RCS and water in the state, and additional buffer and filter strip requirements between LMUs and any water in the state.

By adopting these best management practice (“BMP”) restrictions on CAFO waste management in order to reduce the discharge of pollutants, the TCEQ has created additional effluent limitations that must be reviewed by the agency, incorporated into the permit, and made available to the public so that it may participate effectively in the permitting and enforcement processes.

According to Clean Water Act § 402(b)(1)(A), state permit programs must ensure compliance with all applicable requirements of Section 301 of the Act, 33 USC 1311, including meeting the BPT, BCT, and BAT limits that were in issue in *Waterkeeper* [§§ 301(b)(1)(A), 301(b)(2)(A), and 301(b)(2)(E)] and achieving “any more stringent limitation, including those necessary to meet water quality standards, . . . established pursuant to any State law or regulations.” Clean Water Act § 301(b)(1)(C), 33 USC § 1311(b)(1)(C).

Just as the Second Circuit concluded that EPA could not ensure compliance with an NMP without reviewing it and including it in the permit, TCEQ cannot ensure compliance with the CNMPs, PPPs, RCS capacity requirements and management plans, etc., without TCEQ’s reviewing them and including them in the TPDES permits that it issues. The exact same statutory interpretations and legislative policies apply to the Clean Water Act provisions

applicable to state permit programs as to those applicable to the federal permit program. The same is true of those Clean Water Act provisions that require public participation in the permitting process. Section 101(e) is expressly applicable to *state* implementation of *state standards*: "Public participation in the development, revision, and enforcement of any regulation, standard, effluent limitation, plan, or program established by the Administrator or any *State* under this chapter shall be provided for, encouraged, and assisted by the Administrator and the States." Clean Water Act § 101(e), 33 USC § 1251(e).

Once it is established that these documents must be included with any CAFO permit application and in any permit ultimately issued by the TCEQ, the Clean Water Act is explicit in its requirements that the state must make them available to the public for review prior to issuance of the permit and in order to obtain a public hearing on any contested aspect of them. Clean Water Act §§ 402(b)(3), 402(j), 33 USC §§ 1342(b)(3), 1342(j).

The draft permit for P&L Dairy, therefore, must be rescinded, and the technical review phase of the application reopened to require P&L Dairy to submit its current Pollution Prevention Plan, its CNMP, its RCS management plan, and any other technical documents missing from its application that would demonstrate how it intends to control the discharge of pollutants from the CAFO. Then the Executive Director must make all these documents available to the public, review them, and, if they are ultimately approved, incorporate them into the next draft permit, if any, for P&L Dairy.

V. The NMP and other parts of the permit application submitted by the P&L Dairy are replete with errors and deficiencies that make invalid the permit that incorporates the application.

These errors and deficiencies are described in the following 11 enumerations of "failures" in the application.

1. Failure to calculate realistic runoff amounts in the water balance.

The applicant is converting 24-hour Runoff Curve Numbers to 30-day Runoff Curve Numbers based on information in Texas Engineering Technical Note No. 210-18-TX3. Although the TCEQ has indicated that this Technical Note has been used by NRCS to predict average monthly runoff for use in the design of animal waste retention structures since 1990, this approach obviously has serious shortcomings and is not appropriate. This is demonstrated in the Water Balance Model provided in Tables 2.3a and 2.3b of the permit application. The water balance predicts that none (0.0 inches) of the rainfall that falls on the irrigation area will run off during seven of the months. Clearly, this is ridiculous and bears no semblance to reality. Does the TCEQ really believe that there will be no runoff from these fields during these seven months?

While the City acknowledges that the rainfall-runoff process involves many factors such as the initial abstraction and characteristics of the surface and that certain small rainfall events will not lead to any runoff, the point here is that, as clearly shown in the preceding water balance example, the use of 30-day curve numbers developed in Technical Note 210-18-TX3, are not appropriate for adjusting 1-day CN values in these small agricultural fields and production areas.

The adjustment process described in Texas Engineering Technical Note No. 210-18-TX3 was developed for a reservoir operation study. The reservoir operation study, as envisioned in this Technical Note, involved a much larger watershed area, probably on the order of thousands of acres, rather than the smaller watersheds of agricultural fields and production areas operated by CAFOs. These larger watersheds often contain many large depressions, small diversions, and other features (such as stock tanks) which reduce the runoff and were incorporated into the CN duration adjustment in the Technical Note. Even for these larger watersheds, the Technical Note has some reservations with using this adjustment procedure as shown on page 1-2 where it states "If this approach is used, however, the computed average annual runoff should be checked with gauged runoff from other areas of approximately the same size and located in similar climatic zones." The small agricultural fields and especially the production areas of CAFOs do not generally contain the large depressions and features which reduce runoff. In fact, 30 TAC § 321.40(e) and 30 TAC § 321.43(j)(5)(B) require CAFOs to minimize ponding or puddling. Because of this, the 30-day CN values used for CAFOs should be much higher than those used in Technical Note 210-18-TX3, and the current approach is useless in preparing a meaningful water balance. The City is not opposed to the concept of CN adjustments in the water balance when calculating runoff based on monthly rainfall values. However, the calculation of runoff needs to be based on more realistic CN adjustments rather than those from Figure 1 in Technical Note 210-18-TX3. Until more realistic CN adjustments can be made, the TCEQ should use the 1-day CN value for calculating monthly runoff from the production area.

2. Failure to provide a stage/storage table in order to properly calculate water balance.

A stage/storage table showing stage versus surface area and volume has not been provided in the permit application. This table is required in order to perform a water balance since the monthly evaporation from an RCS is based on the estimated surface area of the RCS which is a function of the monthly storage volume. The effective surface area for evaporation should be based on the average surface area during the month. The applicant has provided no information, such as a stage/storage table, to justify the effective surface area used in the water balance.

Even if the applicant has not constructed the enlarged RCS yet, a stage/storage table can and must be developed for the proposed structure. Specifications must be prepared showing what is planned for construction; otherwise, the contractor would not know how to construct it. The only way evaporation can be properly calculated is to use a stage/storage table based on the proposed structure. The purpose of as-built certifications is to provide assurances that the RCS has been constructed as designed and represented in the permit application, not as a justification for not providing the required information in the first place.

3. Failure to provide adequate information on settling ponds.

The applicant has indicated that settling ponds will remove 40% of the solids produced by the milking parlor based on estimates from the Midwest Plan Service Structures and Environment Handbook. The settling basins (weir notch or dewatering) described in this handbook have specific design requirements in order to achieve such removals. The applicant

has provided no information at all concerning the type, design, or maintenance requirements for the settling pond. Just putting a hole in the ground will not meet the design criteria and is unlikely to achieve the projected removal rates. With the current information in the application, there is no way to determine if these settling ponds are adequately designed to meet the 40% solids removal rate or maintain this rate over the course of the permit. With a removal rate this high and its associated impact on RCS sizing, the TCEQ must require the design for these settling ponds to be submitted so it can be determined if they meet the criteria associated with the projected removal rates.

4. Failure to use proper RCS sludge accumulation rate for process-generated wastewater.

The applicant has calculated the required sludge accumulation rate resulting from process-generated wastewater based on a rate of 0.0729 cubic feet of storage capacity per pound of total solids. The accumulation rates in Table 10-4 of the USDA-NRCS Agricultural Waste Management Field Handbook are clearly based on the solids being decomposed in an anaerobic lagoon properly designed for adequate treatment. If adequate treatment volume is not provided, the solids will not be decomposed at the assumed rate. The assumed sludge accumulation rate would be acceptable if the minimum treatment volume were being provided. However, the applicant has no intention of providing adequate treatment as no minimum treatment level has been provided. Although a minimum treatment level may not be required for dairies with less than 1000 cows under the permit-by-rule air authorization in Chapter 106 Subchapter F, it must be required if the 0.0729 value for calculating sludge accumulation is to be used. Otherwise, a larger value should be used to calculate the sludge accumulation rate. If annual measurement of the sludge accumulation were required in the permit, the City's concern with respect to this comment would not be as important, and the City would consider the issue to have been adequately addressed.

5. Failure to use proper sludge accumulation rate from open lot runoff.

The applicant has calculated the sludge accumulation volume resulting from runoff based on 25% of the runoff from the 25-yr 10-day rainfall event. Even though the TCEQ may have accepted this since 1999, there is *no* technical basis or historical data (site-specific or otherwise) to justify this value. There is not even a logical or justifiable reason for using only the 25-yr 10-day event to calculate the sludge accumulation from runoff. All runoff events that occur at the facility will cause some portion of the manure to enter the lagoon and lead to sludge accumulation. The TCEQ cannot allow some arbitrary number in the calculation of sludge accumulation without providing some data or technical basis for using it. If annual measurement of the sludge accumulation were required in the permit, the City's concern with respect to this comment would not be as important, and the City would consider the issue to have been adequately addressed.

6. Failure to certify current RCS capacity and adequate sludge accumulation capacity.

Although capacity certifications were submitted with the permit application, these were made in 2003, about four years ago, and did not include any information concerning the accumulated sludge. More recent information has not been provided in the application, and there is nothing in the draft permit requiring that these RCSs be re-certified with respect to the existing sludge volume. It is quite possible that these RCSs are currently non-compliant with the capacity requirements of the existing permit.

7. Failure to provide adequate liner certifications.

The liner certification provided for RCS #1 is inadequate. Although not to scale and is not close to resembling the shape shown in the provided capacity certification, the samples appear to have been taken in the embankments with none being taken in the bottom of the RCS. Samples should have been taken in both the bottom and the embankments.

The liner certification provided for RCS #2 is inadequate. Although no locations are shown, the samples are reported to have been taken in the bottom with none being taken in the embankment of the RCS. Samples should have been taken in both the bottom and the embankments. Based on the engineer's language ("appears to meet the requirements", "should be no significant leakage", "should meet the requirements"), he is not completely certain that this RCS meets the requirements or that there will be no leakage. This is an unacceptable certification. The engineer should be able to definitively state that the RCS meets requirements. If he cannot, the certification is useless.

The liner certification provided for settling pond is inadequate. The diagram provided indicates that the samples were taken from the bottom of the settling pond with none being taken in the embankment of the pond. Samples should have been taken in both the bottom and the embankments.

8. Failure to address issues related to the enlargement of RCSs.

The applicant and the draft permit indicate that the requirements of the 25-yr 10-day design rainfall event will be met by enlarging RCS #1 and RCS #2. This will require enlarging RCS #1 by 31% from 9.81 ac-ft to 12.85 ac-ft and enlarging RCS #2 by 91% from 7.54 ac-ft to 14.39 ac-ft. There has been no information provided as to how these RCSs will be enlarged. RCS #2 is of particular concern. It will be almost doubling in size, and there is a drainageway and LMU immediately adjacent to it. There does not appear to be a way to enlarge this RCS without encroaching upon the drainageway or LMU.

There have been no plans submitted on how the applicant intends to operate while the RCSs are being enlarged. It appears that process wastewater would need to be stored, and runoff from any rainfall event, however unlikely, would need to be anticipated and stored if necessary during certain periods of construction while this embankment is removed and the disturbed area of the liner re-established. The permit should specifically indicate that the TCEQ is *not* granting

approval to any construction activity that would allow process wastewater or contaminated runoff to flow into an RCS that is partially unlined even if only temporarily.

9. Failure to provide adequate description of structural controls.

The permit application does not provide an adequate description of structural controls, particularly the berms. The berms are an integral part of the facility necessary to prevent contaminated runoff from leaving the site. An inspector can observe whether berms are present or not and can judge the height and width, but the inspector does not generally have the expertise to determine whether the berms are adequate. The inspector certainly could not do this without making the necessary engineering calculations first, something that will not happen in the field. Therefore, some means must be given to the inspector to evaluate compliance. Additionally, if the operator is not given an adequate description of structural controls, the operator will not be able to determine their own compliance and how to make repairs if, for example, a berm deteriorates over time as a result of settling, some action of a careless worker, or runoff erosion. Simply pushing up a few inches of uncompacted dirt with a tractor blade is usually not adequate. The permit application and the draft permit should describe these berms in sufficient detail with respect to location, size, and construction so that TCEQ inspectors can determine if the facility is in compliance and the operator can make adequate repairs if necessary.

10. Failure to properly calculate agronomic rates.

The basic methodology being utilized in the NMP to calculate agronomic rates is flawed because the NMP fails to account for the nutrients available to plants in the root zone to satisfy the crop requirement. Instead, application of the annual crop requirement is allowed regardless of the actual soil nutrient content until the soil reaches a concentration of 200 ppm P. Even then, continued application of nutrients is allowed even though there is more than three times the amount of nutrients necessary for optimum growth.

As an analogy, the TCEQ more properly makes the agronomic rate calculations when determining agronomic rates for the application of biosolids. For biosolids permit applications, the TCEQ requires that the agronomic rate calculations take into account the nutrients in the soil by taking the crop requirement and subtracting the nutrients available in *both* the 0-6" and 6-24" soil depths for the most recent year. Only the amount of nutrients needed to satisfy the overall crop requirement for that year is allowed to be applied. If the amount of nutrients in the soil exceeds the crop requirement, no additional nutrients can be added during that year. The nutrients in biosolids are not fundamentally any different than the nutrients in dairy waste. There is no reason that the TCEQ should calculate the agronomic rate differently for CAFO permits. CAFO permits, including this one, should allow application of only that quantity of nutrients that will benefit optimum crop production (i.e., beneficial use), as required by the rules.

11. Failure of NMP to meet applicant's representation in permit application.

P&L Dairy has represented in the application (Application Section 6.2) that the dairy will be operated in a manner consistent with the TMDL. In item #1 and #2 of this section, the applicant indicates that it will implement a NUP that limits P application to crop requirement and incorporate a P reduction component on fields over 200 ppm P and that it will limit maximum P

level in soils to 200 ppm. Setting aside the fact that NRCS Code 590 will not allow application of P at the crop requirement rate for fields over 200 ppm (it must be limited to the crop removal rate), the applicant is planning in its very first year (based on its submitted NMP) to cause LMUs #3 and #4 to reach projected soil P levels of 240 ppm and 233 ppm, respectively. LMUs #3 and #4 both currently have soil P levels of 198 ppm. The applicant is planning to apply at the crop P requirement rate on both. Considering the crop yield, this will result in a net P increase of 42 ppm in LMU #3 and 35 ppm in LMU #4 after the first year. As demonstrated by the City in part VI.13 of these comments, all of the LMUs are projected to have soil P levels above 200 ppm after four years. If the applicant really intended to limit maximum P level in soils to 200 ppm as it has represented, it would be applying no waste to its LMUs by end of the term of the permit. Does the TCEQ really believe it is being protective of water quality when it will likely have a dairy that is applying 100% of its waste to minimally regulated third-party fields?

VI. Numerous provisions in the draft permit are so defective that the permit cannot attain the phosphorus TMDLs for the North Bosque River, the state water quality standards, and the requirements for CAFOs in Subchapter B.

These technical permit deficiencies are described in the following 17 enumerations of "failures" in the draft permit.

1. Failure to require an RCS Management Plan until after the permit is issued.

The permit requires an RCS Management Plan to be prepared and placed in the PPP after the permit is issued, but no review of this plan by the TCEQ is required before the permit is issued or even before it is implemented after the permit is issued. This does not allow for any comment by the public on its adequacy. The water balance and RCS Management Plan are an integral part to properly sizing the RCS. This is not a trivial exercise. There are multiple factors to be considered. The water balance must be prepared in conjunction with an associated RCS Management Plan or it is meaningless. The water balance and RCS Management Plan must consider not only monthly rainfall runoff, but also the storage requirements and supplemental irrigation necessary to enable supplying sufficient water to the crops during the high water demand months of the summer. An RCS Management Plan should be required to be submitted before issuance of the permit.

Under the current draft permit, the only time the RCS Management Plan will be seen is when the inspectors see it on annual inspections. As a practical matter, there is not adequate time for inspectors in the field to properly evaluate the validity of such a plan. Additionally, it is unlikely that the TCEQ inspectors have the proper engineering background and expertise to make such an evaluation. If the TCEQ is intent on issuing the permit without reviewing an RCS Management Plan, the draft permit should require that the RCS Management Plan be submitted to the TCEQ permitting staff for review and approval.

2. Failure to adequately regulate settling ponds.

Permit Provision X.N indicates that the solids in the settling basin must be removed on a "regular and consistent basis." Since "regular and consistent" is a very subjective phrase and given the importance of removing solids to maintain the removal efficiency of the settling basin,

the removal requirements must be more specific in the permit. For example, the Midwest Plan Service Structures and Environment Handbook referred to by the applicant recommends removing solids after every major rainfall event or 3 to 4 times a year depending on the type of settling basin. Since the applicant is relying on removal efficiencies described in this handbook, it should be held to the associated maintenance standards described in this handbook.

3. Failure to require adequate monitoring of sludge accumulation.

The buildup of sludge is one of the most common causes of reduced capacity in an RCS. The draft permit does not require measurement of the sludge volume in the lagoons until three years after the date of permit issuance. In the case of this dairy, the sludge accumulation has not been measured in at least four years and probably longer. Once a problem is discovered, it can take over a year to get it corrected and re-certified, especially since the TCEQ is reluctant to levy fines for such obvious violations. This permit should require that the sludge accumulation be determined annually, especially since the lagoon accumulation rates have been improperly calculated as indicated in previous comments.

4. Failure to adequately define capacity certification requirements.

The required RCS capacity certification under provision VII.A.3(a)(2) is ambiguous. It is not clear whether it refers to total as-built capacity or available capacity above the sludge. The permit language should make it clear that all capacity certifications require certification of both total as-built capacity and the volume of sludge accumulation. The available capacity is the difference between these two numbers.

5. Failure to provide adequate liner design specifications in the permit.

30 TAC §321.38(g) requires the permit to identify the required design specifications for all RCSs including procedures and minimum requirements for liner and embankment testing. Further, 30 TAC §321.38(g)(3)(A) requires information on the "materials underlying and forming walls of the containment structure up to the wetted perimeter." While some of this information is provided in VII.A.3(f) of the permit, it is inadequate. Although the municipal solid waste rules in 30 TAC 330 do not apply to CAFOs, the permit should include information similar to that found in 330.339(c). Future liner certifications should meet a standard similar to other TCEQ programs.

The information provided to justify certification of liners at CAFOs in the past has been largely inadequate. Many previous certifications contained just a few samples with no information at all on the sample location. While design and construction standards of the past may have allowed such minimal information, the potential for significant water quality impacts today requires a significantly higher standard of practice. Although the permit does contain some procedures and requirements for liner and embankment construction (i.e., maximum lift depth and minimum Proctor density), it does not provide adequate procedures for testing. At a minimum, the TCEQ should 1) require the field density tests to be based on predetermined moisture-density compaction curves, Atterberg limits, and laboratory permeabilities of undisturbed field samples of the compacted soil liner, 2) define the frequency of testing (e.g., number of tests per specific area per lift) for both the bottom *and* sides, 3) require testing *during*

the construction of the liner (*not* after completion of the liner), and 4) require continuous on-site inspection during construction. If these additional requirements are not placed in the permit, the TCEQ should explain why each of the preceding items is not necessary and by what other method it will ensure the public that the RCSs have been adequately constructed to protect water quality.

There is no reason to believe that simply providing a certification from a Licensed Professional Engineer can substitute for review of the supporting information by the TCEQ. Time and time again, Professional Engineers have submitted sealed documents to the TCEQ that are in error. The TCEQ must be able to review the soils testing results to make an independent verification of the certification.

6. Failure to require certification of structural controls prior to or upon issuance of permit.

Permit Provision VII.A.10(b) requires a licensed Texas professional engineer to complete a site evaluation of the structural controls once every five years and certify a report of findings. This type of evaluation should occur prior to issuance of the permit or at the very least immediately upon issuance of the permit. The structural controls, particularly the berms, are an integral part of the facility necessary to prevent contaminated runoff from leaving the site. If the berms are not sized properly, runoff will leave the facility during significant rainfall events. Without this certification, one cannot be sure that all berms are constructed and functioning properly to contain contaminated runoff and prevent it from leaving the site. If a certification has not been provided with the permit application, the City believes that the Five-year Evaluation should occur immediately upon issuance of the permit and then every five years thereafter.

7. Failure to require adequate sampling of wastewater and manure.

Only one annual sample is required to be collected for wastewater and for manure (one for wastewater and one for manure). The entire NMP and future application to third-party fields are based on these single annual samples. These single samples, if not representative, could and probably do drastically underestimate phosphorus loading to a field. Wastewater is typically sampled from the surface of RCSs. Taking a sample from the surface of a quiescent RCS will result in significantly different sample concentrations than taking it from the irrigation pipeline. When the irrigation pumps in the RCSs are operating, sludge in the bottom of the RCSs is agitated and becomes mixed with the wastewater. This sludge agitation has often been cited by the dairies as a reason that sludge removal may not be needed as often as predicted. Since this sludge contains high levels of phosphorus, the wastewater that is actually being used to irrigate the fields contains much higher levels of phosphorus than is measured in the single annual surface sample. This invalidates the assumptions used in the NMP. Additionally, the concentration of phosphorus in the RCS varies according to the antecedent rainfall or drought conditions which may cause varying degrees of dilution or concentration. RCS samples should be obtained from the irrigation pipeline following the pump rather than from the surface of the RCS to provide a more realistic estimate of what is actually being applied to the field.

RCS samples should be taken much more often (preferably at least once during each irrigation event). Wastewater treatment plants typically take samples weekly and often daily. There is no practical reason why one sample per irrigation event (which may often last for several days) should not be required. At the very least, at least one sample per week or month (when irrigating) should be required. Additionally, the City is not advocating updating the NMP after every irrigation event. An average of the sampling events over the year could be utilized in updating the NMP.

Similar problems arise with the manure and more than one annual sample of the manure should be performed (preferably one each month or one from each transport event). Taking only annual samples from manure can result in significant errors in calculating the amount of nutrients applied to the land. Moisture content plays an important role in calculating the amount of nutrients applied. If the sample is not taken concurrently with the application of the manure, significant errors may exist when calculating the application rates. If the manure is sampled while having a high moisture content and then applied much later when it has a much lower moisture content, the calculated nutrient application rate will be significantly underestimated.

8. Failure to require proper management of phosphorus production.

Table 2.1 p.10 (dated 11/20/2006) of the application indicates that the total phosphorus produced by the proposed 990 cows is 385 lb/day P₂O₅. This is equivalent to 140,525 lb/yr P₂O₅ (385 x 365).

The NMP (dated 6/12/07) indicates that the amount of wastewater to be irrigated is 301 ac-in/yr (25.1 ac-ft/yr). The NMP further indicates that, based on a lab analysis dated 4/26/2006, the wastewater contains 0.0102% P. Therefore, the nutrient availability from the wastewater is 16,012 lb/yr P₂O₅ (Table 1 of the NMP). Of the 301 ac-in/yr, 230 ac-in/yr will be applied to the four LMUs and the remaining 71 ac-in/yr will be applied offsite (Table 4 of the NMP). Therefore, with respect to wastewater, P&L Dairy plans to apply 12,235 lb/yr P₂O₅ (16,012 x 230 / 301) to its LMUs and send the remaining 3,777 lb/yr P₂O₅ offsite to third-party fields.

