Response to Public Comment
One Total Maximum Daily Load for Bacteria in Peach Creek
June 27, 2008

Summary of Request or Comment	Summary of TCEQ Action or Explanation
The Texas Commission on Environmental Quality approved the release of the draft TMDL document for public comment on April 2, 2008 and the document was made available on the agency web page for a comment period which ended on May 17, 2008. A public meeting was conducted by TCEQ staff at the City of Waelder Community Center on April 15, 2008. Twenty stakeholders registered for the meeting and six provided comments. Issues raised at the public meeting: 1. Stakeholders recommended that the TMDL document should not be approved as proposed. This position was supported by the Texas and Southwestern Cattle Raisers Association and repeated in written comments from the Texas Department of Agriculture and the Texas Poultry Federation.	1. The TCEQ agrees with the commenters that a strong reason to delay the TMDL is the potential revision of the *E. coli* criteria and potential establishment of additional recreational use categories. If standards revisions are supported by stakeholders at a statewide level, if adopted by the Commission, and if approved by EPA, Peach Creek could be de-listed or the magnitude of load reductions could lessen. There are also strong reasons to approve the TMDL at this time. The TCEQ realizes that predicting a future water quality standard may be premature. The TCEQ is confident that implementation efforts that have begun, i.e. TSSWCB poultry water quality management plan program, educational activities, technical assistance, and financial assistance, will achieve load reductions that could restore water quality to achieve the existing water quality standard in the short term. Additionally, the TCEQ is fully supportive of an adaptive management approach towards implementation. Under such an approach, when new or more accurate data and information are available, the implementation plan (I-Plan) can be adjusted accordingly and TMDL allocations revised as well.

	The water quality standards revision process occurs approximately every three years and is currently underway. TCEQ has held several stakeholder meetings specifically focused on the review and revision of recreational use criteria for surface water in the State of Texas. The TCEQ will continue to review and revise standards as necessary, consistent with State and Federal environmental statutes, to ensure protection of human health and the environment. Proposals for revisions to water quality standards to address contact recreation uses are currently being considered. Members of the Peach Creek River TMDL stakeholder group are actively participating in this public process Section 303(d) of the Federal Clean Water Act requires all states to identify water bodies that do not meet, or are not expected to meet, applicable water quality standards. The compilation of impaired water bodies is known as the 303(d) list. For each Category 5a listed water body, states must develop a TMDL for each pollutant that contributes to impairment. The Texas Commission on Environmental Quality (TCEQ) is responsible for ensuring that TMDLs are developed for impaired surface waters in Texas.
2. Model should be run using *E. coli* data rather than fecal coliform. Concern about the conversion of historical fecal coliform data to *E. coli*.	2. The modeling approach (HSPF) used to develop this TMDL is a robust and sophisticated tool, as compared to many others that are available. However, this approach also requires a larger amount of input data to support the predictive aspects of the modeling analysis. When this project was initiated, there were insufficient *E. coli* data available to complete a valid assessment and modeling analysis. Literature values available to complete existing data gaps were reported as fecal coliform, rather than *E. coli*. TCEQ recognizes that the calculated conversion factor might not reflect a fecal coliform/*E. coli* relationship as accurately as may be desired. However, conversion is consistent with procedures in other states, where the same model was used.
3. Inequity in requirements for reductions – no reduction recommended for municipal sources, but reductions are focused on nonpoint sources. Wastewater treatment facilities have record of violations, therefore must be contributing to the problem.	3. Table 9 in the TMDL report identifies that no waste load reduction is required for municipal WWTFs. This is based upon TMDL sampling and self-reported data from the dischargers, indicating low concentrations of indicator bacteria in the wastewater treated effluent. However, municipalities must also ensure that wastewater collection systems do not leak. This TMDL considers such overflows to be nonpoint source and part

	of the load allocation. The TCEQ recognizes that further action to address collection systems may be necessary to reduce this loading, This TMDL demonstrates the majority of loading originates from nonpoint sources; therefore, equity should result in reductions from nonpoint sources. State and federal regulatory authority of nonpoint source pollution is limited and is not expected to be expanded as a result of this analysis. It is anticipated that any reductions necessary from these sources can be accomplished through voluntary effort and integrated into the implementation process with stakeholder oversight and guidance.
4. Sampling station location biased data used in the analysis and did not accurately reflect input from WWTFs.	4. During the monitoring phase of the project, the City of Waelder and Flatonia were both monitored. On July 27-28, 2004, samples collected under baseflow conditions at Flatonia and Waelder WWTF outfalls showed mean counts of 3 cfu/100 mL and 32 cfu/100 mL respectively. On April 24-27, 2004, samples collected under runoff conditions at Flatonia and Waelder WWTFs showed