On the form "Manure, Litter, and Wastewater Handling" (p.6), the applicant has indicated that the sludge and solids will be disposed of either on-site or off-site. However, since the applicant does not have any capacity to provide for on-site application of sludge and solids, the sludge and solids will have to go off-site. Since the wastewater contains only 16,012 lb/yr P₂O₅, this leaves 124,513 lb/yr P₂O₅ in the sludge and solids that must be managed. Other than to say generally that the sludge and solids may be transferred to other persons, sent to third-party fields, or sent to composting, the application and the permit have given no specifics concerning the location of where these solids and sludges may be applied. Although listed as one of a number of possible options, there is no indication that *any* of the manure will actually be sent to composting or out of the watershed. This means that a total of 128,290 lb/yr P₂O₅ (91.3%) from wastewater, manure, and sludge will be potentially managed on third-party fields within the North Bosque River watershed in the first year *without any* nutrient management plan and very little regulation or oversight. As discussed elsewhere in the comments, the amount of exported wastewater will increase in year two and even more phosphorus will be managed on third-party fields. If all of the 128,290 lb/yr P₂O₅ from this wastewater and manure is applied to third-party fields in the

watershed with soil concentrations less than 151 ppm P, approximately 867 additional acres (assuming 3-cut coastal) will have phosphorus applied at application rates ranging between the nitrogen crop requirement rate and 2 times the crop phosphorus removal rate. Assuming application at 2 times the crop phosphorus removal rate, this will result in an increase of the soil P in these additional acres of 16 ppm per year. The cumulative impact will be tremendous. Additionally, these additional acres will be virtually unseen (and hence unregulated) by TCEQ inspectors.

It is incredible that the TCEQ would allow 91.3% of the phosphorus (128,290 lb/yr P₂O₅) to be applied throughout the watershed with less oversight than the "regulated" LMUs that are located at the facility. Not only does this flout the goal of the TMDL to remove 50% of the collectable solids from the watershed, it does not even adequately regulate waste application within the watershed. Failure to plan for proper management of this phosphorus will lead to excess and unmanaged phosphorus distribution within the watershed resulting in further degradation of water quality in the North Bosque River and Lake Waco.

9. Failure to require removal of 50% of the solid manure from the watershed as modeled in the TMDL.

The TMDL for the North Bosque watershed recommends removal of 50% of the manure in order to meet the water quality goals. Based on the CDM Erath County Animal Waste Management Study performed for BRA in September 1998 and the SWAT modeling that was done in support of this TMDL, 50% of the solid manure (38.1% of the total manure production) was assumed to be removed from the watershed. For the proposed P&L Dairy permit, 53,540 lb/yr P₂O₅ would need to be removed from the watershed (or sent to composting). If this manure is not removed from the watershed, the water quality goal will not be met. The TCEQ has not provided any information to demonstrate how allowing 100% of the manure to be applied within the watershed will allow the water quality goals in the North Bosque River to be met.

10. Failure to prohibit waste and wastewater application to fields exceeding 200 ppm P.

The North Bosque River TMDL Implementation Plan dated December 2002 (p.16) states that formal enforcement action will result if CAFOs "apply waste or wastewater to a WAF that has been documented to have exceeded 200 parts per million phosphorus in Zone 1 of the soil horizon." Permit Provision VII.A.8(c)(2) negates this enforcement action by allowing application to continue as long as a NUP has been prepared and approved by the TCEQ. Soil phosphorus concentrations can continue to rise as long as they do not exceed 500 ppm. Even above 500 ppm, application can continue as long as the NUP contains a phosphorus reduction component. Application of waste and wastewater to fields in excess of 200 ppm (and especially 500 ppm) should be prohibited in order to be consistent with the language of the TMDL. At the very least, fields in excess of 200 ppm should be required to have a NUP containing a phosphorus reduction component subject to Permit Provision VII.A.8(c)(5).

Further, regardless of the language in the TMDL, the 200 ppm phosphorus is over seven times the amount of phosphorus needed for optimum growth of the proposed crops (i.e., seven

times the agronomic need). The rules require NUPs to ensure the beneficial use of manure, litter, or wastewater. The definition of “beneficial use” in the rules is the “application of manure, litter, or wastewater to land in a manner that does not exceed the agronomic need or rate for a cover crop.” Applying waste to soil that contains seven times the agronomic need cannot possibly be considered beneficial. No application should be allowed on fields which contain phosphorus exceeding the agronomic needs of the crop, much less on fields which contain more than seven times the agronomic needs of the crop. The TCEQ needs to explain how there is an agronomic need for more phosphorus in fields which exceed the phosphorus requirement for the crop (almost always less than 60 ppm in the soil).

11. Failure to adequately regulate and monitor third-party fields.

The language in Permit Provision VII.A.8(e)(5)(i)(E) allows land application to third-party fields when the phosphorus is “less than or equal to 200 ppm phosphorus”. This is inconsistent with 30 TAC § 321.42(j)(2) of the rules which require application to cease if the phosphorus is greater than or equal to 200 ppm. The permit language should be changed to “less than 200 ppm phosphorus.” Similarly, the language of Permit Provision VII.A.8(e)(5)(ii) should be changed to “greater than or equal to 200 ppm.”

The language in Permit Provisions VII.A.8(e)(5)(i)(C-E) need to also include a statement that the application rate is not to exceed the requirements of NRCS Code 590. Although more restrictive in many instances, it is possible for third-party fields to meet the requirements of Permit Provisions VII.A.8(e)(5)(i)(C-E) and fail to meet the requirements of NRCS Code 590. For example, NRCS Code 590 requires that the application rate not exceed the annual crop P requirement in fields with a P-Index rated of “Very High.” Permit Provision VII.A.8(e)(5)(i)(c) allows the nitrogen crop requirement rate if the field is less than 50 ppm irrespective of the P-Index. Adherence to NRCS Code 590 should be required if it is more restrictive. Contrary to previous assertions by the TCEQ, 30 TAC § 321.42(i)(5)(A) does not include third-party fields. Therefore, a specific permit provision must be added to require adherence to NRCS Code 590 for third-party fields if it is more restrictive.

According to Permit Provision VII.A.8(e)(5)(i)(A), no NMP is required for third-party fields. Without preparing an NMP, the requirements of Permit Provisions VII.A.8(e)(5)(i)(C-E) cannot be met since an NMP is the planning tool that is necessary to determine the appropriate application rates. An NMP must be required.

While 30 TAC §321.46(d)(8)(F) requires recording the actual yield of each harvested crop in the PPP, it does not require it to be reported. Similarly, Permit Provision VIII.B.7 does not require reporting of this information in the annual report. Permit Provision VII.A.8(e)(5)(iv) needs to include a requirement that records of crops and crop yields on third-party fields be submitted to the TCEQ quarterly. Permit Provision VIII.B.7 needs to include a requirement that records of crops and crop yields be submitted to the TCEQ in the annual report. Otherwise, the phosphorus crop removal rates cannot be calculated and compliance with the phosphorus application rate limitations cannot be determined.

12. Failure to adequately regulate sludge application.

Permit Provision VII.A.5(a)(7) is allowing sludge to be applied to third-party fields. Typical sludges contain extremely high levels of phosphorus. It is general knowledge that many of the fields in the Bosque watershed that exhibit very high levels of phosphorus (some in excess of 500 ppm) are the result of past applications of sludge from RCSs. Because of this, the City believes that the best management practice in the impaired Bosque watershed is for 100% of the sludge to be removed from the watershed or sent to composting. If this BMP is not implemented, the City believes that significantly greater oversight needs to be required by the TCEQ when sludge is being applied to third-party fields. The potential for significant adverse impacts from sludge application is enormous. Prior to application to third-party fields, the TCEQ should require 10-day notification as to the date and location of the planned application and an application plan prepared by a certified nutrient management specialist (based on current soil P levels and the measured sludge nutrient content) demonstrating that the requirements of Permit Provision VII.A.8(e)(5)(i) will be met. The notification of date and location will also allow the TCEQ to check compliance with the permit provision requiring incorporation within 48 hours of application. This is not an unreasonable requirement given past experience in the watershed and the potential for significant adverse impacts from sludge application; nor, is it an onerous requirement since sludge removal from an RCS is not a frequent occurrence.

13. Failure to require a demonstration of sustainability for the term of the permit.

The NMP provided in the proposed permit addresses only the first year of the permit. It fails to address the subsequent years of the five-year permit term. A 5-year NMP should be prepared that shows the impacts of all nutrient management issues over the five-year permit term and whether the operation is sustainable. The permit should establish an overall maximum application rate that allows the facility to operate in a sustainable manner over the five-year term of the permit. An annual NMP can then be used to fine-tune each year's application schedule and adjust application to any individual field based on annual soil sampling and crop production. The Texas State Soil & Water Conservation Board requires that the smaller AFOs for which they prepare certified Water Quality Management Plans have *sustainable* operations and NMPs. The TCEQ should require no less of a standard for the much larger CAFOs.

The TCEQ has previously indicated that because an NMP is likely to change each year based on site-specific sampling, an NMP for the term of the permit would not be relevant. The City does not agree with this. While it is true that the NMP may change each year based on site-specific sampling results, an NMP for the term of the permit is far from irrelevant. If the NMP has any meaning, it must be considered to be a reasonably accurate predictor of what will occur in the fields assuming the wastewater and manure sampling is representative. The applicant should be required to demonstrate that, based on projected application rates, it has enough land to sustain its operation for the five-year term of the permit. If the applicant cannot demonstrate this on paper, it has little hope of sustaining its operation in reality.

The P&L application is a clear example of the need for 5-year NMP projections. P&L has four LMUs with a size of only 16 acres, 6 acres, 19 acres, and 2 acres. These four LMUs have a current soil P of 138 ppm, 95 ppm, 198 ppm, and 198 ppm, respectively. P&L will be applying

the maximum allowable rates to their four LMUs. Even then, with no solids being applied onsite, only 76% of the wastewater can be applied onsite in the first year. The NMP indicates that in the first year, all of the solids and 24% of the wastewater must go offsite, presumably to third-party fields.

LMUs #3 & #4 will reach a soil P of 240 and 232, respectively, after the first year and then have to be cut back to 1xP removal rate. They will theoretically stay at 240 and 232 for the remaining four years of the permit. LMU #1 will reach a soil P of 221 after the second year and then have to be cut back to 1xP removal rate. It will theoretically stay at 221 for the remaining three years of the permit. LMU #2 will reach a soil P of 233 after the fourth year and then have to be cut back to 1xP removal rate. It will theoretically stay at 233 for the remaining year of the permit.

In summary, after only two years, three of the fields will have a soil P well over 200 ppm and 68% of the wastewater will be going offsite to third-party fields. After four years, all of the fields will have a soil P over 200 ppm and 73% of the wastewater will be going offsite to third-party fields. Even discounting where all of the solids will go (probably to third-party fields), after only two years, the majority of the wastewater is predicted to be going to third-party fields with none of the operational requirements of typical LMUs such as NMPs, vegetative buffers and filter strips, prohibition of nighttime application, inspections of equipment, etc. This is absurd, and the TCEQ should not allow it. This dairy should absolutely not be allowed to expand and probably should not be allowed to continue at its currently permitted size.

14. Failure to require designation of offsite LMUs in the permit.

It is almost impossible to economically truck significant quantities of wastewater, so P&L will have to obtain easements for pipelines to cross properties or obtain agreements to apply to adjacent fields. In order to implement the proposed NMP, P&L must already have a plan as to where the wastewater will go and have contracts in place. The dairy will have to have total control since only the dairy can determine pumping times from the RCSs, operate the pumps, and properly manage irrigation to avoid saturated soil conditions. The dairy has to be able to dewater the lagoons after significant rainfalls to avoid encroaching into the 25-year 10-day volume. How is the dairy going to do this if it does not have control of the fields? It is difficult to envision how irrigation fields could possibly be considered third-party fields rather than offsite LMUs. The applicant is making a mockery of the distinction between contracts and leases and third-party fields and LMUs. The TCEQ needs to explain how irrigation of wastewater to third-party fields is possible without them being considered LMUs and if EPA concurs with this reasoning.

15. Failure to provide a meaningful definition of vegetative buffers.

Permit Provision X.F of the draft permit requires that the permittee install and maintain buffers according to NRCS standards. While the NRCS does have practice standards for "filter strips" (Code 393), the NRCS has no practice standards for "vegetative buffers." The buffers specified in the permit contain both filter strips and a "vegetative [sic] buffer setback". Without a

definition and standard for “vegetative buffer”, the term is virtually meaningless. A single tree in the buffer area could be considered a “vegetative buffer.”

The TCEQ has previously indicated that a vegetative buffer is commonly understood to mean vegetation that reduces shock due to contact and that the Riparian Forest Buffer (Code 391), which is referenced by Filter Strips (Code 393), qualifies in this respect. The TCEQ seems to indicate that it is defining “vegetative buffers” in the North Bosque River watershed to mean Filter Strips as defined by NRCS Practice Code 393 including Riparian Forest Buffers as defined by NRCS Practice Code 393. If the TCEQ is defining “vegetative buffers” to mean either Filter Strips as defined by NRCS Practice Code 393 or Riparian Forest Buffers as defined by NRCS Practice Code 393, then this definition should be placed in the permit to make it clear to the permittee.

16. Failure to clearly define the beginning of vegetative buffers and filter strips.

It is not clear where the measurement of the vegetative buffers and filter strips begin in relation to the streambed and the center of the stream. The measurement should be from the banks of the stream, not the centerline. The TCEQ has previously indicated that the vegetative buffers can only exist as close as the normal water line or at the top of the bank. The City accepts this definition, assuming the top of bank is used when the stream is intermittent or dry, but believes it would be clearer to the permittee if the language in the permit included this definition.

17. Failure to address discharge of bacteria and other pathogens.

No attempt has been made to demonstrate how the bacterial problems that exist in the North Bosque watershed will be addressed other than to say that controlling phosphorus will control bacteria. In previous responses to comments, the TCEQ has indicated that “management measures for controlling phosphorus will also have some corollary effect on reducing pathogen and bacteria loading, since non-point source nutrient and pathogen loads largely originate from the same sites and materials and are transported via the same processes and pathways.” This is not an adequate response to the City’s comments for the following reasons: 1) There has been no demonstration by the TCEQ that the management measures for controlling phosphorus will have any effect on bacteria. 2) In using the term “some corollary effect”, the TCEQ is acknowledging that they have no idea how much reduction might occur if it does occur. This is far short of demonstrating attainment with the bacteria water quality standards. 3) While the bacteria and pathogen loads originate from the same sites and materials and are transported via the same streams and rivers, the processes and removal mechanism for bacteria are far different than those for phosphorus. Much of the phosphorus from CAFOs is removed by harvesting growing crops to which it has been applied. There has been no demonstration that bacteria are removed by growing crops. There has been no demonstration to what extent bacteria might be captured by the soil or “filtered out” in grass. Bacteria undergo different processes in the streams and rivers. They are not removed by algae and have a potential for regrowth.

VII. The Executive Director has failed to prepare an accurate Fact Sheet.

Page 5 of the Fact Sheet states that “In determining the application rate, the nutrient management plan also evaluates the amount of nutrients needed for optimal crop production and

then balances that need between the nutrients in the soils and nutrient source (i.e., wastewater).” This is factually incorrect. The nutrient management plan allows nutrients in the soil to far exceed what is needed for optimal crop production and to continue to apply nutrients in excess of this.

CONCLUSION

The City of Waco, on its own behalf and as *parens patriae* on behalf of its citizens, hereby requests the Executive Director to take the following actions:

1. Consider these comments in evaluating the draft permit by which the Executive Director has proposed to issue a permit to P&L Dairy;
2. Rescind the draft permit issued for P&L Dairy as without valid legal and technical basis.

The City appreciates very much the opportunity to submit these comments and the consideration that it knows the Executive Director and staff will give to them.

Respectfully submitted,

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(512) 472-5456
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By 
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Attorneys for the City of Waco

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Ms. LaDonna Castañuela,
November 9, 2007
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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6

1445 ROSS AVENUE, SUITE 1200
DALLAS, TX 75202-2733

DEC. 03 2001

Mr. Jeffrey A. Saitas, P.E.
Executive Director
Texas Natural Resource Conservation Commission
P.O. Box 13087
Austin, Texas 78711-3087

Dear Mr. Saitas:

The Environmental Protection Agency (EPA) reviewed the final document *"Two Total Maximum Daily Loads for Phosphorus in the North Bosque River—for Segments 1226 and 1255"* submitted by the Texas Natural Resource Conservation Commission (TNRCC) on March 5, 2001. Based on this review, EPA requested supplemental supporting information, which was furnished by TNRCC.

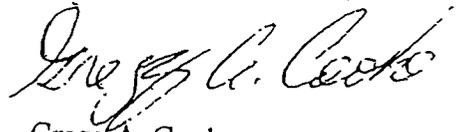
This letter defines EPA's understanding of these total maximum daily loads (TMDLs) based on our review of the submitted TMDL document, modeling information, and the supplemental information provided by TNRCC. Table 1 summarizes the actual TMDLs, including waste load allocations (WLAs), load allocations (LAs), allowance for future growth (FG), and an implicit margin of safety (MOS). EPA recognizes that this TMDL modeling information represents "net" TMDL values at the five river index stations and therefore, the non-point source LAs are net loading values while WLAs are expressed as "gross" loads. It would be consistent with these TMDLs to express the net LA value as a gross LA value for the purpose of developing nonpoint load reductions.

Table 2 includes a scenario for individual WLAs for soluble reactive phosphorus. These WLAs were calculated from the TMDL document, modeling scenario information obtained directly from the Blacklands Agricultural Research Center, and the supplemental information provided by TNRCC. As established in the August 14, 2001, TMDL process agreement between EPA and TNRCC, these individual WLAs may be different from actual effluent limits established as a part of the Texas Pollutant Discharge Elimination System permitting process, and TNRCC will document how actual permit limitations are consistent with these TMDLs.

We request that TNRCC review and provide written concurrence with our interpretations of the enclosed tables. As you are aware, in May 2001, EPA Region 6 held listening sessions with key stakeholders of the North Bosque River Watershed, including cities, dairymen, and environmental groups. The results of these sessions revealed a number of key issues that I feel need further study. My staff and I have shared this information with you and your staff. We

look forward to working with you and your staff to complete the review process for the North Bosque River TMDLs. If further discussion is required, please contact me or have your staff contact Sam Becker at (214) 665-8133.

Sincerely,

A handwritten signature in black ink, appearing to read "Gregg A. Cooke". The signature is written in a cursive style with a long, sweeping underline.

Gregg A. Cooke
Regional Administrator

Enclosure

TABLE 1-North Bosque River TMDL (Segments 1226 and 1255) for Soluble Reactive Phosphorus (SRP)

Column	1	2	3	4	5	6
River Index Stations	TMDL - e for SRP (lbs/day)	LA for SRP (lbs/day)	WLA for SRP (lbs/day)	FG for SRP (lbs/day)	MOS for SRP (lbs/day)	Comments
Above Stephenville	9.34	9.34	0.000	0.00	Implicit	No PS discharge
Below Stephenville	25.18	0.94	24.24	0.00	Implicit	Stephenville discharge
Above Meridian	63.23	34.92	27.06	1.25	Implicit	Stephenville, Hico, and Iredell discharges
Clifton	93.52	61.29	30.98	1.25	Implicit	Stephenville, Hico, Iredell, & Meridian discharges
Valley Mills	106.35	69.78	35.32	1.25	Implicit	Stephenville, Hico, Iredell, Meridian, & Clifton discharges
End of Segment 1226	>106.35	>69.78	37.57	0.00	Implicit	Stephenville, Hico, Iredell, Meridian, Clifton, & Valley Mills discharges

TMDL (Total Maximum Daily Load), WLA (Wasteload Allocation), LA (Load Allocation), FG (Future Growth), MOS (Margin of Safety)

- 1 Represents net TMDL, which is equivalent to stream loading capacity for the "existing" scenario and incorporates best management practices (BMPs) for waste application fields (WAFs) and wastewater treatment plants (WWTPs). Represents anticipated in-stream effect at the five river index stations, which are the compliance points for the mainstem of the North Bosque River Segments 1226 and 1255.
- 2 LA at a given river index station is equal to the sum of all nonpoint sources at or above that location with the exception of manure/wastewater holding lagoons. LA allocation does not include any allocations for manure/wastewater holding lagoons.
- 3 WLA at a given river index station is equal to the sum of all individual point source dischargers at or above that location. For example, at river index station "Above Meridian" the WLA (27.06 lbs/day) = WLA for Stephenville (24.24 lbs/day) + WLA for Hico (2.30 lbs/day) + WLA for Iredell (0.52 lbs/day). These individual WLAs are presented in Table 2.
- 4 FG at a given river index station is allocated between that location and the one above it. For example, at "Above Meridian" the FG (1.25 lbs/day) is allocated between "Below Stephenville" and "Above Meridian."
- 5 MOS is based on conservative assumptions and is implicit for this TMDL.
- 6 These dischargers are located at or above the five river index stations.

TABLE 2- North Bosque River Intial Wasteload Allocations (WLAs) for Soluble Reactive Phosphorus (SRP)

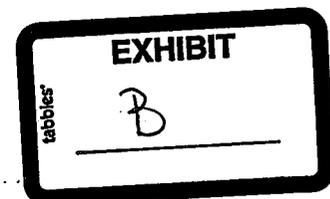
City/Town	Segment Number	Design Flow (MGD)	Individual Point Source Concentrations (ug/l)	Individual Point Source WLA (lbs/day)
Stephenville	1255	3.00	969.00	24.24
Hico	1226	0.20	1378.00	2.30
Iredell	1226	0.05	1244.00	0.52
Meridian	1226	0.45	1045.00	3.92
Clifton (new)	1226	0.65	801.00	4.34
Valley Mills	1226	0.36	748.00	2.25
Future Growth (FG)	1226	0.60	750.00	3.75
TOTAL		5.31		41.32

**HOUSE COMMITTEE ON ENVIRONMENTAL REGULATION
TEXAS HOUSE OF REPRESENTATIVES
INTERIM REPORT 2002**

**A REPORT TO THE
HOUSE OF REPRESENTATIVES
78TH TEXAS LEGISLATURE**

**REPRESENTATIVE WARREN CHISUM
CHAIRMAN**

**COMMITTEE STAFF
DEREK SEAL
ANNETTE GLASS**





Committee On
Environmental Regulation

November 23, 2002

Warren Chisum
Chairman

P.O. Box 2910
Austin, Texas 78768-2910

The Honorable James E. "Pete" Laney
Speaker, Texas House of Representatives
Members of the Texas House of Representatives
Texas State Capitol, Rm. 2W.13
Austin, Texas 78701

Dear Mr. Speaker and Fellow Members:

The Committee on Environmental Regulation of the Seventy-Seventh Legislature hereby submits its interim report including recommendations and drafted legislation for consideration by the Seventy-Eighth Legislature.

Respectfully submitted,

Warren Chisum, Chairman

Dennis Bonnen, Vice Chairman

Fred Bosse

Dawnna Dukes

Charlie Geren

Charlie Howard

Edmund Kuempel

D.R. "Tom" Uher

Zeb Zbranek

Dennis Bonnen
Vice-Chairman

Fred Bosse, Dawnna Dukes, Charlie Geren, Charlie Howard, Edmund Kuempel, D.R. "Tom" Uher, Zeb Zbranek

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INTRODUCTION

At the beginning of the 76th Legislature, the Honorable James E. "Pete" Laney, Speaker of the Texas House of Representatives, appointed nine members to the House Committee on Environmental Regulation: Warren Chisum, Chair; Dennis Bonnen, Vice Chair; Fred Bosse, Dawna Dukes, Charlie Geren, Charlie Howard, Edmund Kuempel; D.R. "Tom" Uher, and Zeb Zbranek.

During the interim, the Speaker assigned charges to the committee. The Committee on Environmental Regulation has completed its hearings and investigations, and has adopted the following report.

The committee wishes to express appreciation to the following people for their invaluable assistance:

Dr. Dale Klein, Assistant Secretary of Defense for Nuclear and Chemical and Biological Defense Programs

Edward Selig, Director, Center for Responsible Environmental Strategies

The Paso del Norte Joint Advisory Committee

From the Bureau of Radiation Control, Texas Department of Health:

Richard Ratliff, Bureau Chief

Ruth McBurney, Director, Division of Licensing and Registration and Standards

Art Tate, Director of Compliance and Inspection

Bob Free, Deputy Director for Emergency Response and Investigation

From the Texas Commission on Environmental Quality:

Susan Jablonski, Low-Level Radioactive Waste Specialist

Victor Hugo Valenzuela, Planner III, Region 6, El Paso

We also offer special appreciation to Ambrose Gonzales, Information Specialist, Texas Legislative Council, for his unending good humor and patience in dealing with Committee computer issues.

Finally, the Committee wishes to express appreciation to the citizens and local government officials who participated in our hearings for their time and efforts on behalf of the Committee.

HOUSE COMMITTEE ON ENVIRONMENTAL REGULATION

INTERIM STUDY CHARGES

- 1. Examine problems related to lost and stolen radioactive material, including sources abandoned downhole in drilling operations.**
- 2. Study the production, transportation, use and disposal of hazardous and radioactive materials that could be used in terrorist actions. Review the management and security of public drinking water systems. Review government regulations and business practices to determine whether legislation is needed to protect life and property and to detect, interdict and respond to acts of terrorism.**
- 3. Identify and prioritize environmental issues on the Texas-Mexico border, including air quality and solid waste.**
- 4. Examine the progress of programs related to vehicle inspection and maintenance and low-income repair assistance.**
- 5. Actively monitor agencies and programs under the committee's oversight jurisdiction, including specifically, implementation of H.B. 2912, the Texas Natural Resource Conservation Commission Sunset Legislation, and S.B. 5, 77th Legislature, to ensure compliance with federal Clean Air Act standards and deadlines.**

SPEAKER'S CHARGE TO THE COMMITTEE

On November 5, 2001, Texas House Speaker James E. "Pete" Laney issued five charges to the House Committee on Environmental Regulation, including instructions to:

... Actively monitor agencies and programs under the committee's oversight jurisdiction, including specifically, implementation of H.B. 2912, the Texas Natural Resource Conservation Commission Sunset Legislation, and S.B. 5, 77th Legislature, to ensure compliance with federal Clean Air Act standards and deadlines.¹

OVERVIEW

The 77th Texas Legislature focused intently on environmental issues, including the first sunset review of the Texas Natural Resource Conservation Commission (TNRCC) since the creation of the agency in 1993.² Imminent deadlines to meet federal air quality standards also accounted for a considerable amount of the workload of the Committee in 2001. The end result of environmental legislation included the addition of several stand-alone bills into the TNRCC sunset bill in the form of amendments addressing major issues such as 'grandfathered facilities'³ and 'upset emissions.'⁴ As additional steps in addressing looming federal deadlines for compliance with the federal Clean Air Act, the legislature created The Texas Emissions Reduction Plan (TERP)⁵ and approved sweeping auto emissions testing legislation.⁶ By the end of the session, the legislature even changed the name of the TNRCC to the Texas Commission on Environmental Quality (TCEQ).⁷

An active legislative session necessarily means significant changes in programs, policies and rules which the TCEQ must implement according to changes in statutes. In response to environmental actions taken by the 77th Texas Legislature, the TCEQ identified 64 rulemaking initiatives and another 56 projects which will not require new rules.⁸ The agency already completed the implementation of the vast majority of new legislative requirements and work is underway on the remaining programs; the agency website provides a site to track the progress.⁹

H.B. 2912 -- TNRCC SUNSET BILL

The legislature created the TNRCC in 1993, by consolidating the Texas Water Commission, Texas Air Control Board and environmental programs from the Texas Department of Health. In its review of TNRCC, the Sunset Advisory Commission found that the traditional, prescriptive regulatory approach employed by the agency focused on outputs and failed to adequately support innovation or provide incentives to reward performance. The Sunset Commission also recommended that additional changes should ensure greater public access to the agency's decision making process. House Bill 2912 continues TNRCC until September 1, 2013 and contains the commission's recommendations to better position the agency to address the state's environmental regulatory needs.¹⁰ Sunset recommendations ultimately adopted include provisions that:

- establish a performance based regulatory structure based on compliance history;
- strengthen agency actions to reduce emissions from emissions events;
- establish a laboratory accreditation program;
- establish a mechanism for providing environmental research to support the agency's environmental regulatory policies;
- ensure greater public interest representation before the commission;
- clarify the executive director's role in contested cases;
- expand the agency's ability to investigate and respond to complaints;

-
- provide the agency with funding flexibility to better support its activities;
 - strengthen the agency's revenue management practices;
 - require the agency to review solid waste disposal permits to assess compliance performance;
 - clarify the authority of the agency to certify water treatment specialists; and
 - continue the agency for 12 years.¹¹

In addition to Sunset Commission recommendations, over 113 amendments were offered on either the House or Senate Floor, adding several major issues not initially included by the Sunset Commission.¹² The provisions added in addition to the Sunset Commission recommendations, include provisions to:

- change the name of the agency;
- clarify the commission's role regarding economic development;
- establish specific timeframes for grandfathered facilities to become permitted and to reduce emissions;
- establish the Texas Environmental Health Institute;
- protect the public from cumulative risks;
- change agency requirements regarding notice for public hearings;
- require contracting under provisions of professional services procurement;
- prohibit the storage and disposal of hazardous waste in certain geological formations;
- allow an order for remediating hazardous waste at a solid waste facility;
- exclude certain persons as responsible parties for purposes of remediation;
- tighten the regulation of concrete and rock crushing facilities;
- authorize remedial action at a scrap tire site that threatens to release a hazardous substance;
- clarify regulatory and operational requirements for solid waste facilities;
- require a permit, instead of registration, to land apply certain sewage sludge;
- require secondary containment for certain underground storage tank systems;
- expand availability of information about the Edwards Aquifer and the commission's Edwards Aquifer programs;
- establish a regulatory approach for dealing with runoff and managing waste from dairy operations in the Lake Waco watershed;
- establish timeframes for commission standards for low-emission diesel; and
- authorize the disposal of animal remains under certain conditions.¹³

S.B. 5 -- THE TEXAS EMISSIONS REDUCTION PLAN

The federal Clean Air Act authorizes the EPA to establish maximum allowable concentrations of pollutants because these pollutants in excess can endanger human health, harm the environment, and cause property damage. Areas where pollutants exceed EPA standards may be designated as nonattainment areas and if these areas do not meet EPA standards by 2007, a non-complying state faces severe sanctions. Texas has four nonattainment and three near nonattainment areas, comprising 37 counties, which combined all represent 70% of the state's population, 76% of aggregate employment, 82% of personal income and 83% of gross state product. Because of Texas' integrated economy, all parts of the state have a stake in bringing these areas into compliance. Even though the TCEQ submitted a SIP to regulate emissions in nonattainment areas, the agency cannot regulate significant areas of potential emissions reductions though reductions might be realized through an incentive program. With these circumstances in mind, the legislature passed S.B. 5 which established the Texas Emissions Reduction Plan (TERP) to reduce emissions in the state.¹⁴

The legislature created the TERP to provide grants, rebates and other incentives for

importance of independent producers to the state, he further asserts that less than only two percent of the operators asked for the good guy option, and many of the two percent resulted from "high-risk" operators unwilling or unable to post collateral as a condition of buying a bond.⁷⁹

Commissioner Garza asserts that many of the 17,000 abandoned, nonproducing oil and gas wells in the state pose a potential threat to water, and that bonds, cash and letters of credit, "... assure Texans that sites are cleaned up, wells are plugged and our water is protected long after oil and gas production has ceased."⁸⁰ Generally agreeing with the statistics presented by Chairman Williams, Garza adds that the operators requesting the good guy option account for 0.14 percent of the oil produced in Texas and only 0.03 percent of the natural gas.⁸¹ He says:

But the unfortunate reality is that some low-producing oil and gas operators never will generate enough revenue from their wells to pay for the cost of plugging them when it becomes necessary. So the commission's new requirements promise to play an important role in safeguarding our environment and must be protected themselves.⁸²

The San Antonio Express-News seems to agree with Chairman Williams and Commissioner Garza with the statement that:

Texas is better off if only companies that can afford to be responsible environmental stewards stay in the oil and gas business. Companies that are too weak to post a performance bond are more likely to leave environmental problems for their industry peers and state taxpayers to address.⁸³

Lastly, The TLMA agrees that Railroad Commission should continue along the present course, asserting that:

The state is finally making some progress in addressing the abandoned well problem in Texas ... [which] should not be undermined by a few operators who are unwilling to change their business model to deal with the realities of the universal bonding requirements that go into effect in 2004. Likewise, any action by the Railroad Commission that is not consistent with achieving the goal of universal bonding would be shortsighted.⁸⁴

FINDINGS AND RECOMMENDATIONS

FINDING NO. 1: The TCEQ has worked diligently since the passage of H.B. 2912 to implement legislative mandates. Some rulemaking proposals, rulemaking adoptions and some policy changes incited a substantial amount of controversy and others did not. However, given the sweeping changes made to the agency through the sunset bill, the effectiveness of many of the changes will not arise until an adequate amount of time passes.

RECOMMENDATION NO. 1: The legislature and the respective committees should continue to monitor implementation of legislation passed in the 77th Legislative Session to ensure the agency meets legislative expectations.

FINDING NO. 2. It is clearly in the best interests of the State of Texas to comply with the federal Clean Air Act, and funding the TERP program established by S.B. 5 provides a clear way to meet federal law.

RECOMMENDATION NO. 2. The legislature should make every effort to adequately fund S.B. 5 in a manner that allows the state to meet federal clean air mandates.

ENDNOTES

1. **77TH LEGISLATURE, INTERIM CHARGES, TEX. HOUSE OF REPS. (November 2001).**
2. **See H.B. 2912, 77th Tex. Leg., R.S. 2001 and BACKGROUND AND PURPOSE, BILL ANALYSIS, Enrolled version, H.B. 2912, 77th Tex. Leg., R.S., 2001.**
3. **See H.B. 3545, 77th Tex. Leg., R.S. 2001; House Floor Amendments 40 - 42, April 19, 2001, H.B. 2912, 77th Tex. Leg., R.S. 2001; Senate Floor Amendment 26A, May 14, 2001, H.B. 2912, 77th Leg., R.S. 2001.**
4. **See H.B. 3584, 77th Tex. Leg., R.S. 2001 and House Floor Amendments 36 - 39, April 19, 2001, H.B. 2912, 77th Tex. Leg., R.S. 2001.**
5. **See S.B. 5, 77th Tex. Leg., R.S. 2001 and BACKGROUND AND PURPOSE, BILL ANALYSIS, Enrolled version, S.B. 5, 77th Tex. Leg., R.S., 2001.**
6. **See H.B. 2134, 77th Tex. Leg., R.S. 2001 and BACKGROUND AND PURPOSE, BILL ANALYSIS, Enrolled version, H.B. 2134, 77th Tex. Leg., R.S., 2001.**
7. **H.B. 2912, 77th Tex. Leg., R.S. 2001, ARTICLE 18.**
8. **See the TNRCC web site at <http://www.tnrcc.state.tx.us/oprd/77legimp.html> (November 26, 2001.)**
9. **See the TCEQ web site at <http://www.tnrcc.state.tx.us/oprd/77legimp.html> (October 15, 2002).**
10. **See H.B. 2912, 77th Tex. Leg., R.S. 2001 and BACKGROUND AND PURPOSE, BILL ANALYSIS, Enrolled version, H.B. 2912, 77th Tex. Leg., R.S., 2001.**
11. **SUNSET ADVISORY COMMISSION, SUMMARY OF LEGISLATION - 77TH LEGISLATURE, 77th Tex. Leg., pp. 33 - 34 (2001).**
12. **See HOUSE JOURNAL, 77th Tex. Leg., R.S. 2001, pp. 1,222 - 1,315, (April 19, 2001); SENATE JOURNAL, 77th Tex. Leg., R.S. 2001, pp. 2,007 - 2,033, (May 14, 2001).**
13. **SUNSET ADVISORY COMMISSION, SUMMARY OF LEGISLATION - 77TH LEGISLATURE, 77th Tex. Leg., pp. 33 - 34 (2001).**
14. **See BACKGROUND AND PURPOSE, BILL ANALYSIS, engrossed version, S.B. 5 , 77th Tex. Leg., R.S. 2001.**
15. **See generally TEX. HEALTH & SAFETY CODE ANN., Chapters 386 - 388 (West Supp. 2002).**
16. **SECTION 2, S.B. 5, 77th Tex. Leg., R.S. 2001, Enrolled version.**
17. **SECTION 3, S.B. 5, 77th Tex. Leg., R.S. 2001, Enrolled version.**
18. **SECTION 7, S.B. 5, 77th Tex. Leg., R.S. 2001, Enrolled version.**
19. **SECTION 10, S.B. 5, 77th Tex. Leg., R.S. 2001, Enrolled version.**

HOUSE OF REPRESENTATIVES



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August 13, 2008

VIA FAX NO.: 512-239-5533

Commissioner Larry Soward, MC 100
TCEQ
P.O. Box 13087
Austin, TX 78711-3087

Commissioner Buddy Garcia, MC 100
TCEQ
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Austin, TX 78711-3087

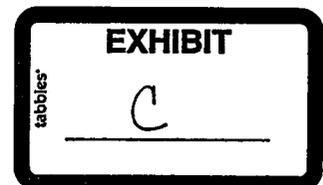
Commissioner Bryan Shaw, MC 100
TCEQ
P.O. Box 13087
Austin, TX 78711-3087

Re: Keith Sherdon Broumley and Jim Whitlock Broumley; Water Quality TPDES Permit
WQ0003395000

Dear Commissioners:

I am writing in regard to the City of Waco's request for a contested case hearing on above-referenced permit application that is pending before the Texas Commission on Environmental Quality ("TCEQ"). I have represented citizens of Waco and McLennan County as a member of the Texas House of Representatives since 1997. During my tenure, I have been very involved in legislation affecting concentrated animal feeding operations ("CAFOs") in the Bosque River watershed and the efforts of the legislature to protect Lake Waco from CAFO-related pollution.

Because each of you began your service as a Commissioner of TCEQ after the most significant legislation had been negotiated, passed, and signed into law, I believe a brief summary of the history of the legislation might be helpful in your deliberations.



In 2001, the 77th legislature focused intently on environmental issues. Among the most important legislation passed was House Bill 2912. That bill, commonly referred to as the TNRCC Sunset Bill, allowed the TNRCC (hereinafter "TCEQ") to continue in existence until September 1, 2013. In its review, the Sunset Commission made a number of recommendations about how the agency could be improved. One notable recommendation was that the Commission undertake changes to ensure greater public access to the agency's decision making process.

The bill also contained a multitude of new laws and amendments to existing laws related to a broad range of environmental issues. In addition to allowing the TCEQ to continue to exist, one very important aspect of HB 2912 was the amendments that were made to the portions of Chapter 26 of the Texas Water Code that deal with CAFOs in the Bosque River Watershed. Those amendments were specifically intended to protect Lake Waco from the environmental problems caused by phosphorus runoff from CAFOs.

Specifically, HB 2912 established a constitutional bracket for Major Sole-Source Impairment Zones and required all operators who sought a new CAFO permit or amended CFO permit seeking an increase in herd size, to acquire a new or amended individual permit prior to beginning to operate. Lake Waco is the only lake falling in this bracket, and the House floor debate, as well as Senate hearings and debates, specifically show this. It was the intent of the legislation that Lake Waco be covered, and there is no doubt about this if you review the record.

The effect of this designation was that general permits, which only required the submission of a Notice of Intent and provided very little opportunity for public comment and/or contested case hearings, were no longer an acceptable way to authorize a CAFO to operate in the Lake Waco watershed. In other words, the legislature's intention was to make those permit applications subject to public comment and contested case proceedings and specifically to allow the City of Waco to meaningfully participate in the permitting process.

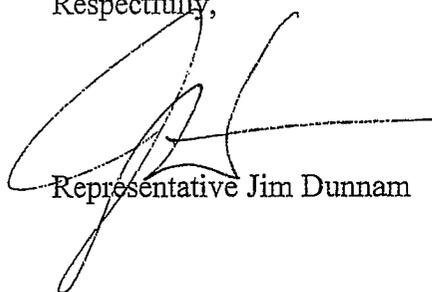
The evidence indicating that CAFOs contribute an overwhelming majority of the phosphorus that makes its way into the lake was, and continues to be, scientifically undoubted. Further, there can be no doubt that the City of Waco is a "person affected," as the term is defined in Section 5.115(a) of the Texas Water Code and 30 T.A.C. §§ 55.201 and 55.203, by all CAFO permit applications seeking to authorize the discharge of waste in the Lake Waco watershed, the Major Sole-Source Impairment Zone. Effectively, any decision by the TCEQ to the contrary undermines the intent of the legislature which passed HB 2912.

As you are probably aware, the TCEQ adopted changes to Chapter 321 of Title 30 of the Texas Administrative Code in order to comply with HD 2912. Notably, hearings about those rules were held in three cities: Austin, Stephenville, and Waco. I believe that the then-Commissioners of the TCEQ realized that the City of Waco was affected by the rules, and that the City provided relevant input during that process. In fact, the Commissioners even revised some rules in response to written and oral comments that were submitted by my office, Senator Kip Averitt (then a fellow House Representative), City of Waco officials, and other individuals from the Waco area during the hearings. Further, the Texas Association of Dairymen even made note of the "delicate compromise that was negotiated during the legislative process between the City of Waco, the commission, and the dairies," in their comments to the draft rules.

On September 3, 2008, Senator Averitt, Representative Doc Anderson, and I will attend a presentation by Dr. Ken Wagner regarding the results of the comprehensive Lake Waco study. Mr. Wagner will also be presenting his findings to representatives of your agency earlier that day. If you do not currently plan to attend that presentation but would like to do so, please let me know and I will do my best to ensure that a seat is reserved for you.

Finally, I understand that the above-referenced permit application and the City of Waco's hearing request are set for consideration on September 10, 2008. I would appreciate the opportunity to speak or have a statement presented during that public meeting. I also am available to gladly answer any questions you might have about the history of the legislature's activity with respect to the Lake Waco watershed. Please let me know if I may assist you in any way.

Respectfully,

A handwritten signature in black ink, appearing to be 'JD', with a long horizontal line extending to the right. The signature is positioned above the printed name 'Representative Jim Dunnam'.

Representative Jim Dunnam

May 4, 2001

To: Members of the Texas Legislature

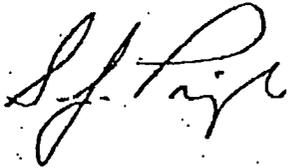
Re: Sibley Amendment to Article 10 of H.B. 2912 (Regulation of Certain Animal Feeding Operations in the North Bosque River Watershed)

We respectfully ask for your support of the Dunnam/Averitt House Floor Amendment as modified by the Sibley Amendment to C.S.H.B. 2912. Article 10 of the bill addresses the water quality problems only in the North Bosque River Watershed.

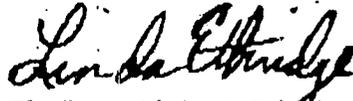
All parties, here undersigned, have agreed to support this language. We respectfully ask that the legislature support the enactment of this language.

Thank you for your favorable consideration of our request.

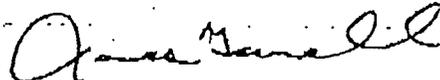
Sincerely,



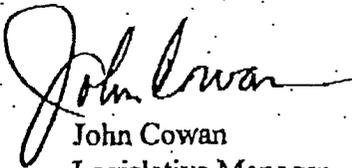
Steve Pringle
Legislative Director
Texas Farm Bureau



The Honorable Linda Ethridge
Mayor
City of Waco



James Terrell
Executive Director
Texas Association of Dairymen



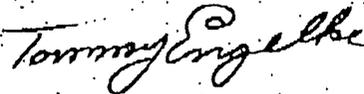
John Cowan
Legislative Manager
Dairy Farmers of America

JAMES GRIMM
by FLW

James Grimm
Executive Vice President
Texas Poultry Federation

KEN HORTON
by FLW

Ken Horton
Executive Vice President
Texas Pork Producers
Association



Tommy Engelke
Executive Vice President
Texas Agricultural Cooperative Council

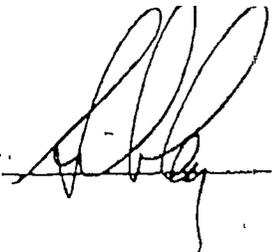


Ross Wilson
Vice President
Texas Cattle Feeders Association

Attachment



FLOOR AMENDMENT NO. 17

BY: 

1 Amend C.S.H.B. No. 2912 as follows:

2 (1) Strike SECTION 10.01 of the bill (page 32, line 59
3 through page 33, line 20, committee printing) and substitute the
4 following:

5 "SECTION 10.01. Section 26.001, Water Code, is amended by
6 amending Subdivisions (10) and (13) to read as follows:

7 (10) "Agricultural waste" means waterborne liquid,
8 gaseous, or solid substances that arise from the agricultural
9 industry and agricultural activities, including without limitation
10 agricultural animal feeding pens and lots, structures for housing
11 and feeding agricultural animals, and processing facilities for
12 agricultural products. The term:

13 (A) includes:

14 (i) tail water or runoff water from irrigation
15 associated with an animal feeding operation or concentrated animal
16 feeding operation that is located in a major sole source impairment
17 zone, as defined by Section 26.502; or

18 (ii) rainwater runoff from the confinement area
19 of an animal feeding operation or concentrated animal feeding
20 operation that is located in a major sole source impairment zone,
21 as defined by Section 26.502; and

22 (B) [~~"agricultural waste"~~] does not include tail
23 water or runoff water from irrigation of rainwater runoff from

1 other cultivated or uncultivated range land, pasture land, and
2 farmland or rainwater runoff from an area of land located in a
3 major sole source impairment zone, as defined by Section 26.502,
4 that is not owned or controlled by an operator of an animal feeding
5 operation or concentrated animal feeding operation on which
6 agricultural waste is applied.

7 (13) "Pollutant" means dredged spoil, solid waste,
8 incinerator residue, sewage, garbage, sewage sludge, filter
9 backwash, munitions, chemical wastes, biological materials,
10 radioactive materials, heat, wrecked or discarded equipment, rock,
11 sand, cellar dirt, and industrial, municipal, and agricultural
12 waste discharged into any water in the state. The term:

13 (A) includes:

14 (i) tail water or runoff water from irrigation
15 associated with an animal feeding operation or concentrated animal
16 feeding operation that is located in a major sole source impairment
17 area as defined by Section 26.502; or

18 (ii) rainwater runoff from the confinement area
19 of an animal feeding operation or concentrated animal feeding
20 operation that is located in a major sole source impairment zone,
21 as defined by Section 26.502; and

22 (B) [~~pollutant~~] does not include tail water or
23 runoff water from irrigation or rainwater runoff from other
24 cultivated or uncultivated range land, pastureland, and farmland or
25 rainwater runoff from an area of land located in a major sole
26 source impairment zone, as defined by Section 26.502, that is not

1 owned or controlled by an operator of an animal feeding operation
2 or concentrated animal feeding operation on which agricultural
3 waste is applied."

4 (2) In Sec. 26.502, Chapter 26, Water Code, in SECTION 10.02
5 of the bill (page 33, line 35, committee printing), insert the
6 following between the words "only" and "in":

7 "to a feeding operation confining cattle that have been or may
8 be used for dairy purposes, or otherwise associated with a dairy,
9 including cows, calves, and bulls."

10 (3) In Sec. 26.503, Chapter 26, Water Code, in SECTION 10.02
11 of the bill (page 33, line 69, committee printing), insert
12 "operated by an owner or" between the words "or" and "controlled
13 by".

14 (4) In Sec. 26.503, Chapter 26, Water Code, in SECTION 10.02
15 of the bill (page 34, lines 4-5, committee printing), strike "and
16 including delivery to a third party for use or disposal".

TNRCC Response to Public Comments for Two TMDLs for Phosphorus in the North Bosque River

February 19, 2001

Document Structure

This document has been prepared in response to comments received by the Texas Natural Resource Conservation Commission (TNRCC or Agency) on the two Total Maximum Daily Loads (TMDLs) prepared for phosphorus in the North Bosque River. This Response to Comments document contains two main sections. The first section is a summary which provides the Agency's response to the most common comments received on the two TMDLs. The second section is a synopsis in table format of all comments submitted and the TNRCC's responses to each comment.

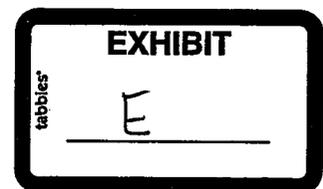
Many comments address similar issues from slightly different perspectives. For organizational and consolidation purposes, the Response to Comments has been arranged into seven different categories:

- I. Texas TMDL Development Process
- II. General water quality issues
- III. Technical Issues (problem definition & endpoints; pollutant source analysis; linkage/modeling & margin of safety; loading allocation)
- IV. Implementation Issues
- V. Permitting Issues
- VI. Enforcement issues
- VII. Legal Issues

The TNRCC is committed to developing and implementing TMDLs. After a TMDL is approved, the TNRCC will begin preparing an implementation plan. The TNRCC has utilized the best available science to develop these TMDLs and is confident that these TMDLs provide the necessary technical basis for restoring water quality as defined by the narrative standard outlined in the TMDL. Outside of the scope of TMDL development, TNRCC implements a variety of ongoing permitting and enforcement programs that directly benefit the goal of phosphorus reduction in the North Bosque River. The implementation of these programs in the North Bosque River watershed will be modified as necessary based on the implementation plan. Finally, although the development and approval of TMDLs do not constitute rule making, the TNRCC is confident that it has established an open process for obtaining public input and comment on TMDLs.

I. Texas TMDL Development Process

The primary goal of the TNRCC's Total Maximum Daily Load (TMDL) program is to restore and maintain beneficial uses in impaired water bodies. For each impaired water body, the process in Texas requires the preparation of a TMDL. The TMDL is a technical analysis that 1) determines the maximum loadings of a substance causing impairment that a water body can receive and still attain and maintain its water quality standards and (2) allocates this allowable loading



between contributing point and non-point source categories in the watershed. Upon approval by the Commission, the technical analysis must be submitted to EPA for review and approval.

The process in Texas includes the preparation of an implementation plan which is a detailed description and schedule of the (regulatory and voluntary) management measures necessary to achieve the pollutant reductions identified in the TMDL. Implementation plans are developed with consultation and input from stakeholders in the watershed and are subject to review and approval by the Commission. The TMDL or pollutant load allocation and the implementation plan together create a watershed action plan which provides local, regional, and state organizations a comprehensive strategy for restoring and maintaining water quality in an impaired water body.

The TMDL development process has been designed to support the Commission's policy directive that TNRCC staff establish a clear delineation between TMDL allocation and an implementation plan. TMDLs can be completed accurately and expeditiously by first acquiring scientific information to determine how much pollutant reduction is necessary, rather than how pollutant reductions will be achieved. Once TMDLs are completed and approved, TNRCC and stakeholders can focus on selecting specific management options for achieving the pollutant reduction established by the TMDL.

The level of stakeholder involvement throughout the preparation of the implementation plan will be determined on a case-by-case basis. After a draft implementation plan report has been prepared with local stakeholder input, TNRCC will initiate a process for the review and approval of an implementation plan report. TNRCC staff will make the implementation report available for public comment, conduct a hearing, analyze the comments, make the necessary revisions based upon the public input we receive and bring the document to the commission for adoption.

II. General Water Quality Issues

Some comments indicate a concern that there are human health issues associated with phosphorus and/or other nutrients in the North Bosque River or Lake Waco. The types and loads or concentrations of nutrients in the North Bosque River watershed are issues of ecological health, not human health. There is little reason to believe that measured and predicted phosphorus levels would preclude physical contact with surface water in the North Bosque watershed nor contribute to impairment of the contact recreational use.

Many comments concerned the taste and odor of drinking water produced from Lake Waco, and whether that should be a focus of the TMDLs. The substances that cause the taste and odor in Lake Waco are not a threat to public health. Lake Waco has experienced seasonal taste and odor episodes for at least 40 years. While nutrient conditions in the lake may have some indirect influence on taste and odor episodes, there is no demonstrated linkage to assure that reducing nutrient concentrations will reduce or eliminate taste and odor episodes. Other Texas reservoirs with similar and higher nutrient and algae levels do not experience taste and odor problems. Measured and predicted nutrient levels in this reservoir cause it to be ranked in a "mid-range" when compared to other reservoirs in Texas. All reservoirs are subject to nutrient enrichment, but Lake Waco has not shown the advanced water quality effects associated with excessive nutrient enrichment. Even though Lake Waco is not included on the state list of impaired waters, and therefore not specifically addressed in these TMDLs, the recommended reduction in phosphorus

loading to Segments 1226 and 1255 should contribute to a reduction of nutrient enrichment for this reservoir. To the extent that taste and odor episodes are related to nutrient enrichment, this reduction should also reduce the incidence of these episodes.

The North Bosque River (Segments 1226 and 1255) was included in the 1998 Texas CWA § 303(d) List and deemed impaired under narrative water quality standards related to nutrients and aquatic plant growth. Those segments are also listed for contact recreation impairment based on the potential presence of pathogens; however, these TMDLs are not addressing that issue. TNRCC is evaluating the relationships between elevated levels of fecal coliform bacteria and the designated use of contact recreation in this and other streams in Texas. Consistent with guidelines from the Environmental Protection Agency (EPA) and other state programs the TNRCC has changed bacterial indicators of water quality from fecal coliform to *Escherichia coli* (*E. coli*) in fresh water and enterococci in marine water. This change was adopted in July 2000 in revisions to 30 TAC, Chapter 307 (Surface Water Quality Standards) and has been submitted to EPA for review and approval. Although the measurement of fecal coliform bacteria (normally found in the intestines of warm blooded animals and some cold blooded animals) has provided a convenient tool for the screening of water bodies for potential contamination from untreated wastewater, public health studies have not demonstrated a clear, reproducible relationship between fecal coliform levels and transmission of water borne diseases through recreational contact. The TNRCC will continue to monitor both fecal coliform and the more definitive *E. coli* and enterococci to develop accurate relationships for Texas surface water.

There were also comments about the overall health of the North Bosque River (and other adjacent watersheds) and requests that TNRCC do more to address these types of concerns. The TNRCC concurs that there may be other water quality concerns throughout the North Bosque River watershed (and other watersheds). However, the purpose of these TMDLs is to address phosphorus loading in the two impaired segments. While these TMDLs are focused on addressing water quality problems associated with nutrients, other TMDLs will be necessary to fully address other water quality impairments identified in the North Bosque River watershed.

III. Technical Issues associated with the TMDL report

Problem Definition and Endpoint Identification

The TNRCC has determined that the appropriate target for broad-scale North Bosque River TMDL allocation purposes is narrative in character, like the water quality standard it supports. Numerous comments recommended there should be quantitative goals for the TMDLs, in the form of numeric water quality standards or criteria. There were suggestions that narrative goals are not adequate for establishing the TMDLs or for evaluating the success of implementation. Some of those comments then objected to numbers found in the TMDLs, contending that those numbers constituted numeric criteria or standards for phosphorus that were inappropriately selected by TNRCC. One comment requested numeric criteria for many types of nutrients and related parameters, as well as phosphorus.

Under General Criteria, the Texas Surface Water Quality Standards [30 TAC, Chapter 307.4 (e)] say:

“Nutrients from permitted discharges or other controllable sources shall not cause excessive growth of aquatic vegetation which impairs an existing, attainable, or designated use. Site-specific nutrient criteria, nutrient permit limitations, and/or separate rules to control nutrients in individual watersheds will be established where appropriate after notice and opportunity for public participation and proper hearing.”

Also pertinent are the following statements from the Texas Surface Water Quality Standards [30 TAC, Chapter 307.4 (a)] regarding the applicability of general criteria:

“(a) Application. The general criteria set forth in this section apply to surface waters in the state and specifically apply to substances attributed to waste discharges or the activities of man. General criteria do not apply to those instances in which surface water, as a result of natural phenomena, exhibit characteristics beyond the limits established by this section. . . .”

Nutrients are natural components of natural systems, and nutrients are needed to maintain ecological health. Natural nutrient levels can be highly variable, influenced by weather and season, local geology and/or vegetation, and other things. The response of aquatic vegetation, including algae, to nutrient loading is also highly variable, influenced and often controlled by factors such as temperature, stream flow, light availability, and seasonal variations in biotic communities. For these basic reasons, establishing simple yet reasonable and appropriate numeric standards for nutrient concentrations is very difficult, and when possible is very site-dependent.

Biological and chemical data collected within the North Bosque watershed, and assessed during the TMDL development process, indicated that soluble phosphorus is the nutrient that would most often limit algal growth. Related studies indicated that annual average soluble phosphorus concentrations less than approximately 50 micrograms per liter ($\mu\text{g/L}$) would have some limiting effect on algal growth potential. In order to accomplish the technical analysis and run a quantitative model to determine where levels of phosphorus would not cause excessive growth of algae, a numeric target or range of targets was needed as a working assumption. The stakeholder committee selected a “preliminary target” of 30 $\mu\text{g/L}$ at a site near Meridian, which represented approximately 50% of the average concentration at that site. To achieve the 50% reduction in concentration at this point it was estimated that a 50% reduction in loading would be necessary. However, model output was ultimately presented in a probability curve form that did not require a specific concentration target to be identified in order to evaluate model predictions.

The assumption by some commentators that either the 30 $\mu\text{g/L}$ or 50 $\mu\text{g/L}$ soluble concentrations are *de facto* goals of the TMDL document is not correct. Those were working numbers, based on the best available in-stream algal growth response information and for discussion, but neither value is proposed by TNRCC as a numeric standard or criteria for TMDL implementation. Due to the size and variability within the North Bosque River watershed, appropriate nutrient criteria would vary geographically and temporally, and the establishment of single-value standards is not appropriate for this watershed. Model predictions suggest that annual average concentrations of soluble phosphorus at several index sites will often be near those discussion values.

The narrative goal is *to achieve reductions in the total-annual loading measured as passing specific index sites along the North Bosque River, with the reductions averaging approximately 50% across the watershed but varying between approximately 38% and 66% at the individual index sites.* This narrative load reduction target is expected to result in similar reductions in the annual-average concentration of soluble phosphorus at the index sites. The narrative goal is not predicated on the basis of conditions during any particular year, nor for any particular population of humans or dairy cows.

The most feasible parameter for measurement currently appears to be in-stream concentrations of soluble phosphorus. The numeric measures will vary at the different index sites, are likely to reflect longer term values (i.e. annual averages) rather than instantaneous concentrations, and are likely to be assessed against probability curves to account or allow for natural and unpreventable annual variations related to weather conditions. Annual average expression of numeric measures for these TMDLs is more appropriate and more feasible than daily loads or instantaneous limits. This approach is consistent with similar evaluations elsewhere and is more appropriate for the watershed because 1) project analyses utilized annual averages, 2) model calibration and predictions are stronger for annual averages, and 3) algal growth response to nutrient loading in a large watershed, such as this, occurs over longer time periods. The annual average is more feasible because daily loads or instantaneous limits linked to extremely dynamic environmental conditions cannot reasonably be defined or monitored.

The load and concentration reductions that result from the narrative goal of the TMDLs are expected to achieve the narrative water quality standards. If post-implementation assessment of the numeric measures of success indicate that the standard is not being attained, the implementation plan will include provisions for revisiting the analyses and/or developing additional controls or management measures to achieve success.

Source Identification

Several comments object to municipal wastewater treatment plants (WWTPs) being described as “major controllable sources” of phosphorus along with dairy waste application fields (WAFs). Comments along these lines cite the fact that total WAF loading within the watershed has been approximately five times as much as total WWTP loading, and suggest or imply that reductions in WWTP loading are not needed or appropriate at this time. In the context of the North Bosque River TMDLs, the term “controllable” should be understood to mean – subject to existing regulatory programs and requirements, and having known and effective control actions or management measures that can significantly reduce phosphorus loading to the stream system. Of the sources considered and modeled, only WAFs, WWTPs, and urban stormwater are subject to an existing regulatory program. Urban stormwater is not easily managed to reduce phosphorus loading and the effectiveness of such measures is unknown. The WWTPs are “major” sources because they dominate local conditions during low flow periods and have significant effects within stream channels immediately downstream of the discharge points. This is true even though WWTP loading is of moderate scope in the overall annual watershed total. The WAFs are “major” sources because they have provided loading that is disproportionately large on a per-acre basis, compared to all other sources; because they may have dramatic impacts on small streams or reservoirs within a short distance downstream during small to moderate rainfall events; and because WAFs dominate the overall annual watershed total loading.

Some comments took issue with source identification numbers from Table 3 and Figure 3 of the TMDL document. In particular, the numbers and pie chart indicating that approximately 80% of the gross loading “Above Stephenville” during the mid-90's originated from waste application fields was criticized as unfair and inaccurate, and attributed to “erroneous modeling.” The numbers in Table 3 and Figure 3 were calculated directly from the area (i.e. hectares) of each land use within subwatersheds and land-use-specific export coefficients (i.e. kilograms per hectare per year) developed from data collected in the North Bosque River watershed. The export coefficients were derived from data collected in small tributary streams (not in fields, not upstream from BMPs), and did not omit the assimilative effects of WAF BMPs. The data were collected under quality assurance plans approved by USDA and/or TNRCC. The gross loading numbers estimate the total loading that reached streams within a short distance from various land uses, but still some distance upstream from the North Bosque River index sites. The SWAT model did not play any part in developing the Table 3 and Figure 3 values – nor any other gross loading values presented or discussed. The SWAT output represents the “net loading” that is expected to actually pass the index sites, after some additional in-stream assimilation of phosphorus delivered to streams as “gross loading.” The TNRCC believes the gross loading estimates in Table 3, and most of the information in Figure 3, were generally accurate, represent conditions that existed when TMDL development began, and provide a valuable perspective on which sources to control. One error in Figure 3 has been identified: numeric values for loading in the bar graphs was presented as kilograms, but actually represented pounds. Correction of that error will reduce the magnitude of numbers on the bar graph axes, when converted to kilograms, but the shape of the bar graphs will not change. The pie charts are not affected, because the proportionate contributions by source are the same regardless of the units of measurement used.

Linkages Between Sources and Receiving Water (Modeling)

The TNRCC believes that the Soil and Water Assessment Tool (SWAT) watershed modeling has been more than adequate for the purpose of establishing the TMDLs, and now will begin developing an implementation plan and initiating implementation. Some modeling comments expressed concern that predictions of the future “may not be accurate” because of various details of model theory, operation, or calibration. Others suggested that the model must portray every individual facility or land unit that is or may be a source of phosphorus, every possible management practice or permit violation, and every foot of stream or water body up to the headwaters, to provide instantaneous water quality limitations for every moment of every day. In general, the modeling comments then request that more modeling be done to resolve all such details and uncertainties before any TMDL can be developed.

The TNRCC believes that the modeling used the best tool available, since the SWAT model was specifically developed to address large-watershed agricultural management issues and is widely used nationally and internationally for such purposes. Other modeling approaches were evaluated, and this approach was considered the most appropriate for this situation. The model development and operation were performed by the creators and sponsors of the SWAT model, who are among the most experienced and knowledgeable SWAT users available. Furthermore, the model operators are located in proximity to the North Bosque River watershed and were thus familiar with the physical watershed characteristics and able to participate in meetings and discussions of the technical work group or stakeholder committee.

Some comments contend that there was no true peer review of the modeling effort, suggesting that term can only be used for the kind of review applied to new scientific hypotheses by other research scientist. The generic SWAT model was appropriately peer reviewed when it was first developed. Peer review for specific TMDL applications is different. TMDLs are regulatory planning exercises, not pure science research to construct or alter basic theories. The “peers” for regulatory planning exercises include affected parties, those involved in developing the plan, and consultants or advisors that participate to assist them — that is a large part of what the stakeholder process is about. Through meetings of the stakeholder committee and technical work group, there were numerous opportunities for the appropriate involved “peers” to comment on and help guide data analyses, model development, and model prediction scenarios. The TNRCC believes that appropriate peer review for the North Bosque River TMDLs did occur.

The model analyses performed to develop the TMDLs involved numerous SWAT simulations, for several purposes. The first major purpose was to calibrate and verify the North Bosque River application of the model. Calibration used inputs that were actually measured, simulated over relatively short monitored periods, and compared model output to stream results that were actually measured during the corresponding period. Various rates or constants used by the model to calculate results were adjusted to match model output to observed data as closely as possible. Some customization of the model algorithms was done to improve its characterization of nutrient fluxes and BMPs. Verification consisted of applying the calibrated model to another portion of the data set to test the calibration settings. Adjustments to the "curve number" values were used to calibrate surface runoff calculations, and adjustments to the "cover factor" of the Universal Soil Loss Equation were used to calibrate sediment yield calculations. The curve number and cover factor adjustments were reasonable, within normal ranges and consistent with similar calibrations for sites throughout the United States, and consistent with theoretical limitations cited by some comments. The TNRCC believes the North Bosque River SWAT model was correctly and adequately calibrated and verified.

The second major purpose of model development was to prepare suitable initial condition scenarios, which were named "Existing" and "Baseline" (or "Future") for discussions and graphics. Long term planning based on predictive modeling, like these TMDLs, require initial condition or baseline model runs from which to estimate the effectiveness of changes. Predictive "forward looking" model simulations used a 38-year period of historical weather imposed on management practices, discharges, land use distributions, etc., that remained constant year-to-year in the model. This provided output that characterizes the range of variation to be expected because of weather. The "Existing" model scenario used management, discharge, and land use conditions like the calibration/verification simulations, but set constant and imposing the 38-yr weather condition variation. This provided a "before" case that is computationally similar to the predictive simulations. Another scenario referred to as "Baseline" (or sometimes "Future") used estimates of urban growth, with full-permitted discharge conditions for WWTPs, and full-permitted dairy cow numbers with concomitant adjustments to WAF acreage. Output from those "Existing" and "Baseline" scenarios predicted conditions expected before any TMDL-imposed management practices or controls take effect. The narrative goal of substantial phosphorus net loading reductions at various index sites is proposed relative to the "Existing" scenario results.

Some of the model cases and details involved in calibrating and verifying the model, and preparing the initial cases for evaluation purposes, were as follows:

- 1) Calibration and Verification
 - a) Use current estimate of cow numbers
 - b) Apply all manure on total amount of WAF (9,450 ha) at rate between N and P rate
 - c) WAF soil P concentration at 250 ppm (based on field study in mid 90's)
 - d) Use average discharge rate and concentrations from WWTP
 - e) Run for 10 years, but calculate average for years when observations made
- 2) Existing
 - a) Same as calibration, except run for 1960 through 1998
- 3) Baseline
 - a) Cropland area constant
 - b) Urban area increased by population growth (20%)
 - c) Permitted cow numbers (67,000) and permitted WWTP flow concentrations
 - d) Apply manure at N rate
 - e) Soil P at 250 ppm in WAF (6,375 ha)
 - f) Simulations for 1960 through 1998
 - g) Add 3 new point sources @ 1 mg/l total P and 0.75×10^{-6} L/d each)

It is not feasible to constantly change the Existing and Baseline model scenario(s) to represent daily changes that occur as the planning effort proceeds, in order to then resimulate all future predictions, as suggested by some comments.

The third major purpose of model simulations was to predict the environmental effect of various management practices or control actions. Many more predictive scenarios were simulated by altering management practices or controls from the Existing/Baseline model scenarios to represent potential TMDL measures, and thus provide predictions of the relative effectiveness of the potential measures. Ultimately, the model scenarios named "TMDL-e" and "TMDL-f" were developed by combining a suite of several management practices and control actions that appeared to effectively reduce phosphorus loads and concentrations at the index sites. Contrary to the allegations of several comments, the selected management practices and control actions were not chosen on the basis of acceptability by the dairy industry, nor by cities. Both groups have indicated in comments that management practices or control actions included in the final model scenarios are not considered acceptable by them.

Some comments contend that there is no margin of safety in the TMDL. In some cases because of inadequate peer review, in others cases because of uncertainty regarding the effect of nutrient levels on algal density or taste and odor. The implicit margin of safety discussed in the TMDL document pertains to model predictions that significant reductions in phosphorus loading are possible by using feasible management practices and control actions. Reductions in phosphorus concentrations are reasonably certain to result from the loading decrease. Significant reductions in phosphorus loading (with correlated reductions in concentrations) are the goal of the TMDLs. The margin of safety discussion is not intended to apply to indirect tertiary or quaternary effects like algal density or taste and odor issues. Algal density is affected by many uncontrollable factors as well as nutrient levels. Nor does the margin of safety pertain to the Lake Waco taste and odor

problem, which is not verifiably linked to or controlled by algae levels or nutrient concentrations in a predictable manner, and is not a target of the TMDLs.

Even though the TNRCC believes that the SWAT watershed modeling has been more than adequate for the purpose of establishing the TMDLs, model refinement is always possible, and TNRCC will support efforts to improve the model analyses as implementation proceeds, in coordination with affected parties and regional interest groups. Adjustments to the implementation plan can be made later if shown to be appropriate by the improved model analyses.

Some comments indicated concern or confusion regarding “time-weighted” versus “flow-weighted” presentation of model output. Presentation and discussion of time-weighted and flow-weighted depictions of model output were attempts to portray different perspectives on a complex issue. Time-weighted concentrations are shown in the TMDL figures that use concentration units. The TMDL figures that use load units represent the same perspective portrayed by previous flow-weighted concentration displays, but using different units. Both perspectives are important and must be incorporated in large scale nutrient management, and both perspectives were considered by TNRCC in developing the TMDL.

Loading Allocations

The use of annual average loads and concentrations in the TMDLs is more appropriate and feasible than daily loads or instantaneous limits. Annual average values are appropriate because 1) project analyses utilized annual averages, 2) model calibration and predictions are stronger for annual averages, and 3) algal response to nutrient loading in a large watershed occurs over longer time periods than a day. Annual average targets are also more feasible because daily loads or instantaneous limits linked to extremely dynamic environmental conditions cannot reasonably be defined or monitored. TMDL targets are not meant to be, and will seldom be useful as, “grab limits” for instantaneous enforcement of permit conditions.

Some comments suggest that the TMDLs are not adequate because the SWAT model does not portray individual sources specifically enough to simulate or assign facility-specific permit limits to every CAFO or WAF, or because the TMDLs do not state specific allocations for each of the specific types of sources. The TNRCC believes that the model analyses have been sufficient in quality and quantity to establish the stated TMDL goals as the basis for implementation planning. The SWAT model was never intended as a tool for setting individual permit limits; if such models are ever needed, perhaps they can be developed later. The TMDLs do establish reductions in pollutant loadings from the point source and nonpoint source categories as required by law. The process and steps for achieving those reductions will be determined in the implementation plan.

IV. Implementation Issues

The TNRCC believes that the many and conflicting concerns relating to implementation plan elements should be addressed as the implementation plan is developed, and that approval of the TMDL must occur first. Many comments stated that the full implementation plan must or should be available for review and discussion before comments on the draft TMDL can be made. These comments address a policy issue that is not unique or restricted to the North Bosque River TMDLs. There is a presumption that various elements of an implementation plan are embodied in the modeling or analyses. Current TNRCC policy is that implementation plans are developed after

TNRCC approves the TMDL allocation and the goals it establishes. That policy is consistent with existing Federal regulations regarding TMDLs. While the suite of management measures and controls simulated for the TMDL document provides a starting place for development of an implementation plan, and may identify possible management strategies of the eventual plan, the scope and sequence and ultimate form of each management strategy are not yet determined. Development of the implementation plan will be coordinated with concerned parties and ultimately open to public review and comment, similar to the TMDL.

V. Permitting Issues

A number of comments were submitted questioning the appropriateness of TNRCC issuing CAFO permits for expanding or new CAFO facilities until the TMDL and associated implementation plan are completed. The commission has addressed this issue twice in the past through the adoption of an interim policy in November of 1999, which was subsequently modified to address additional concerns about permitting in the North Bosque watershed.

VI. Enforcement Issues

Several comments were received expressing concern over the aggressiveness of the enforcement program in this watershed. Most encouraged a more aggressive program and some indicated that with more aggressive enforcement, the TMDL would not be necessary. The TNRCC enforces all of its rules aggressively and equitably and will continue to do so.

With the adoption of the statewide rule related to concentrated animal feeding operations in April of 1987 the TNRCC and its predecessor agency have attempted to fulfill the obligation of developing and implementing a vigorous and equitable permitting and enforcement program. The Texas State Legislature provided the agency broader enforcement authority in 1985, including authority to issue administrative penalties, during the same period of rapid expansion of the dairy industry in the Bosque River watershed. The adoption of the rule in 1987 related to animal feeding operations and established a permitting process for many of these facilities. The rule also provided the foundation for the agency to initiate enforcement activities which included administrative penalties. After a permit format was developed to reflect requirements in the rule, the agency staff focused on making contact with dairies in the Bosque River watershed which were subject to the permitting requirements for the first time. After providing a reasonable period of time for dairy operations to become familiar with the new regulation and to install necessary facilities and management changes to implement the program, the inspectors from agency offices in Waco, Arlington, and San Angelo added dairy operations to their routine inspection schedules. Violations were documented and notices of violation were sent to the operators. Formal enforcement actions leading to enforcement orders, some with administrative penalties, were issued for facilities that were not responsive to notices of violation.

After several years of inspectors working out of the existing regional offices, the agency created a satellite office in the City of Stephenville in 1996. This office was staffed with four inspectors and administrative staff. Having the inspectors located in the area allowed a more rapid response to complaints and inquiries from citizens and dairy operators in the watershed. The office adopted a policy of responding to any citizen complaint within 2 hours of receipt, even after hours and on weekends. In addition the inspectors initiated a program to inspect each dairy operation in the

Central Texas dairy outreach program area (Erath, Bosque, Hamilton, Johnson, and Comanche Counties) at least once each year. They also conducted follow-up inspections on operations that were issued a notice of violation as a result of the annual comprehensive inspection. Since 1997 the inspectors in this office have completed at least one annual inspection for every known dairy operation in the area.

VII. Legal Issues

The Constitutions and the Texas Administrative Procedures Act

Comments were received concerning the legal status of TMDLs, considering their anticipated consequences. Some expressed the opinion that these TMDLs are too ineffectual to accomplish anything, while others objected that they are so onerous they may destroy an industry. Nevertheless, both sides agreed that they are of sufficient regulatory effect that they must be adopted through formal rulemaking under the Texas Administrative Procedures Act. This objection arises from a fundamental misunderstanding of the result of the approval of a TMDL. A TMDL is a number used as a reference point for management of a specific pollutant in a segment of state water – it does not regulate any activity; it does not require or prohibit doing any act. It does not set commission policy, nor does it implement, prescribe or interpret law or policy. The law requiring the TNRCC to assess and protect state waters, plan water quality programs and implement water quality standards is stated in the Water Code sections described below. The commission's permitting policies are set out in its rules that include both state water quality standards and the commission's permitting parameters and procedures.

These TMDLs, in contrast to law and policy, represent a goal for pollutant reduction in two river segments. They are a planning tool and a permitting guidance, just like the waste load evaluations and waste load allocations that the TNRCC has been incorporating into state water quality plans for about 20 years. The water quality management plan, including these TMDLs, will continue to be used by the TNRCC for program planning and resource allocation purposes. The TMDLs establish the goal for setting permit conditions, but they do not mandate any particular conditions. The legislature and other state agencies may refer to it for their own planning purposes as well.

TAD asserted that these TMDLs violate constitutional and statutory prohibitions against taking of private property and governmental restrictions on private rights without due process. To the contrary, nothing in the TMDLs or in their supporting reports places any restriction on land use or personal action. They are findings consisting of two major parts - a determination of the major classes of sources of phosphorus deposition into the two river segments; and a determination that an average reduction by each of those classes in the amount of 50% of the phosphorus contributed will result in the segments' regaining and maintaining the narrative standard for nutrients. That standard is that there shall not be excessive nutrients in surface water that make the water esthetically unattractive or impair an attainable use.

The TMDL report also includes back-up material indicating that the 50% reduction is feasible. This information is included because EPA requires it as background for their assessment of whether the TMDL accurately predicts attainment of the water quality standard. However, the question answered by the commission and expressed in these TMDLs is not "How will the 50% reduction be achieved?" It is "Will achievement of a 50% reduction implement the water quality

standard?” By approving these TMDLs for submission to EPA and incorporation into the water quality management plan, the commission has determined only that the reduction, if achieved, will implement the standard.

The dairy industry objects that in the report too much of the existing phosphorus loading is attributed to them, and the City of Waco claims that not enough is allocated to that industry. The common theme is that the commission lacked sufficient accurate information to determine that the 50% reduction will implement the water quality standard. The commission is persuaded that the modeling done to assess relative potential for contribution of phosphorus was accomplished using a widely accepted model, calibrated and used in conformity with scientifically appropriate procedures generally accepted in the professional community. The results were not perfect; in our experience modeling never produces a 100% accurate picture of reality.

However, the reason for the use of the model was not to apportion “blame;” nor is the purpose or effect of the TMDL to assign responsibility for cleaning up the river. The model predicted, based on what is known about current permitted and actual land use in the watershed, how much phosphorus those classes of sources can potentially deliver to the streams. In cases like the Bosque, where there are pollutant sources whose actual loading limit is not prescribed by permit, such modeling is necessary in order for the commission to assess the possible loading that can occur. TAD is correct that the model doesn’t take into account the location of each dairy and waste application field, the management practices used on each one, or other individual characteristics. The executive director, together with the Texas State Soil and Water Conservation Board, will begin now to create a plan to implement these TMDLs. As part of that process they will assess the impact of mandatory and voluntary measures currently in effect in the watershed.

The City of Waco directs its comments to the perceived inadequacy of the TMDLs to assess the effects of dairy waste application fields on the taste, color and odor of Lake Waco. As pointed out elsewhere, these TMDLs were undertaken to determine what reduction in phosphorus loading to segments 1255 and 1226 will result in those waters’ meeting the narrative standard for nutrients. It was not the purpose of this particular project to assess the causes of aesthetic conditions in Lake Waco. If, as Waco asserts, the source of those problems is phosphorus traveling downstream from segments 1255 and 1226, a 50% reduction in that migration - no matter how it is ultimately achieved - will benefit the aesthetic problems in the lake. Those factors are not within the scope of these TMDLs, however, and did not govern the commission’s adoption decision.

Authority for Adoption

TAD questioned the legal authority of TNRCC to develop TMDLs.

The State of Texas is required by federal law to develop TMDLs. Section 303(d) of the Federal Clean Water Act (CWA) requires each state to identify water quality limited segments requiring TMDLs and submit a list of those water bodies to the Administrator of the Environmental Protection Agency (EPA). The same section requires that states calculate the total maximum daily load (TMDL) of each pollutant of concern that can be received by each listed segment. States are further required under federal regulation to incorporate TMDLs into their water quality management plans required under §208 of the CWA.

In Texas, state statutory provisions require the commission to establish the level of quality to be maintained in, and control the quality of, water in the state. (Texas Water Code (TWC) §26.011). Texas fulfills its obligations under §303(d) to list impaired segments and create TMDLs through functions assigned by the legislature to TNRCC. The 303(d) list is prepared by TNRCC as part of its monitoring, planning and assessment duties. (TWC §26.0135).

TMDLs themselves are part of the state water quality management plans that TNRCC is charged by statute to prepare. (TWC § 26.036). As the state environmental regulatory body, the commission has primary responsibility for implementation of water quality management functions within the State. (TWC §§26.0136, 26.127). The Executive Director of the TNRCC must prepare and develop, and the commission must approve, a comprehensive plan for control of water quality in the state. (TWC § 26.012). The list of impaired segments and resulting TMDLs are tools in water quality planning.

The commission is also charged with establishing water quality standards (and amending them as needed), as well as ensuring that each watershed in the state is assessed and monitored for compliance with the water quality standards. (*See* TWC §§ 26.0135 and 26.023). The Executive Director is required under TWC § 26.127 to establish water quality sampling and monitoring program for the state, and may enter into contracts or other agreements with other entities for laboratory services for water quality testing.

The commission also has primary jurisdiction over discharges into surface waters of the state. (*See* TWC § 26.001(20), 26.121 and 26.127). As the agency of the State charged with implementing the constitution and laws of this state relating to the conservation of natural resources and the protection of the environment, TWC § 5.012, the commission is authorized to perform any acts necessary and convenient to the exercise of its jurisdiction and powers, (TWC § 5.102).

Summary of Comments Received

Abbreviations and acronyms used:

TMDL	Total Maximum Daily Load	CWA	Clean Water Act
TNRCC	Texas Natural Resource Conservation Commission	mg/L	milligrams per liter
CAFO	Concentrated Animal Feeding Operation	ppm	parts per million; approximately equal to mg/L
AFO	Animal Feeding Operation	µg/L	micrograms per liter
WWTP	Wastewater treatment plant	ppb	parts per billion; approximately equal to µg/L
WAF	Waste application field		
BRA	Brazos River Authority		

Date Rcd.	Source	Summary of Request or Comment	Summary of TNRCC Action or Explanation
II. General Water Quality Issues			
10/23/00	Mayor of Bellmead (verbal)	Residents of Bellmead are concerned about the cost of water treatment associated with taste and odor issues in Lake Waco. The TMDLs should control effects on Lake Waco.	The TMDLs for the North Bosque River will reduce nutrient loading to Lake Waco, which may be beneficial. However, the influence of phosphorus on taste and odor is not direct or reasonably predictable, and no guarantees regarding taste and odor can be made. See Section II of Introduction to TNRCC Response to Comments.
10/23/00	concerned citizen (verbal)	TMDL "pamphlet" does not address tributaries of the North Bosque River, like Duffau Creek in Erath Co., which also have water quality problems. If there is a problem in Lake Waco, it must be worse in those small tributaries, and may affect private water wells.	Implementation strategies are not discussed in the TMDL report. However, as part of the implementation plan, specific management measures will occur in the subwatersheds of the North Bosque aimed at reducing specific sources of phosphorus loading. The mainstem of the North Bosque River cannot improve unless the tributaries do.
10/23/00	concerned citizen (verbal)	In other states, like Massachusetts, children have died because of water wells polluted by dairies, and this needs to be addressed in the North Bosque River area now.	Elevated levels of phosphorus the North Bosque cause no human health risk.

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10/23/00	concerned citizen, speaking for "business community of the region" (verbal)	The quality of water supplied from Lake Waco is vital to the businesses in the region, and to attracting new businesses. The economic welfare of hundreds of thousands of people is affected by the quality of Lake Waco. All businesses today must contend with more regulation than in the past. Something should be done now to reverse the deterioration of Lake Waco, before it gets worse.	The TMDLs for the North Bosque River will reduce nutrient loading to Lake Waco, which may be beneficial. However, the influence of phosphorus on taste and odor is not direct or reasonably predictable, and no guarantees regarding taste and odor can be made. See Section II of Introduction to TNRCC Response to Comments.
10/23/00	concerned citizen (verbal)	Stated support for statements by mayors of Stephenville and Waco.	TNRCC acknowledges the concern expressed, and notes the expression of concurrence with City of Waco positions, which are addressed elsewhere in this document.
10/23/00	Director of Utilities, City of Temple (verbal)	Temple supports other cities in their concern about diminishing water quality in the Bosque and Leon Rivers due to nutrients from dairy waste application fields. Measures to improve the Bosque should also help the Leon R.	See Section II of Introduction to TNRCC Response to Comments.
11/20/00	Mayor of Temple (written)		
10/23/00	concerned citizen (verbal)	Expressed general concern about the water and its effect on his generation's future.	TNRCC has similar concerns, and strives to protect water quality for all generations of Texans.
10/23/00	Mayor pro tem of Killeen (verbal)	Killeen's water source, the Leon River and Lake Belton watershed, contains concentrations of dairies similar to the N Bosque. Killeen supports Waco and other cities in efforts to address water quality problems, to help prevent similar problems in the Leon R watershed.	See Section II of Introduction to TNRCC Response to Comments.
10/23/00	concerned citizen, Chair of Waco Chamber of Commerce, speaking for business community (verbal)	The present and future health and economic well-being of our region, and our children's future, are at stake. The Chamber of Commerce urges TNRCC and other governing agencies to assure that current and future laws will be enforced.	See Section II of Introduction to TNRCC Response to Comments.

Date Rcd.	Source	Summary of Request or Comment	Summary of TNRCC Action or Explanation
10/30/00	concerned citizen, Chair of Waco Chamber of Commerce, speaking for business community (letter)	Designated uses of the North Bosque River should be expanded to include fishing and swimming, and those uses should be addressed in the TMDL.	Designated uses for the North Bosque River already include aquatic life use/support, and contact recreation. Measures implemented to address nutrient effects are likely to enhance aquatic life support, and can improve contact recreation support.
10/30/00	concerned citizen, Chair of Waco Chamber of Commerce, speaking for business community (letter)	TNRCC should commit to the businesses, cities, and citizens along the river and Lake Waco that the proposed TMDL will in fact restore water quality to what it was 10 to 20 years ago.	The TMDL will improve water quality, and TNRCC intends that the improvement will support appropriate uses. Reference to some past date provides no measurable basis for evaluating water quality. Taste and odor issues have existed in Lake Waco for more than 20 years, and there can be no guarantee that will change, since nutrients have only indirect effects on taste and odor.
10/23/00	concerned citizen (verbal)	Water quality in L Waco is a concern for the people of McLennan Co, because the water tastes and smells bad. He supports "TNRCC's proposal that will go before the Texas state legislature this January." Although not perfect, that proposal (the TMDL?) is "certainly a step in the right direction."	See Section II of Introduction to TNRCC Response to Comments.
10/23/00	Mayor of Lacy Lakeview (verbal and written)	Taste and odor of Lake Waco water have caused complaints by citizens. City management is concerned about phosphorus from North Bosque River watershed. City managers concur with assessment by Waco mayor, and support those comments and suggestions.	See Section II of Introduction to TNRCC Response to Comments.
12/04/00	Mayor of Woodway (written)	Woodway supports the City of Waco efforts and requests that TNRCC protect water quality in the region.	See Section II of Introduction to TNRCC Response to Comments.

Date Rcd.	Source	Summary of Request or Comment	Summary of TNRCC Action or Explanation
10/23/00	concerned citizen, Chair of the Texas Parks & Wildlife Fisheries Advisory Board, on behalf of anglers (verbal)	Outdoor water-based recreational opportunities contribute greatly to the quality of life. Fishing has declined in the upper Bosque River, and consumption advisories are "inevitable" if measures are not taken now. Algae causes "ring around the boat" in Lake Waco - where does it come from? Recreational use of Lake Waco could decline if water quality is not protected, with significant economic ramifications. Speaker urges TNRCC to take steps to ensure that water quality in the Bosque River and Lake Waco will not be diminished, and will support recreational opportunities for future generations.	These TMDLs for nutrient impacts will improve water quality in the Bosque River basin. However, it is not possible to predict or guarantee how or whether nutrient controls will affect recreational use or fishing. See Section II of Introduction to TNRCC Response to Comments.
10/23/00	member of Waco City Council (verbal)	Speaker endorsed and supported the comments of the McLennan Co Judge, the Mayors of Waco, Woodway, Lacy Lakeview, and Bellmead, "and others who have spoken on behalf of the objective measurement and the protection of the watershed of Lake Waco."	TNRCC acknowledges the support of the other commentors, and notes the expression of concurrence with City of Waco positions. See Section II of Introduction to TNRCC Response to Comments.
12/15/00	City of Waco (written)	The City of Waco urges the Executive Director to rescind the draft TMDLs and prepare new proposed TMDLs along the lines recommended by the City.	TNRCC believes that it is now more important to move forward on the Bosque River issues than to reconsider the TMDL process. The implementation plan will provide confidence that goals of the CWA will be achieved.
10/23/00	concerned citizen, on behalf of the Water Quality Task Force of the Greater Waco Chamber of Commerce (verbal and written)	The business community of the greater Waco area share the concerns to be expressed by the Brazos River Authority, and requests that TNRCC address those concerns.	TNRCC acknowledges the concern expressed, and notes the expression of concurrence with Brazos River Authority (BRA) positions. The BRA concerns are addressed elsewhere in this document.
10/23/00	concerned citizen, on behalf of M&M Mairs (verbal)	M&M Mairs located in Waco in part because of the availability of milk and water supplies. They are required to treat their wastes to protect water quality. In order to ensure that existing manufacturing facilities remain viable, and to attract new industries to the area, it is imperative that water quality be maintained, and that any other industry that impacts water resources be environmentally responsible.	TNRCC agrees that water quality is important, and that any source of adverse impacts to water resources should be held responsible.

Date Rcd.	Source	Summary of Request or Comment	Summary of TNRCC Action or Explanation
10/23/00	concerned citizen, on behalf of the Centex Chapter of the American Water Works Association (verbal)	Without reasonably-priced water, the economic condition of the region will eventually suffer. Cost has increased due to pollution. Centex AWWA supports the positions of the cities, including the need for numerical limits to improve the TMDL.	TNRCC acknowledges the concern expressed, and notes the expression of concurrence with city positions (addressed elsewhere in this document). See Section II of Introduction to TNRCC Response to Comments.
12/15/00	Rangeland Consultants Inc. (written)	Phosphorus is essential to all life forms, and has no known direct toxic effects on humans or animals.	True. TNRCC has never said or contended otherwise, although many verbal comments seem to indicate confusion about this issue. The TMDLs do not presume any toxic or health effects on humans or animals due to phosphorus.
10/23/00	County Judge, McLennan Co. (verbal)	A definite solution to water quality problems, that all can agree upon, is needed. Some compromise may be needed.	The Commission agrees that the water quality problems in the North Bosque watershed must be addressed and solved. These TMDLs are the first of two steps needed to restore water quality in the North Bosque; the second step is development of the implementation plan.
11/28/00	Mayor of Meridian (written)	Meridian agrees that development of a TMDL is absolutely necessary to protect the North Bosque River, and the city wants to assist in a fair and equitable manner.	The TNRCC agrees, and appreciates the City's offer of assistance.
12/15/00	City of Waco (written)	Since Lake Waco is the receiving reservoir for loadings from the listed North Bosque River segments, the TMDL should expressly consider the effect on Lake Waco of targeted reductions of loading to the River, and provide documentation that the proposed actions to reduce nutrient loading will also improve or protect water quality in 'downstream water bodies.'	TMDLs address segments on the 303(d) list. There is no requirement to document effects outside the TMDL watershed. There is no scientifically verified linkage that would assure nutrient reductions would improve taste and odor.
11/09/00	Texas Parks and Wildlife Department (written)	Many types of wildlife depend on the Bosque River. Aquatic life can be stressed by nutrient loading. Fish kills and pollution complaints have increased since 1974 and "are related to growth of the dairy industry..."	These are among the factors that led to development of the TMDLs for the North Bosque River watershed.
10/30/00	concerned citizen (written)	Writer states that Lake Waco water tastes very bad, but that the causes are complex, at least partly natural, and involve multiple sources. Blaming dairies as the sole cause is just local politics.	See Section II of Introduction to TNRCC Response to Comments.

Date Rcd.	Source	Summary of Request or Comment	Summary of TNRCC Action or Explanation
12/15/00	National Wildlife Federation (written)	NWF respectfully requests that the TNRCC step back and re-evaluate the approach to TMDLs illustrated by this document. TMDLs should provide sufficient information to inspire confidence that goals of the Clean Water Act will be achieved. This document does not pass that basic test.	TNRCC believes that it is now more important to move forward on the Bosque River issues than to reconsider the TMDL process. The implementation plan will provide confidence that goals of the CWA will be achieved.
11/09/00	Texas Parks and Wildlife Department (written)	The scope of the TMDLs is too narrow, and should address nutrient impacts in Lake Waco.	TMDLs address segments on the 303(d) list. Exclusion of Lake Waco from the TMDL was a policy decision. The TNRCC believes that nutrient reductions by these TMDLs may help the Lake Waco situation, and cannot hurt, but nutrients are secondary or tertiary contributors to the problem and there can be no guarantee made regarding taste and odor results.
III. Technical Issues			
12/15/00	Texas Association of Dairymen and Dairy Farmers of America (written)	The problem definition is flawed - To the extent that any exists, the TMDL lacks adequate peer review.	See Section III of Introduction to TNRCC Response to Comments.
10/23/00	Brazos River Authority (verbal)	The N Bosque R TMDLs should advance sound numerical standards.	See Section III of Introduction to TNRCC Response to Comments.
10/23/00	Mayor of Woodway, speaking for the "community of cities" (verbal)	The TMDL standard needs to be numeric and objective, not narrative or subjective.	See Section III of Introduction to TNRCC Response to Comments.
10/23/00	Brazos River Authority (verbal)	Narrative standards in TMDLs are subjective, elusive, and nonquantifiable. Numeric standards would set a scientific benchmark from which to measure success and remove subjectivity. BRA recommends numeric standards for the TMDLs.	See Section III of Introduction to TNRCC Response to Comments.

Date Recd.	Source	Summary of Request or Comment	Summary of TNRCC Action or Explanation
10/30/00	concerned citizen, Chair of Waco Chamber of Commerce, speaking for business community (letter)	TNRCC should identify a quantifiable measurement for demonstrating compliance with the TMDL and attainment of water quality goals.	See Section III of Introduction to TNRCC Response to Comments.
12/15/00	Texas Association of Dairymen and Dairy Farmers of America (written)	The problem definition is flawed - The model is based on Lake Waco, not the Bosque River; therefore, the endpoint is wrong and there is no margin of safety.	The SWAT model simulated the Bosque River watershed, and does not include Lake Waco. The TMDLs are based on the SWAT watershed model.
12/15/00	Texas Association of Dairymen and Dairy Farmers of America (written)	The problem definition is flawed - The TMDL does not determine the scientifically appropriate maximum daily load, but instead is based on an arbitrarily set load/target and contains assumptions about loading allocations, sources, linkage and implementation plans.	See Section III of Introduction to TNRCC Response to Comments.
10/23/00	Director of Utilities, City of Temple (verbal)	Temple strongly recommends a quantitative numerical standard for protecting the rivers, instead of the narrative standard contained in the draft TMDL. "This will allow a clear and precise standard as opposed to one open to various interpretations."	See Section III of Introduction to TNRCC Response to Comments.
11/20/00	Mayor of Temple (written)		
10/23/00	concerned citizen (verbal)	Speaker alluded to the scientific difficulty and uncertainty associated with assigning fixed numeric standards for nutrients, and to recent Congressional action to divert TMDL funds to research to address such issues. He stated that the BRAC and TNRCC "struggled under very adverse circumstances to do the very best job that could be done". He then stated that the TMDL goal of 50% reduction, "regardless of any increase in numbers, people or cattle," is numeric and is the best that can be done.	TNRCC acknowledges this statement of support.
12/04/00	Mayor of Woodway (written)	Woodway is concerned about reliance on subjective narrative nutrient standards for the TMDL, and encourages establishment of a numerical standard to insure the TMDL can be sufficiently monitored and enforced.	See Section III of Introduction to TNRCC Response to Comments.

Date Rcd.	Source	Summary of Request or Comment	Summary of TNRCC Action or Explanation
12/15/00	Texas Association of Dairymen and Dairy Farmers of America (written)	The problem definition is flawed - No impairment caused by phosphorus has been identified. The TMDL "will only 'potentially' solve a purely aesthetic appearance of algae blooms in the Bosque River during the six or seven times a year in which the river flows."	See Section III of Introduction to TNRCC Response to Comments.
12/15/00	City of Waco (written)	The soluble phosphorus criterion of 30 ppb selected by the BRAC is more justifiable than a 50 ppb target that resulted from simulations of BMPs acceptable to the dairy industry.	See Section III of Introduction to TNRCC Response to Comments.
10/23/00	President, Texas Association of Dairymen (verbal)	Based on previous meetings with or involving TNRCC, TAD had the understanding that the TMDLs would be based on percentage reductions in loading rather than instream concentrations of phosphorus. However, the published draft TMDLs appear to set an instream target of 30 parts per million (Note: transcript says million, but he may have said billion). TAD requests that TNRCC clarify that the TMDLs require percent reductions in loading rather than setting a target level for instream concentrations.	See Section III of Introduction to TNRCC Response to Comments.
12/15/00	Texas Association of Dairymen and Dairy Farmers of America (written)	The SWAT model "sets a stream concentration of 30 ppb below Meridian" as the TMDL target, despite any statements contained in the TMDL document. That is not a reasonable or attainable target.	See Section III of Introduction to TNRCC Response to Comments.
12/15/00	Rangeland Consultants Inc. (written)	Scientific literature, and data from natural pristine streams, indicate that background concentrations of phosphorus vary widely (i.e. 0 to 1480 ppb), and often approximate 30 ppb as a long term average. Therefore, 30 ppb seems to be an arbitrary value for an instream target, and was not derived from scientific peer-reviewed research.	It is true that natural nutrient concentrations often vary widely in space and time, and that natural waters often have sufficient nutrients to support algal blooms. However, goals for the North Bosque River TMDLs were developed from watershed-specific data and analyses; and, the TMDL goals do not include any fixed concentration target, of 30 ppb or any other, as is presumed by this comment.

Date Recd.	Source	Summary of Request or Comment	Summary of TNRCC Action or Explanation
12/15/00	National Wildlife Federation (written)	Numeric criteria are needed for several nutrient species and response parameters as well as phosphorus in order to assess attainment of water quality standards. Based on the draft Yr2000 303(d) List, additional parameters should be addressed by the TMDLs.	TMDLs for other parameters listed on the 303(d) List will be initiated by TNRCC. See Section III of Introduction to TNRCC Response to Comments.
11/09/00	Texas Parks and Wildlife Department (written)	The original preliminary concentration target range of 15 to 50 µg/L soluble phosphorus is reasonable for the North Bosque River system.	That preliminary target range was the general (but not unanimous) consensus of technical and public participants in the data analyses.
12/15/00	Texas Association of Dairymen and Dairy Farmers of America (written)	<p>Jurisdictional issue - The TMDLs exceed Commission jurisdiction because a TMDL is inappropriate for phosphorus in this case.</p> <p>-First, EPA's list published under 33 U.S.C. §1314(a)(2) does not set forth a numeric criteria for phosphorus. TNRCC's standards for phosphorus are also narrative, and by definition are not suitable for calculation.</p> <p>-Second, science does not show that phosphorus is suitable for calculation.</p> <p>-Third, TNRCC has made unsupported assumptions that dairies and other industries have produced nutrients that have caused excessive growth of aquatic vegetation which impairs an existing, attainable, or designated use.</p>	<p>1) A great deal of science, from this project and others, shows that phosphorus loading and concentrations can be calculated.</p> <p>2) Water quality data from the North Bosque River watershed has identified existing or potential impairments within the watershed, and also quantified the contributions of various sources.</p> <p>3) See Section III of Introduction to TNRCC Response to Comments.</p>
12/15/00	Brazos River Authority (written)	The TMDLs are not quantitative enough. Definitive numeric standards are needed to measure success of the TMDLs.	See Section III of Introduction to TNRCC Response to Comments.
12/15/00	City of Waco (written)	Figures 4-8 of the draft TMDL indicate that the North Bosque R will not achieve the 30 ppb BRAC target anywhere, and will not achieve the 50 ppb TNRCC target at the majority of river sites.	The figures use model output to illustrate the magnitude of change anticipated from one feasible set of management practices. The TMDL targets are not likely to be single values at any site, nor identical between sites.
12/15/00	City of Waco (written)	The TNRCC should set numerical criteria for phosphorus concentrations in the North Bosque River segments, instead of using the narrative nature of the standard to justify an indefinite endpoint.	See Section III of Introduction to TNRCC Response to Comments.

Date Rcd.	Source	Summary of Request or Comment	Summary of TNRCC Action or Explanation
11/28/00	Mayor of Meridian (written)	Meridian believes that a numeric standard is necessary, not just a percentage reduction. The 50% reduction goal puts an undue burden on WWTPs. In setting a percentage reduction, TNRCC also needs to verify if that is percentage of present or percentage of future production.	The percent reduction target is not related to production of anything, but to the amount of loading observed at points in the North Bosque River. The reduction is calculated relative to current river transport. See Section III of Introduction to Response to Comments.
10/23/00	Mayor of Waco (verbal)	Annual average values are not adequate as targets. "Daily" limits that will affect or limit effects of individual storm events are needed.	See Section III of Introduction to TNRCC Response to Comments.
12/15/00	National Wildlife Federation (written)	TMDLs must ensure compliance with water quality standards during all years, at all times during all years, including during critical conditions. These TMDLs do not even assess seasonal compliance.	This comment does not consider the ecological realities of nutrient issues. Attempting to address such concerns in great detail would only prevent any real progress while more analyses are done.
10/23/00	Mayor of Waco (verbal)	Numeric standards should be established for the TMDL, not subjective, vague narrative criteria. Numeric standards would be more protective, more clear, and easier to implement.	Application of numeric criteria for assessing TMDL success will be considered during development of the implementation plan. See Section III of Introduction to TNRCC Response to Comments.
10/25/00	concerned citizen (written)	North Bosque River has become more polluted due to dairy growth. Pollution has reduced fish populations in the river. No nutrient should be put in the river.	The TMDLs are attempting to address these general concerns.
11/28/00	Mayor of Meridian (written)	City WWTPs should not be considered a major controllable source. WWTPs contribute only 10% of the loading. Load reductions should be assigned to the primary contributor, CAFOs, which contribute five times as much loading as WWTPs.	There are three regulated sources in the watershed: CAFOs, WWTPs, and urban runoff. The TMDLs recognize the relative contributions by sources, and allocates reductions proportionately.
11/20/00	Mayor of Clifton (written)	Rural sources provide approximately 80% of phosphorus loading in the North Bosque River watershed, while urban sources (WWTPs and urban runoff) provide approximately 20%. WWTPs should not be labeled or considered "major sources" in comparison to dairy waste application fields. Other rural sources like cropland or pastures are controllable if regulatory agency decides they are.	The TMDLs recognize the relatively small contribution by urban sources, and allocates reductions proportionately.

Date Rcd.	Source	Summary of Request or Comment	Summary of TNRCC Action or Explanation
12/15/00	National Wildlife Federation (written)	Discharges from CAFO lagoons do not appear to be included or characterized as point sources.	Discharges from CAFO lagoons were not specifically modeled. Discharges under extreme weather conditions authorized by permits are too rare and unpredictable for large scale modeling. Discharges under normal conditions are permit violations, most appropriately dealt with via enforcement programs.
12/15/00	Texas Association of Dairymen and Dairy Farmers of America (written)	Other Legal Authority - The TMDLs may not have used quality assured data as required by Texas Water Code.	Data from TNRCC, TIAER, or the Brazos River Authority were collected under quality assurance plans.
12/15/00	City of Waco (written)	By a wide margin, the single most significant source of phosphorus in the watershed is runoff from WAFs, and it is difficult to understand why the TMDL would conclude that a 50% reduction in both point and nonpoint sources is necessary.	See Section III of Introduction to TNRCC Response to Comments.
12/15/00	City of Waco (written)	TIAER studies indicate that the export coefficients for phosphorus associated with dairy WAFs are much larger than for any other source in the watershed.	True, and that is reflected in the TMDL document information regarding sources of phosphorus loading.
12/15/00	City of Waco (written)	The loading from WAFs are two to five times greater than the loading percentages contributed by the wastewater treatment plants.	That is how the TMDL information portrays the situation.
12/15/00	Rangeland Consultants Inc. (written)	Experimental application of municipal biosolids has increased rainfall infiltration and decreased surface runoff from application areas. A rhetorical question then seems to imply that there may be little if any surface runoff from WAFs in the Bosque watershed, due to extensive application of similar biosolids.	Certainly biosolids can improve soil characteristics when correctly and carefully applied. Experimental applications are often more carefully managed than operational waste management applications. Surface runoff from Bosque WAFs does occur; in addition, phosphorus can be exported via subsurface flow.

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12/15/00	National Wildlife Federation (written)	The TMDLs contain no appropriate margin of safety. NWF does not accept the margin of safety claimed in the document.	The TNRCC believes that the discussion of margin of safety in the TMDL document is pertinent to the model prediction that significant reductions in net phosphorus loading can be achieved through management measures and control actions known to be effective. See Section III of Introduction to TNRCC Response to Comments.
12/15/00	National Wildlife Federation (written)	Phosphorus concentrations predicted by model simulations "...often would exceed the point of limiting algal growth," which is not sufficient to demonstrate compliance with water quality standards.	As pointed out by other commentors, pristine natural waters often exceed nutrient concentrations that would limit algal growth. Water quality standards do not prohibit the growth of algae, but indicate that it should not be excessive due to human sources.
10/23/00	concerned citizen, on behalf of the Water Quality Task Force of the Greater Waco Chamber of Commerce (verbal and written)	Water is one of the most important resources in the region or state. We are already behind the curve in protecting water quality, and this TMDL will be the basis for future protection of the water resource. It is essential that the TMDL be technically sound.	The TNRCC believes that the TMDL is technically sound. It is based on large amounts of watershed-specific data, extensive analyses, and numerous model simulations.
12/15/00	City of Waco (written)	The referenced modeling does not achieve the targeted loading and instream concentration reductions for the 'future' even when permits are frozen at mid-90s herd sizes and WAF acreage. What the TNRCC modeled as 'future' in this draft TMDL bears no resemblance to the future that is actually being allowed to develop on the North Bosque River. Therefore, the model results can be interpreted, at best, to indicate that conditions in the river will remain close to existing impaired conditions as development in the watershed continues.	The TNRCC does not agree with this interpretation. The model prediction figures indicate that post-TMDL concentrations "will equal or exceed" existing (as predicted by the model) concentrations at two of five sites and on rare occasion. Furthermore, the "equal or exceed" condition is only predicted to occur when the concentrations are within the acceptable target range developed from watershed analyses, at sites that are generally not exceeding the target range today. Review of the numeric model output also indicates that, on the average, there will be significant reductions in phosphorus concentrations from current levels to those predicted at full-growth permitted levels.

Date Rcd.	Source	Summary of Request or Comment	Summary of TNRCC Action or Explanation
12/15/00	City of Waco (written)	Even the "existing" model scenario was based on cow numbers and WAF acreage not representative of the increases allowed by TNRCC since the mid-90s.	All long-term model analyses or planning require an initial reference time, and cannot be constantly revised to include "today's" data. Simulations used the most current and reliable data available when the model scenarios were developed.
12/15/00	City of Waco (written)	It is likely that the model greatly underpredicts phosphorus loads in the watershed during high flow events.	See Section III of Introduction to Response to Comments.
12/15/00	City of Waco (written)	There is no justification for the claim that the modeling results are 'environmentally conservative.'	One reason is that WWTP discharges are over-estimated by using anticipated permit limits instead of realistically probable flows or loading – which is required by federal TMDL guidance.
12/15/00	Rangeland Consultants Inc. (written)	"Significant" stormflow events occur a small percentage of the time in the North Bosque River. Nonpoint source loading only affects the river during those short rare periods.	Long distance transport of runoff loading may only occur during such "significant" events, but the TMDL must also protect the tributary streams and PL566 reservoirs that do receive loading from even minor rainfall runoff events.
12/15/00	City of Waco (written)	There appears to be no justification for the claim that thorough analysis and peer review contributed to minimization of the uncertainty in the conclusions.	There is little uncertainty that instream loading and concentrations can be significantly reduced via a feasible implementation plan, which is the stated goal of the TMDLs. There is more uncertainty about how algae mass or growth rates will respond to those reductions, but that is always the case, and those are not TMDL targets.
12/15/00	Rangeland Consultants Inc. (written)	The linkage between land-based management of phosphorus sources and phosphorus impact areas is typically not simple and direct. Removing 50% of biosolids from the North Bosque watershed is not likely to reduce phosphorus loading by 50%.	TNRCC agrees that these linkages are not simple and direct. This is one reason that complex models are used to assess such linkages.
12/15/00	Rangeland Consultants Inc. (written)	The SWAT model of the North Bosque watershed does not have adequate spatial resolution to provide detailed management plans for each specific land use or individual site.	True, but such resolution is not needed at this time. More detailed modeling may be developed, if needed, to support the implementation plan.

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12/15/00	Michael Sullivan and Associates, Inc., submitted on behalf of the Texas Association of Dairymen (written)	The SWAT model is unsuitable for TMDLs due to its use of the Curve Number method, the Universal Soil Loss Equation, and simplified instream phosphorus decay kinetics. A model review report (Ward and Benaman 1999) is cited as supporting this contention.	The Ward & Benaman report does NOT indict the SWAT model on these issues. The model was calibrated, in part, by adjusting the curve numbers and USLE cover factor. Those adjustments were not improper "stretching" of the model, but represent appropriate calibration of empirical equations. The phosphorus decay kinetics used in SWAT were not as simple as described by the commentors, and while not the most complex possible, did improve simulation of assimilation in the stream channels.
12/15/00	Michael Sullivan and Associates, Inc., submitted on behalf of the Texas Association of Dairymen (written)	Calibration and verification of the SWAT model were inadequate.	TNRCC believes that the SWAT model was adequately and correctly calibrated and verified by skilled users with first-hand knowledge of the Bosque River watershed, with adequate review by the Technical Work Group. See Section III of Introduction to Response to Comments.
12/15/00	Michael Sullivan and Associates, Inc., submitted on behalf of the Texas Association of Dairymen (written)	The SWAT model does not specifically simulate 40 PL566 reservoirs, which may trap initial loading from storm events and thus ameliorate dairy and WAF impacts to a greater extent than the model predicted.	The scale of the modeling effort made it infeasible to simulate the watershed at that level of detail. However, the presence, effect, and water quality in those PL566 reservoirs was addressed by parallel studies and modeling efforts, and has been considered by TNRCC staff.
12/15/00	Michael Sullivan and Associates, Inc., submitted on behalf of the Texas Association of Dairymen (written)	The North Bosque River can be affected by stormwater loading only 6 to 17 days per year, so nonpoint source controls are not needed.	TNRCC is required to identify and quantify all sources - point and nonpoint - of pollutant loading contributing to an impairment as part of a TMDL. Available data clearly indicates both point and nonpoint source pollution contribute to impairment in the North Bosque River. To restore water quality, management measures will be targeted throughout the watershed at specific, controllable sources of phosphorus loading.

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12/15/00	Michael Sullivan and Associates, Inc., submitted on behalf of the Texas Association of Dairymen (written)	The nonpoint source loading only affects Lake Waco.	TNRCC is required to identify and quantify all sources - point and nonpoint - of pollutant loading contributing to an impairment as part of a TMDL. Available data clearly indicates both point and nonpoint source pollution contribute to impairment in the North Bosque River. To restore water quality, management measures will be targeted throughout the watershed at specific, controllable sources of phosphorus loading.
12/15/00	Michael Sullivan and Associates, Inc., submitted on behalf of the Texas Association of Dairymen (written)	Imposing additional management practices on dairies will not result in reducing nuisance algae blooms in the Bosque River.	Imposing additional nutrient management practices on dairies may not reduce algae blooms, since the linkage between BMPs and stream condition is seldom simple or direct (ref Rangeland Consultants, Inc.), and indirect effects on algae mass are notoriously difficult to predict. That is a reason to structure a flexible implementation plan to allow for additional phases as needed to achieve the TMDL targets.
12/04/00	Mayor of Woodway (written)	Woodway urges TNRCC "to consider appropriate peer review."	TNRCC has sought appropriate peer review throughout the TMDL development process, and has extended the comment period to allow several parties to perform additional review.
12/15/00	City of Waco (written)	Even though TNRCC is continuing to authorize expansion of the dairy herd size and WAF acreage, the "future" modeling scenario assumed that CAFO permits would be frozen at mid-90s numbers, herd size, and WAF acreage.	All long-term model analyses or planning require an initial reference time, and cannot be constantly revised to include "today's" data. Simulations used the most current and reliable data available when the model scenarios were developed.
12/15/00	City of Waco (written)	SWAT calibration was poor for high flow periods, when WAF loading would be largest; therefore, loads attributable to WAFs may be much larger than simulated with the model.	See Section III of Introduction to Response to Comments.
10/23/00	President, Texas Association of Dairymen (verbal)	TAD requests that TNRCC "do everything possible to ensure that the data and watershed models upon which the TMDLs rely are accurate." If not accurate, the analyses could have an unwanted effect on the dairy industry.	See Section III of Introduction to Response to Comments.

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10/23/00	Brazos River Authority (verbal)	The watershed model requires additional review. BRA staff have reservations about details of how waste application fields were simulated and the amount of storm water data used in calibration of the model.	See Section III of Introduction to Response to Comments.
10/23/00	Brazos River Authority (verbal)	TNRCC staff should continue to allow for in-depth scientific peer review of the TMDL model itself. BRA recommends "the TNRCC should give reconsideration to this TMDL process."	TNRCC believes that these issues have been addressed using the best available science and tools. Stopping progress towards TMDL adoption and implementation in order to reconsider matters that have already been subject to extensive analyses, peer review, and coordination would only slow the improvement of water quality. TNRCC believes that the better course is to implement these TMDLs as expeditiously as possible, and provide for adjustment or correction as needed if progress towards water quality goals is not sufficient. See Section III of Introduction to Response to Comments.
12/15/00	City of Waco (written)	Despite evidence that soil phosphorus concentrations at many dairy WAFs far exceed 200 ppm, no effort apparently was made to model the contributions from these many overloaded fields.	See Section III of Introduction to Response to Comments.
12/15/00	City of Waco (written)	Although information was presented that phosphorus export coefficients are higher for WAFs receiving liquid wastes than for solid wastes, there is no indication that SWAT simulated application of liquid wastes.	SWAT did not explicitly simulate application of liquid manure, but did increase the quantity of dry manure applied by a commensurate amount.
12/15/00	City of Waco (written)	SWAT modeling ignored subsurface and surface return flows from WAFs under baseflow conditions, resulting in their effects apparently erroneously being attributed to the municipal wastewater treatment plants.	Simulations of subsurface flows using a more detailed model of smaller areas predicted that subsurface export would be a small percentage of the overall phosphorus export budget. Regardless of how seepage from WAFs was depicted in the model, there was no such erroneous attribution regarding WWTPs.

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12/15/00	City of Waco (written)	The draft TMDL presents no information regarding how the SWAT model was calibrated or verified, and no details on the simulation of WAFs within the SWAT model.	Information of this type was discussed at technical work group meetings, which were open to all interested parties. Papers describing the North Bosque model development will soon be published in technical journals.
10/23/00	Mayor of Stephenville (verbal at hearing; hard copy received 11/27/00)	If the goal is to return the Bosque River to acceptable water quality, then the scientific data does not support the imposition of a TMDL of 1 mg/L on WWTPs.	See Section III and IV of Introduction to Response to Comments.
12/15/00	City of Waco (written)	The model should be run to determine the assimilative capacity of the North Bosque River such that instream targets are met; it should not focus on which specific BMPs may or may not be acceptable.	The model was used to predict the effects of various BMPs. Selection of BMPs for the implementation plan will be based on their effectiveness.
10/23/00	Brazos River Authority (verbal)	The TMDL figures for phosphorus concentration indicate that future concentrations with the TMDL in place "will equal or exceed the soluble phosphorus levels now existing without a TMDL in place." This is inconsistent with the goal of the TMDLs.	The model prediction figures indicate that post-TMDL concentrations "will equal or exceed" existing (as predicted by the model) concentrations at two of five sites and on rare occasion. Furthermore, the "equal or exceed" condition is only predicted to occur when the concentrations are within the acceptable target range developed from watershed analyses, at sites that are generally not exceeding the target range today. Review of the numeric model output also indicates that, on the average, there will be significant reductions in phosphorus concentrations from current levels to those predicted at full-growth permitted levels.
10/23/00	Brazos River Authority (verbal)	BRA endorses a watershed approach for addressing pollutant effects as capable of providing sound science-based regulation.	TNRCC agrees, and is using a watershed approach for this and all other TMDL projects.
12/15/00	City of Waco (written)	The TMDL does not establish allowable pollutant loadings distributed among source categories as required by law.	See Section III of Introduction to Response to Comments.

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12/04/00	Mayor of Woodway (written)	The proposed use of average annual values to determine improvements is less preferable than a daily average or grab sample value. The latter method would identify potential problems immediately so that solutions could be initiated more timely.	See Section III of Introduction to Response to Comments.
10/23/00	Mayor of Bellmead (verbal)	The TMDL should control maximum daily load, instead of or as well as average daily load, similar to wastewater treatment plant permits. This is necessary to control the effects of individual storm events. Recovery of the lake from a large storm event that has significant ecological impact may take years.	See Section III of Introduction to Response to Comments.
10/23/00	Mayor of Woodway, speaking for the "community of cities" (verbal)	Both the TMDL and CAFO permits should specify maximum limits on a daily basis for each individual facility. Maximum limits should not be based on annual averages.	See Section III of Introduction to Response to Comments.
IV. Implementation Issues			
12/15/00	Brazos River Authority (written)	The 50% reduction target stated in the TMDLs will not and can not be attained due to anticipated growth in the North Bosque River watershed.	This comment seems to be based on several pre-summptions concerning the nature of the implementation plan, which is yet to be defined.
10/23/00	concerned citizen (verbal)	CAFOs and dairies must take responsibility for their waste management and their own ecological management. His generation and city are "tired of paying for a mess that is being made 100 miles northwest of us."	All permittees and regulated entities will be held responsible for their waste management. See Section IV of Introduction to Response to Comments.
12/15/00	Texas Association of Dairymen and Dairy Farmers of America (written)	The problem definition is flawed - The TMDL document does not contain a plan to assess the results of the TMDL.	See Section IV of Introduction to Response to Comments.
10/23/00 11/20/00	Director of Utilities, City of Temple (verbal) Mayor of Temple (written)	Temple supports "voluntary compliance by the dairy industry which results in substantive and measurable results."	The TNRCC acknowledges the support, and will address voluntary compliance during development of the implementation plan.

Date Rcd.	Source	Summary of Request or Comment	Summary of TNRCC Action or Explanation
11/29/00	Two Rivers Sierra Club (written)	Healthy rivers are a birth-right of all Texans. The health of the North Bosque River is important to the quality of life and economic welfare of the region. No industry or group has a right to compromise quality of life or economic health by polluting public resources. The Club urges TNRCC to take actions of sufficient strength and scope to insure that the North Bosque River will become a healthy and thriving river as soon as possible.	See Section IV of Introduction to Response to Comments.
10/23/00	Mayor of Waco (verbal)	The load allocation must be equitable, and reductions should be proportionate to sources. The sources causing pollution must be held accountable and made to stop.	TNRCC believes that the TMDLs and implementation plan will be equitable, will require reductions proportionate to source, and that sources will be held accountable. See Section IV of Introduction to Response to Comments.
12/15/00	Brazos River Authority (written)	The TNRCC may wish to explore the possibility of forming an "executive committee" composed of watershed-based stakeholders to oversee implementation of the TMDLs.	As the implementation plan is developed, this possibility will be explored. The Brazos River Authority is likely to be included, among other stakeholders, if such a committee is formed, and may be considered for monitoring or other duties also.
10/23/00	Mayor of Waco (verbal)	TNRCC must assure that voluntary measures will be adequately implemented with genuine accountability. Third-party measurement or verification of voluntary measures/compliance is needed.	See Section IV of Introduction to Response to Comments.
10/30/00	concerned citizen, Chair of Waco Chamber of Commerce, speaking for business community (letter)	Voluntary measures under the TMDL should be measured for accountability, and enforced if offenders do not comply with the standard.	See Section IV of Introduction to Response to Comments.
12/15/00	National Wildlife Federation (written)	The TMDLs must provide load allocations specific enough to determine if individual permits can be authorized, now and in the future. These TMDLs do not.	See Section IV of Introduction to Response to Comments.

Date Rcd.	Source	Summary of Request or Comment	Summary of TNRCC Action or Explanation
10/23/00	Director of Utilities, City of Temple (verbal)	Temple endorses the plan for regional manure composting facilities outlined by TNRCC.	The TNRCC acknowledges the endorsement.
11/20/00	Mayor of Temple (written)		
11/29/00	Two Rivers Sierra Club (written)	There are multiple sources of pollution in the watershed, and all should be reasonably and appropriately monitored and regulated. However, CAFOs are clearly the principle source in the watershed, and should be required to take whatever steps are necessary to reduce pollution, including limiting herd density, hauling away wastes, participating in manure recycling programs, funding wetland projects, etc.	The TNRCC intends that sources of pollution take appropriate responsibility for, and actions to control, their pollution. See Section IV of Introduction to Response to Comments.
11/29/00	Two Rivers Sierra Club (written)	Any reasonable implementation plan should have specific goals within a reasonable time frame, with monitoring, public access to data, and periodic assessments of TMDL effectiveness. Whatever the specifics of the implementation plan are, TNRCC should allow adequate time for public comment.	See Section IV of Introduction to Response to Comments.
10/23/00	concerned citizen, on behalf of the Water Quality Task Force of the Greater Waco Chamber of Commerce (verbal and written)	It is essential that the TMDL and any regulations or rules based on it be developed and put into effect as rapidly as possible.	The TNRCC intends to implement the TMDL as soon as possible. See Section IV of Introduction to Response to Comments.
10/23/00	President, Texas Association of Dairymen (verbal)	TAD supports development of the incentive program for manure composting. The dairy industry looks forward to helping successfully implement that program on a voluntary basis.	TNRCC acknowledges this statement of support for the composting program, and welcomes the support of the dairy industry in implementing that program for the benefit of water quality.
10/23/00	President, Texas Association of Dairymen (verbal)	The dairy farmers of the North Bosque River watersheds are ready and able to implement economically viable measures to improve water quality. However, they support doing so only if the measures are based on both sound science and sound economics.	TNRCC intends that the TMDLs and implementation plan are based on sound science and will consider the most cost-effective solutions.

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10/30/00	concerned citizen (written)	Writer suggests that TNRCC should discourage the practice of water flushing of livestock waste to holding lagoons, and should consider phasing out lagoons and sprayfields as in North Carolina	See Section IV of Introduction to Response to Comments.
12/15/00	Texas Association of Dairymen and Dairy Farmers of America (written)	The TMDL is premature - It fails to consider new regulatory measures, manure composting, and other BMPs and fails to use current data.	All long-term model analyses or planning require an initial reference time, and cannot be constantly revised to include "today's" data. The implementation plan will consider new regulatory measures, composting, and other BMPs.
11/09/00	Texas Parks and Wildlife Department (written)	The TMDLs cannot be evaluated without information concerning management measures that will achieve the allocation.	See Section IV of Introduction to Response to Comments.
11/20/00	Mayor of Clifton (written)	Freezing or capping city WWTP loading at current levels is inappropriate, as it would reward existing poor performers and sets up a situation where future growth in cities could not be accommodated.	Management measures and control actions needed from municipal wastewater treatment plants necessary to achieve water quality standards will be developed as part of the implementation plan. Such measures and actions are not limited to freezing or capping phosphorus loading at current levels. Alternatives to achieve the overall reduction of phosphorus loading will be evaluated with the assistance of stakeholders. The achievement of sufficient reduction to allow future growth may ultimately depend on more efficient or new technology. See Section IV of Introduction to Response to Comments.
11/09/00	Texas Parks and Wildlife Department (written)	TMDL allocations and implementation plans should not be separated. This is a significant departure from TNRCC Guidance. This strategy may create problems if, for example, elements of the TMDL need to be changed based on practical issues encountered during the implementation process.	The TNRCC Guidance document describes itself as subject to change as policies or procedures evolve. Some adjustments to address "practical issues encountered during the implementation process" may be made through adaptive management. See Section IV of Introduction to Response to Comments.

Date Rcd.	Source	Summary of Request or Comment	Summary of TNRCC Action or Explanation
11/09/00	Texas Parks and Wildlife Department (written)	There is uncertainty regarding model predictions. A thorough monitoring plan must be part of the implementation plan to assure success.	A monitoring plan and evaluation criteria will be included in the implementation plan. See Section IV of Introduction to Response to Comments.
10/23/00	concerned citizen (verbal)	At his property on the N Bosque R, his family has been concerned about water quality for several years, and have noticed a "sharp decline" in game fish in the river. Also, contact recreation use of the river has been curtailed in recent years because of pollution. Information from TNRCC indicates that CAFOs are responsible for the pollution. The cause of that pollution must be stopped, and the N Bosque R returned to its former condition.	TNRCC expects that implementation of the TMDL will significantly reduce nutrient-related pollution in the North Bosque River.
11/20/00	Mayor of Clifton (written)	The writer requests an opportunity to comment on implementation rules at the appropriate time.	See Section IV of Introduction to Response to Comments.
10/23/00	Mayor of Stephenville (verbal at hearing; hard copy received 11/27/00)	A 1 mg/L phosphorus limit for the Stephenville WWTP would be a severe economic burden on the city (\$90,000 per year for a city of 15,000 residents) but would not solve the North Bosque River problems. This management measure should NOT be required. Make 1 mg/L the goal, not the requirement, otherwise there may be compliance problems and sanctions on the City WWTP. If such a limit must be imposed, please condition it to allow for operational variability of WWTPs.	The implementation plan is not yet defined, but may require a 1 mg/L phosphorus limit for Stephenville. Permit limits normally do allow for operational variability within reasonable bounds.
V. Permitting Issues			
10/23/00	concerned citizen (verbal)	Speaker expressed general dismay that additional dairy cattle are authorized by existing permits in the N Bosque R watershed.	TNRCC intends to regulate pollution, not production units. The goal of the TMDLs is to reduce pollution regardless of the number of dairy cattle present. See Section V of Introduction to TNRCC Response to Comments.
12/15/00	National Wildlife Federation (written)	New or expanded permits that cause or contribute to impairments are prohibited by federal law until a TMDL has been developed.	The TNRCC is considering options for addressing pre-TMDL permit increases. See Section V of Introduction to TNRCC Response to Comments.

Date Rcd.	Source	Summary of Request or Comment	Summary of TNRCC Action or Explanation
11/20/00	Mayor of Clifton (written)	Permits to expand dairy herd size have been issued by TNRCC during the same period when urban WWTP expansion has been limited due to the TMDL project. This was done with the knowledge that there are insufficient safeguards to prohibit excess phosphorus runoff, and is contrary to the purpose of the TMDL. There is little evidence that TNRCC has implemented Section 26.027(a) of the Texas Water Code in a manner that is responsible to the environment. The issuance of permits to increase the number of dairy cattle in the watershed should be immediately discontinued, unless such authorizations require that <u>all</u> manure generated by the increase be hauled <u>out</u> of the watershed.	The TNRCC is considering options for addressing pre-TMDL permit increases. See Section V of Introduction to TNRCC Response to Comments.
10/23/00	Director of Utilities, City of Temple (verbal)	The size of dairy herds in Erath, Comanche, and Hamilton Counties must be controlled, including an upper limit on the total number. TMDL reductions will mean nothing if herd increases counteract them.	The TNRCC is considering options for addressing pre-TMDL permit increases. See Section V of Introduction to TNRCC Response to Comments.
11/20/00	Mayor of Temple (written)		
11/28/00	Mayor of Meridian (written)	Meridian is concerned that TNRCC has continued to permit expanded CAFO herds, with knowledge that there are insufficient safeguards to prohibit excess phosphorus runoff. This shows disregard for the TMDL goal of improving water quality. Meridian asks that CAFO regulations in the Texas Water Code be enforced, and that issuance of permits that increase the overall dairy herd in the watershed be immediately discontinued unless such authorizations require that <u>all</u> manure generated by the increase be hauled <u>out</u> of the watershed.	The TNRCC is considering options for addressing pre-TMDL permit increases. See Section V of Introduction to TNRCC Response to Comments.
10/30/00	concerned citizen, Chair of Waco Chamber of Commerce, speaking for business community (letter)	TNRCC should immediately freeze dairy permit issuance, and urge the current dairy owners to limit their herd size.	The TNRCC is considering options for addressing pre-TMDL permit increases. See Section V of Introduction to TNRCC Response to Comments.

Date Rcd.	Source	Summary of Request or Comment	Summary of TNRCC Action or Explanation
10/23/00	Mayor of Waco (verbal)	The number of dairy cows allowed in the watershed should be capped or limited. If TNRCC continues to issue permits, the benchmark changes in the model. Residents of Waco pay costs for water treatment because of the cows, and we have taste and odor problems directly related to the number of cows in the watershed. No increases should be authorized before the TMDL implementation plan is completed.	TNRCC is considering options for addressing pre-TMDL permit increases. See Section V of Introduction to TNRCC Response to Comments.
VI. Enforcement Issues			
10/23/00	Mayor of Woodway, speaking for the "community of cities" (verbal)	There is no inventory or data on the existing waste application fields. Existing standards should be enforced to eliminate problems.	See Section VI of Introduction to TNRCC Response to Comments.
10/23/00	Mayor of Waco (verbal)	The lack of information or data concerning soil concentrations of phosphorus in waste application fields "signals" that TNRCC is "not going to deal with the waste application fields in an implementation plan."	More data concerning soil concentrations in WAFs is being collected. TNRCC will address WAFs in the implementation plan.
10/23/00	Mayor of Woodway, speaking for the "community of cities" (verbal)	CAFOs are not a natural land use, but are industrial facilities. CAFOs must be regulated like all other types of industrial facilities that produce pollution. CAFOs must be held accountable for cleaning up the pollution they create. The cities that comprise the community of cities in McLennan County unanimously support the position of the City of Waco in this matter.	CAFOs are and will continue to be regulated like industrial facilities.
10/23/00	concerned citizen, on behalf of the Water Quality Task Force of the Greater Waco Chamber of Commerce (verbal and written)	It is essential that the adopted rules and regulations be fairly and uniformly, but vigorously, applied and enforced across the board.	The TNRCC intends to implement the TMDL as soon as possible.

Date Recd.	Source	Summary of Request or Comment	Summary of TNRCC Action or Explanation
10/23/00 (verbal)	concerned citizen	As a consulting engineer, speaker feels that TNRCC does a good job regulating municipal wastewater treatment plants via the permit and enforcement programs. However, he believes that existing TNRCC CAFO regulations (cites Chapter 321, Subchapter B, Paragraph 39) are not being adequately enforced. As a result, the N Bosque R segments have become impaired. He requests immediate enforcement of the existing regulations, and hopes that enforcement will be the highest priority of the TMDL.	See Section VI of Introduction to TNRCC Response to Comments.
10/30/00 (written)			
10/23/00	concerned citizen (verbal)	Based on 40 years of personal observation, speaker indicated that water quality and fish population in the North Bosque River below Valley Mills have declined over the past 10 years, spoke of odors and "white phosphate foam" in summer, and attributed the decline to dairy-related loading. He requests that TNRCC do something about the situation, and do it soon.	Development of the TMDLs and implementation plan for the North Bosque River watershed is a significant effort to address the situation described. TNRCC is proceeding as expeditiously as possible with development and implementation of these TMDLs.
10/23/00	concerned citizen (verbal)	Speaker requests that TNRCC enforce the existing laws. TMDLs will have no effect unless enforced. If existing laws had been enforced, "then surely we wouldn't be here today."	The TNRCC agrees enforcement is important, and is committed to continued enforcement of all its rules. See Section VI of Introduction to TNRCC Response to Comments.
10/23/00	concerned citizen (verbal)	Speaker contended that he cannot take his child fishing in the North Bosque River north of Hico "because it might kill him. Can you believe that? That happened under the watch of the TNRCC."	It is not clear what type of threat to his child the speaker perceives. Phosphorus concentrations in the North Bosque River do not pose any direct threat to human health. Common sense precautions against physical and bacterial hazards in a natural environment have and always will be needed.
10/23/00	Director of Utilities, City of Temple (verbal)	Temple encourages "enforcement of current TMDL limits by TNRCC."	The TNRCC agrees enforcement is important, and is committed to continued enforcement of all its rules. See Section VI of Introduction to TNRCC Response to Comments.
11/20/00	Mayor of Temple (written)		

Date Rcd.	Source	Summary of Request or Comment	Summary of TNRCC Action or Explanation
10/23/00	Mayor of Bellmead (verbal)	Better enforcement of rules is needed.	The TNRCC agrees enforcement is important, and is committed to continued enforcement of all its rules. See Section VI of Introduction to TNRCC Response to Comments.
VII. Legal Issues			
12/15/00	Texas Association of Dairymen and Dairy Farmers of America (written)	The TMDL is premature - The EPA has not finalized its guidance document and the TNRCC has no statutory or regulatory guidelines on how TMDLs in Texas are to be developed.	All states are required by § 303(d) of the 1972 Clean Water Act (CWA) to develop TMDLs for water bodies that are impaired. Furthermore, under state law, TNRCC has the authority to develop TMDLs as part of WQMPs. See Section VII of Introduction to TNRCC Response to Comments.
12/15/00	Texas Association of Dairymen and Dairy Farmers of America (written)	Jurisdictional issue - Procedures for developing TMDLs have been unconstitutionally delegated to the TNRCC with no standards.	The legislative directive to TNRCC is sufficiently specific in stating the duties of the TNRCC with respect to water quality. Under state law, TNRCC has the authority to develop TMDLs as part of WQMPs. See Section VII of Introduction to TNRCC Response to Comments.
12/15/00	Texas Association of Dairymen and Dairy Farmers of America (written)	Jurisdictional issue - TNRCC's attempted additional regulation of agricultural non-point sources through TMDLs exceeds the Commission's jurisdiction.	The TMDL does not regulate anyone nor prescribe activities. The TMDL sets a load allocation as required by the Texas Water Code (TWC). The TMDL will be implemented by the TNRCC and the Texas State Soil and Water Conservation Board (TSSWCB) in accordance with duties delegated to those agencies by the legislature.
12/15/00	City of Waco (written)	Runoff from WAFs is regulated by CAFO permits, and any runoff of excessively applied nutrients constitutes a discharge from a point source.	This is an inaccurate statement of the law. It is not particularly relevant because the TMDL takes into account both point sources and nonpoint sources of pollution.

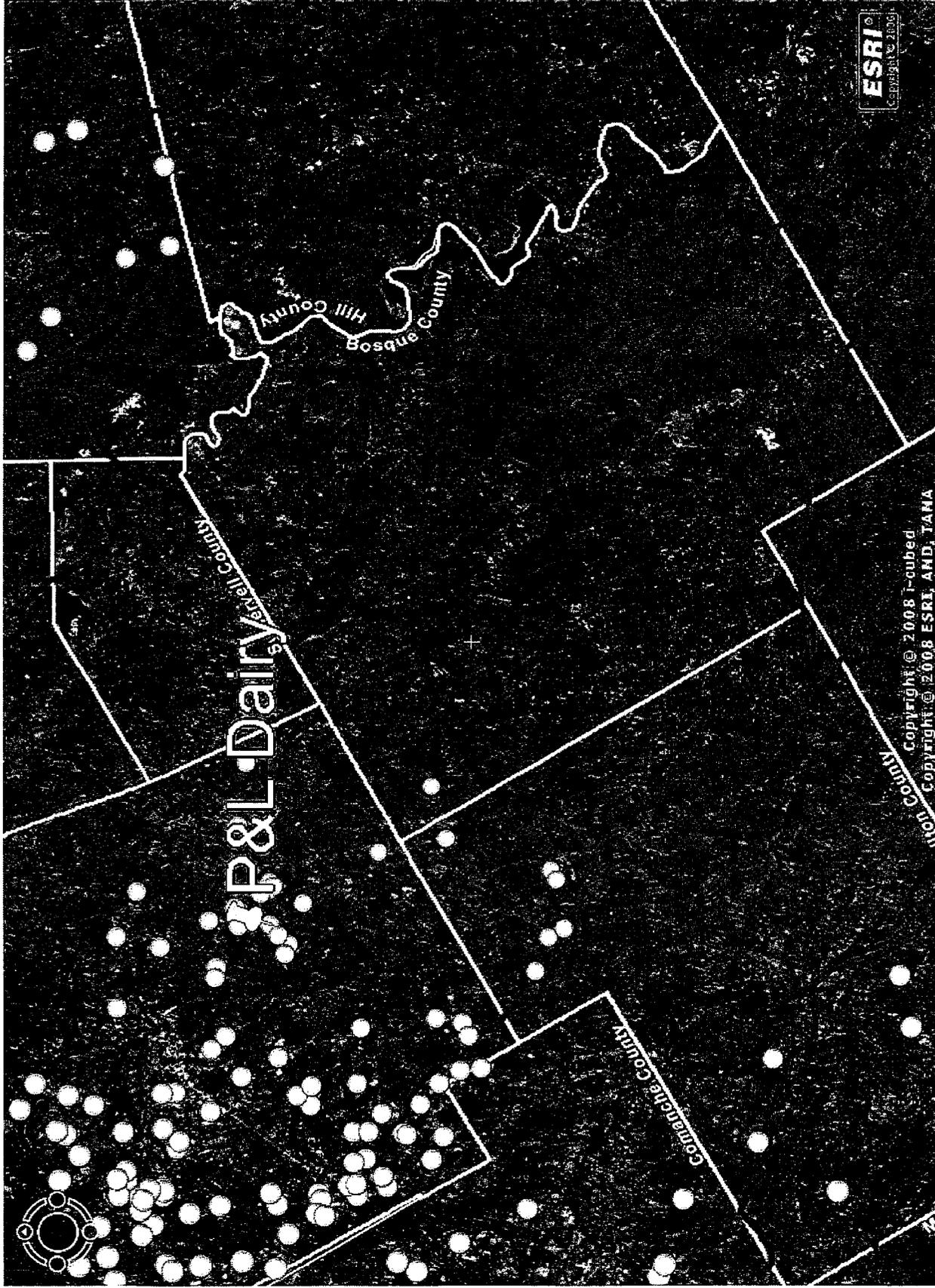
Date Recd.	Source	Summary of Request or Comment	Summary of TNRCC Action or Explanation
12/15/00	National Wildlife Federation (written)	The lack of an implementation plan to support the TMDL prevents meaningful assessment of the allocation, and fails to comply with federal public comment requirements.	The TMDL process involves development of two documents: 1) a TMDL which determines the allowable loading and allocates reductions to point and nonpoint categories source, and 2) an implementation plan that describes management measures and control actions needed to achieve the pollutant reductions. While federal law does not require an implementation plan, TNRCC has decided implementation plans are appropriate and will develop them after load allocations have been determined. The process and form of these TMDLs are consistent with federal laws and regulations. See Section VII of Introduction to TNRCC Response to Comments.
12/15/00	National Wildlife Federation (written)	The document oversimplifies the issue of controlling pollution from waste application fields, which must be controlled or allocated as point sources.	This is an inaccurate statement of the law. The comment is not particularly relevant because the TMDL takes into account both point sources and nonpoint sources of pollution. Under state and federal law, runoff from agricultural fields is not regulated as a point source.
12/15/00	Texas Association of Dairymen and Dairy Farmers of America (written)	Jurisdictional issue - The Clean Water Act and Texas law exempt land application from the purview of the TNRCC.	Texas is required under § 303(d) of the CWA to develop TMDLs for water bodies that are impaired. TNRCC and TSSWCB are the state agencies primarily responsible for ensuring that TMDL projects are initiated and implemented.
12/15/00	Texas Association of Dairymen and Dairy Farmers of America (written)	Jurisdictional issue - There are no State legislative guidelines or regulatory guidelines on development of TMDLs.	Under state law, TNRCC has the responsibility to do TMDLs as part of WQMPs, among other legislative mandates. See Section VII of Introduction to TNRCC Response to Comments.

Date Rcd.	Source	Summary of Request or Comment	Summary of TNRCC Action or Explanation
12/15/00	Texas Association of Dairymen and Dairy Farmers of America (written)	<p>Jurisdictional issue - The TMDL violates Article II, § 1 and Article III, §1, Texas Constitution in that the TNRCC's duties were unconstitutionally delegated to TIAER and other entities.</p> <p>--First, there is no legislative grant of authority to the TNRCC that authorizes it to punt the development of TMDLs to third parties.</p> <p>--Second, there are no contracts in place between the TNRCC and TIAER or Blackland for the development of the TMDLs.</p> <p>--Third, there is no reasonable control by the TNRCC over the TMDLs or the TNRCC's involvement or review of the data, since all supporting data for the TMDLs was held by TIAER or Blackland and not the TNRCC.</p> <p>--Fourth, there are no TNRCC rules on the development of a TMDL which gives no real protection against an arbitrary action of a third party.</p> <p>--Fifth, the TNRCC guidance document on TMDLs was not prepared by the TNRCC, but by TIAER and Blackland which raises concerns that there have been no controls and no legal standards in developing the TMDLs which may prejudice the rights of TAD and DFA.</p>	<p>TNRCC follows the public participation requirements of 40 CFR § 130.7(a) as well as applicable state law, TWC §§ 26.036 and 26.037. In fact, the federal regulations at 40 CFR § 130.7(b)(5)(iii) encourage solicitation of water quality data from agencies and academic institutions among other entities. TNRCC seeks meaningful public participation in the decision making process for the development of TMDLs. In response to the first point, the TMDL sets a load allocation as required by the TWC. Furthermore, the TMDL will be implemented by the TNRCC and the TSSWCB in accordance with duties delegated by the legislature. In response to the second point, there need not be contracts in place for TNRCC to consult with TIAER, Blackburn or any other research body in the development of the TMDLs. In response to points three and five, TNRCC reviews all data and calculations for quality assurance, quality control and compliance with applicable state laws and agency rules before using that information in developing the TMDLs. TNRCC cooperated with TIAER and Texas A&M in developing the guidance document <i>Developing Total Maximum Daily Load Projects in Texas: A Guide for Lead Organizations</i>. In response to point four, all states are required by § 303(d) of the CWA to develop TMDLs for water bodies that are impaired. Furthermore, under state law, TNRCC has the authority to develop TMDLs as part of WQMPs. See Section VII of Introduction to TNRCC Response to Comments.</p>

Date Recd.	Source	Summary of Request or Comment	Summary of TNRCC Action or Explanation
12/15/00	Texas Association of Dairymen and Dairy Farmers of America (written)	<p>Other Legal Authority - The TMDLs violate Article 1 § 3 of the Texas Constitution, and the 5th and 14th amendments of the U.S. Constitution because it unequally imposes restrictions upon the dairy producers and not all other persons.</p> <p>-First, no city within the TMDL area is required by Phase I or II of the EPA's stormwater regulations to comply with EPA requirements to obtain a permit, even though the EPA could arguably require those entities on a case-by-case basis to comply.</p> <p>-Second, there are no proposed reductions planned for nonpoint contributors in row crops or rangeland.</p>	<p>The TMDL does not regulate anyone nor prescribe activities. The TMDL sets a load allocation as required by the TWC. Future permitting, including stormwater permitting actions, will be undertaken by the state agencies given the legislative directive to do so. The second point refers to issues that will be addressed during the development of the implementation plan.</p>
12/15/00	Texas Association of Dairymen and Dairy Farmers of America (written)	<p>Other Legal Authority - The TMDL proposal violates the Texas Real Private Property Preservation Act, Chapter 2007, Texas Government Code.</p> <p>-First, TNRCC's TMDL efforts are not reasonably taken to fulfill its obligations under the Clean Water Act.</p> <p>-Second, TNRCC has neither alleged or shown that health and safety is currently threatened by the phosphorus levels in the North Bosque.</p> <p>-Third, TNRCC did not perform a takings impact statement.</p> <p>-Fourth, these TMDLs have not been published as rulemaking and proper public notice has not been provided.</p>	<p>The TMDL does not constitute a taking because there has not been a governmental action "that restricts or limits the owner's right to the property." See Section VII of Introduction to TNRCC Response to Comments.</p>
12/15/00	Texas Association of Dairymen and Dairy Farmers of America (written)	<p>Other Legal Authority - The TMDL proposal violates the Texas Administrative Procedure Act and other rule-making procedures.</p> <p>-First, the proposed TMDL is an agency rule.</p> <p>-Second, there is no notice of the results of an analysis of the economic effect upon small businesses.</p> <p>-Third, it does not contain a local employment impact assessment.</p> <p>-Fourth, it does not include a certification that the proposed rule has been reviewed by legal counsel and found to be within the state agency's authority to adopt.</p> <p>-Fifth, the TMDL proposal does not include a draft impact analysis describing the effects of the rule on small businesses as required under TEX. GOV'T CODE ANN. § 2006.002.</p>	<p>These TMDLs are not subject to the rulemaking requirements of the Texas Administrative Procedures Act (APA). The APA defines "rule" as a "...state agency statement of general applicability" that implements, interprets, or prescribes law or policy" or "describes the procedure or practice requirements of a state agency." Tex. Gov't Code § 2001.003(6). These TMDLs do not implement, interpret or prescribe law or policy. They are planning tools for two of the 238 303(d) listed water segments in the state.</p>

Date Recd.	Source	Summary of Request or Comment	Summary of TNRCC Action or Explanation
12/15/00	Texas Association of Dairy Farmers of America (written)	<p>Other Legal Authority - The TMDLs violate Article 1 § 17 of the Texas Constitution, and the 5th and 14th amendments of the U.S. Constitution by being vague and unenforceable.</p> <p>-First, the TMDLs are not clear as to what the limits or desired effect will be of the TMDLs.</p> <p>-Second, there is a substantial risk of miscalculation by the affected parties in that no party can identify in the TMDL a definite numerical target, but yet will be forced into some kind of compliance with an implementation plan.</p> <p>-Third, the proposed TMDLs will also harm the dairies' constitutional rights insofar as the TMDLs subject dairies and others to limitations of 30 ppb per liter SRP or some other parameter not yet identified by TNRCC.</p> <p>-Fourth, the TMDLs also assume and imply certain BMPs and other regulatory requirements which are not set forth in the text of the TMDLs, and are also vague.</p>	<p>The TMDLs clearly state a reduction of approximately 50% phosphorus loading is necessary in the North Bosque River. BMPs and other regulatory requirements will be assessed during development of the implementation plan.</p>
1/16/01	Texas Association of Dairy Farmers of America (written)	<p>Quoted from McFarland/Feagley letter from March 1, 1999:</p> <p>"However, there is no conclusive scientific evidence to confirm that the off-site land application of these materials is contributing significantly to water quality impairments in Texas. It is our belief that the majority of the off-site application is at or below the agronomic rate for nitrogen. Many of these fields receive animal manure applications only periodically (not yearly), and thus do not represent a major concern."</p> <p>We think that the fact that third-party application fields are not regulated, certainly the permitted fields which are regulated and subject to testing threshold limits and NUPs would be even less likely to impair water quality (<i>referencing the above passage.</i>)</p>	<p>The letter doesn't address the subject matter of these TMDLs. It says its authors believe there was no conclusive evidence that offsite waste application is causing water quality impairment statewide, because the practice is used only sporadically. These TMDLs are based on watershed-specific data and represent wasteload allocation to onsite waste application fields.</p>

CAFOs in NORTH BOSQUE RIVER WATERSHED



Yellow Dot = CAFO* Red Line = Watershed Boundary*

*Source = TCEQ GIS Data Retrieved from Public Records

EXHIBIT
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tabbles

TCEQ DOCKET NO. 2008-0569-AGR

IN THE MATTER OF
THE APPLICATION
FOR A MAJOR
AMENDMENT BY
PETER HENRY
SCHOUTEN, SR. AND
NOVA DARLENE
SCHOUTEN, DBA P&L
DAIRY TO WATER
QUALITY PERMIT NO.
WQ0003675000

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BEFORE THE TEXAS
COMMISSION ON
ENVIRONMENTAL
QUALITY

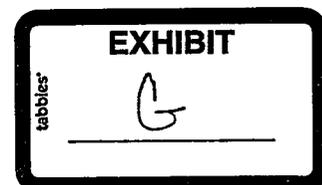
THE OFFICE OF PUBLIC INTEREST COUNSEL'S
RESPONSE TO REQUEST FOR HEARING

TO THE HONORABLE MEMBERS OF THE TEXAS COMMISSION ON
ENVIRONMENTAL QUALITY:

COMES NOW, the Office of Public Interest Counsel (OPIC) of the Texas
Commission on Environmental Quality (the Commission or TCEQ) and files this
Response to Request for Hearing in the above-referenced matter.

I. INTRODUCTION

Peter Henry Schouten, Sr. and Nova Darlene Schouten, dba P&L Dairy (P&L Dairy or Applicant) have applied to TCEQ for a major amendment of existing Concentrated Animal Feeding Operation (CAFO) Texas Pollutant Discharge Elimination System (TPDES) permit no. WQ0003675000. The major amendment to the CAFO individual permit would allow Applicant to expand its dairy head capacity from 580 head to a maximum of 990 head. The facility consists of two retention control structures (RCSs) and four land management units (LMUs). The facility is located approximately 1.8 miles south of the intersection of County Road 229 and Farm-to-Market Road 913 in Erath



County, Texas is located in the drainage area of the North Bosque River in Segment No. 1226 of the Brazos River Basin.

The application was received on June 15, 2004 and declared administratively complete on March 11, 2005. The Executive Director (ED) completed the technical review of the application and prepared a draft permit. A combined revised Notice of Receipt and Intent to Obtain a Water Quality Permit (NORI) and revised Notice of Application and Preliminary Decision (NAPD) for a Water Quality Permit was published in the *Stephenville Empire Tribune* on November 20, 2007. The chief clerk of the TCEQ mailed the Decision of the Executive Director and the Executive Director's Response to Comments (RTC) on March 7, 2008.

The TCEQ received a timely hearing request from the City of Waco on April 7, 2008.

II. ANALYSIS

A. Applicable Law

This application was declared administratively complete after September 1, 1999, and is subject to the requirements of Texas Water Code § 5.556 added by Acts 1999, 76th Leg., ch 1350 (commonly known as "House Bill 801"). Under the applicable statutory and regulatory requirements, a hearing request must substantially comply with the following: give the name, address, daytime telephone number, and, where possible, fax number of the person who files the request; identify the requestor's personal justiciable interest affected by the application showing why the requestor is an "affected person" who may be adversely affected by the proposed facility or activity in a manner not common to members of the general public; request a contested case hearing; list all

relevant and material disputed issues of fact that were raised during the comment period that are the basis of the hearing request; and provide any other information specified in the public notice of application. 30 TEXAS ADMINISTRATIVE CODE (TAC) § 55.201(d). Under 30 TAC § 55.203(a), an affected person is “one who has a personal justiciable interest related to a legal right, duty, privilege, power, or economic interest affected by the application.” This justiciable interest does not include an interest common to the general public. 30 TAC § 55.203(c) also provides relevant factors that will be considered in determining whether a person is affected. These factors include:

- (1) whether the interest claimed is one protected by the law under which the application will be considered;
- (2) distance restrictions or other limitations imposed by law on the affected interest;
- (3) whether a reasonable relationship exists between the interest claimed and the activity regulated;
- (4) likely impact of the regulated activity on the health, safety, and use of property of the person;
- (5) likely impact of the regulated activity on use of the impacted natural resource by the person; and
- (6) for governmental entities, their statutory authority over or interest in the issues relevant to the application.

The Commission shall grant an affected person’s timely filed hearing request if:

- (1) the request is made pursuant to a right to hearing authorized by law; and (2) the request raises disputed issues of fact that were raised during the comment period and that are relevant and material to the commission’s decision on the application. 30 TAC §55.211(c).

Accordingly, pursuant to 30 TAC § 55.209(e), responses to hearing requests must specifically address:

- (1) whether the requestor is an affected person;
- (2) which issues raised in the hearing request are disputed;
- (3) whether the dispute involves questions of fact or law;

- (4) whether the issues were raised during the public comment period;
- (5) whether the hearing request is based on issues raised solely in a public comment withdrawn by the commenter in writing by filing a withdrawal letter with the chief clerk prior to the filing of the Executive Director's response to Comment;
- (6) whether the issues are relevant and material to the decision on the application; and
- (7) a maximum expected duration for the contested case hearing.

B. Determination of Affected Person Status

The Office of the Chief Clerk received a hearing request from the City of Waco (Waco or the City). Waco acknowledges it is approximately 80 river miles downstream from the Applicant's dairy, but demonstrates that it is an "affected person" by detailing how the City will be adversely affected by the proposed CAFO activities. Waco states that Lake Waco is directly impacted by the activities of the Applicant. The Applicant's dairy produces runoff which spills into the North Bosque River and Lake Waco is the final receiving waters for the North Bosque. Waco attaches a detailed expert report setting out the numerous impacts of dairy runoff in the North Bosque watershed on Lake Waco. Waco further states that allowing an increase in herd size from 580 to 990 cows will increase the amount of phosphorous and pathogens in Lake Waco, likely causing algal blooms and taste and odor problems in the water of Lake Waco. Finally, according to Waco, the distance between the dairy and Lake Waco does not reduce the impact as expected, because the heavy rainstorms which wash the pollutants from the dairy fields into the North Bosque ensure that the pollutants make it all the way to Lake Waco in 3 to 5 days.

OPIC finds that the City of Waco has demonstrated that it is an "affected person" as determined by 30 TAC § 55.203(c). Waco owns all the water rights in Lake Waco for municipal uses, including public consumption. The City of Waco provides the water of

Lake Waco for recreation and consumption to its citizens as part of its municipal duties. Waco has provided extensive documentation in its hearing request that pollution from the Applicant's operations will likely impact the water quality of Lake Waco and therefore the water rights owned by Waco. OPIC finds that this concern is protected by the law under which the application will be considered.

OPIC recognizes that the distance between the Applicant's dairy and Lake Waco leads to initial concerns about whether there exists a reasonable relationship between the interest claimed and the activity regulated. However, a party seeking to be considered an "affected person" is not required to demonstrate that all of the issues raised require the application to be denied. Waco is merely seeking standing at this juncture, and has addressed the fact that it is a great distance from the dairy by including a detailed and lengthy expert report to demonstrate that there is a reasonable relationship exists between the interest claimed and the activity regulated. Indeed, Bruce Wiland, P.E. submitted an affidavit detailing his review of the application at issue. His affidavit further states that his expert scientific opinions form the scientific basis for Waco's positions. There are no distance limitations imposed by law on the interest. Waco's attached expert report explains why the relationship between the interest claimed and the activity regulated is reasonable and why Waco can reasonably claim there is a likely impact of the dairy operation on the water quality of Lake Waco, even given the distance between the regulated activity and Lake Waco.

Finally, Waco is a governmental entity¹ with specific obligations to its citizens to provide clean drinking water and recreational areas. For these reasons, Waco is an affected person.

C. Issues Raised in the Hearing Requests

Waco raises the following disputed issues in its hearing request:

1. Should TCEQ have processed the expansion and original construction of P&L Dairy as a “new source” as defined by 40 CFR §122.2?
2. Should ED require a demonstration that there are sufficient remaining load allocations in the North Bosque River to allow for discharges from the expansion of this dairy or that existing dischargers were subject to compliance schedules as Waco believes is required by 40 CFR §122.4 (i)?
3. Will the issuance of the proposed permit be inconsistent with the following assumptions made in the TMDL for phosphorus inputs into the North Bosque River:
 - A) 40,450 dairy cows in the watershed;
 - B) 50% of solid manure from 40,450 dairy cows would be removed from the watershed;
 - C) Phosphorus in the diet of permitted cows would be limited to 0.4%;
 - D) Waste application rates would be limited to the agronomic rates of the crop rather than the crop requirement rate for phosphorus
4. Will allowing the use of third party fields in the draft permit act as a disincentive to transport waste to a compost facility or out of the watershed to the detriment of the water quality standards?
5. Has the ED provided adequate technical justification that the measures recited in the draft permit will meet the water quality standards for phosphorus and actually attain the reductions in phosphorus loading set forth in the TMDL and TMDL-I Plan for the North Bosque River?
6. Has the ED correctly interpreted the legal requirements of 40 CFR §125.3(d)(2) and Clean Water Act §304 (b)(4)(B)?
7. Will the Applicant, through its contracts regarding the use of third party fields, in effect, control those fields? Should those third party fields be considered land management units (LMUs)?
8. Must TCEQ evaluate the following plans prior to permitting and make them available to the public throughout the public comment period: Comprehensive Nutrient Management Plans (CNMPs), Nutrient Utilization Plans (NUPs), Retention Control Structure (RCS) management plans, and pollution prevention plans (PPPs)?

¹ The City of Waco has the authority to protect public health. Section 121.003(a) of the Health and Safety Code provides that “[t]he governing body of a municipality or the commissioners court of a county may enforce any law that is reasonably necessary to protect the public health.” In addition, Texas Water Code Chapter 26, Subchapter E details the statutory authority a local government has over water quality issues.

9. Should the ED require the stage/storage table be available for review as part of the proposed preliminary construction plans, so that Waco has an opportunity to review the calculations prior to permit issuance?
10. Is a forty percent removal rate for solids from the settling basins actually attainable as anticipated in the draft permit?
11. Is the design sludge accumulation rate of 0.0729 cubic feet of storage capacity per pound of total solids in wet manure entering the storage facility realistic given that the draft permit does not require a treatment volume and the Applicant does not intend to have a treatment volume?
12. Is the methodology utilized by the Applicant adequate to estimate sludge volume requirements?
13. Are the requirements found in Section VII.A.5(a)(2) of the draft permit adequate to assure the sludge accumulation ponds are operating properly?
14. Is there adequate area to enlarge the required RSC to meet the requirements in the draft permit?
15. Is the provision in the draft permit requiring "the location and description" of the future structural controls as part of the pollution prevention plans (PPP) adequate to allow TCEQ investigators to properly assess the facility? Should the structural control plans be provided as part of the permit application process, rather than in a PPP that is not reviewable by the public?
16. Should the application rate only allow application of nutrients in a manner that will benefit crop production rather than merely relying on the NRCS standard?
17. Should the representation made by the Applicant in Section 6.2 of the application that it *will* limit maximum phosphorus levels in soils to 200 ppm in the application fields be considered to be a goal, or an enforceable term?
18. Should the RCS management plans be submitted to TCEQ permitting staff for review and approval at some point, even if it is after the permit is issued?
19. Is the capacity certification under draft permit provision VII.A.3(a)(2) referring to total as-built capacity or available capacity above the current sludge line
20. Does 30 TAC§ 321.38(g)(3) include a specific liner requirement?
21. Should a certification by a licensed Texas professional engineer occur immediately upon issuance of the permit to ensure the adequacy of the structural controls?
22. Are the sampling and monitoring requirements in the draft permit adequate?
23. Does the permit adequately address how nutrient runoff will be properly regulated in third party application fields?
24. Should the permit require that 50% of the solid manure to comply with the TMDL for phosphorus in the North Bosque watershed?
25. Should the permit allow application of waste to soil in manner that exceeds the agronomic need considering the additional requirement in a

nutrient utilization plan (NUP) the application of waste to soil must qualify as a “beneficial use” and therefore not exceed the agronomic need for the crop?

26. Should there be a clear requirement in the permit that the Applicant must submit the actual crop yields in the annual report? Likewise should TCEQ require quarterly reports on crop yields be submitted rather than in annual reports?
27. Should the ED require a five year permit term for the applicant’s nutrient management plan (NMP) to ensure operations remain sustainable?
28. Will the best management practices employed to reduce phosphorus adequately reduce the bacteria entering the watershed?

D. Issues raised in Comment Period

All of the issues raised in the hearing request were raised in the comment period and have not been withdrawn. 30 TAC §§55.201(c) and (d)(4), 55.211(c)(2)(A).

E. Disputed Issues

There is no agreement between Waco and the Applicant or Executive Director on the issues raised in the hearing requests.

F. Issues of Fact

If the Commission considers an issue to be one of fact, rather than one of law or policy, it is appropriate for referral to hearing if it meets all other applicable requirements. The City of Waco notes in its hearing request for each issue whether it believes the issue to be one of law, fact, or both. The City of Waco acknowledges the following issues as listed above to be solely issues of law: Issues 1, 2, 6, 8, 20, 24, and 25.

In addition, while Waco state issues 3A, 3B, 3C, and 3D are issues of law and fact, the issues are predominantly issues of law.

Issue 7 has a distinct legal component: Whether the third party fields should be considered to be Land Management Units?

Although Waco attempts to frame issue 9 above as a factual issue, OPIC finds that whether or not this table is available for review now, or is not required to be submitted before permit issuance is predominantly an issue of law.

Likewise the portion of issue 15 above has a legal component: Should the structural control plans be provided as part of the permit application process, rather than in a PPP that is not reviewable by the public? OPIC would therefore recommend that these issues are not appropriate for referral to hearing.

OPIC disagrees that Issue 18 is an issue of fact. It relates to when the ED should require the RCS management plans be submitted to TCEQ permitting staff for review and approval at some point, even if it is after the permit is issued.

Issue 21 is also not an issue of fact, as indicated by Waco. Whether or not the ED should require an engineer is not an issue of fact.

Issue 26 is mostly an issue of law or policy. No factual dispute exists about the contents or frequency of submittal of the information in the annual report.

Issue 27 is an issue of policy related to the ED's decision not to require a mapped out 5 year NMP, rather than a flexible one year plan.

OPIC agrees with Waco that each of the remaining issues is a disputed factual issue. *See* 30 TAC §55.211(b)(3)(A) and (B)

G. Relevant and Material Issues

The hearing request raises issues relevant and material to the Commission's decision under the requirements of 30 TAC §§ 55.201(d)(4) and 55.211(c)(2)(A). In order to refer an issue to SOAH, the Commission must find that the issue is relevant and

material to the Commission's decision to issue or deny this permit.² Relevant and material issues are those that are governed by the substantive law under which this permit is to be issued.³ All of the issues are relevant and material to the Commission's consideration of the application. Each issue raises very specific questions about the draft permit itself and ultimately questions whether the permit is adequately protective of surface water quality in the North Bosque River. Protection of surface water quality under the requirements of Chapter 25 of the Texas Water Code is the purpose of the draft permit and therefore each issue is relevant and material.

H. Issues Recommended for Referral

OPIC recommends that the following disputed issues of fact be referred to the State Office of Administrative Hearings for a contested case hearing:

1. Will allowing the use of third party fields in the draft permit act as a disincentive to transport waste to a compost facility or out of the watershed to the detriment of the water quality standards?
2. Has the ED provided adequate technical justification that the measures recited in the draft permit will meet the water quality standards for phosphorus and actually attain the reductions in phosphorus loading set forth in the TMDL and TMDL-I Plan for the North Bosque River?
3. Will the Applicant, through its contracts regarding the use of third party fields, in effect, control those fields?
4. Is a forty percent removal rate for solids from the settling basins actually attainable as anticipated in the draft permit?
5. Is the design sludge accumulation rate of 0.0729 cubic feet of storage capacity per pound of total solids in wet manure entering the storage facility realistic given that the draft permit does not require a treatment volume and the Applicant does not intend to have a treatment volume?
6. Is the methodology utilized by the Applicant adequate to estimate sludge volume requirements?
7. Are the requirements found in Section VII.A.5(a)(2) of the draft permit adequate to assure the sludge accumulation ponds are operating properly?

² See *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248-251(1986) (in discussing the standards applicable to reviewing motions for summary judgment the Court stated "[a]s to materiality, the substantive law will identify which facts are material. ... it is the substantive law's identification of which facts are critical and which facts are irrelevant that governs.")

³ *Id.*

8. Is there adequate area to enlarge the required RSC to meet the requirements in the draft permit?
9. Is the provision in the draft permit requiring “the location and description” of the future structural controls as part of the pollution prevention plans (PPP) adequate to allow TCEQ investigators to properly assess the facility?
10. Should the application rate only allow application of nutrients in a manner that will benefit crop production rather than merely relying on the NRCS standard?
11. Should the representation made by the Applicant in Section 6.2 of the application that it *will* limit maximum phosphorus levels in soils to 200 ppm in the application fields be considered to be a goal, or an enforceable term?
12. Is the capacity certification under draft permit provision VII.A.3(a)(2) referring to total as-built capacity or available capacity above the current sludge line
13. Are the sampling and monitoring requirements in the draft permit adequate?
14. Does the permit adequately address how nutrient runoff will be properly regulated in third party application fields?
15. Should the permit allow application of waste to soil in manner that exceeds the agronomic need considering the additional requirement in a nutrient utilization plan (NUP) the application of waste to soil must qualify as a “beneficial use” and therefore not exceed the agronomic need for the crop?
16. Will the best management practices employed to reduce phosphorus adequately reduce the bacteria entering the watershed?

I. Maximum Expected Duration of Hearing

Commission Rule 30 TEX. ADMIN. CODE § 55.115(d) requires that any Commission order referring a case to SOAH specify the maximum expected duration of the hearing by stating a date by which the judge is expected to issue a proposal for decision. The rule further provides that no hearing shall be longer than one year from the first day of the preliminary hearing to the date the proposal for decision is issued. To assist the Commission in stating a date by which the judge is expected to issue a proposal for decision, and as required by 30 TEX. ADMIN. CODE §55.209(d)(7), OPIC estimates

that the maximum expected duration of a hearing on this application would be one year from the first date of the preliminary hearing until the proposal for decision is issued.

IV. CONCLUSION

OPIC recommends referring the matter to SOAH for an evidentiary hearing on the issues recommended above. OPIC recommends finding the City of Waco to be an "affected person." OPIC further recommends a hearing duration of one year.

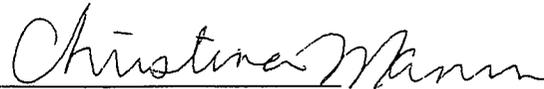
Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that on August 29, 2008 the original and eleven true and correct copies of the Office of the Public Interest Counsel's Response to Request for Hearing were filed with the Chief Clerk of the TCEQ and a copy was served to all persons listed on the attached mailing list via hand delivery, facsimile transmission, Inter-Agency Mail or by deposit in the U.S. Mail



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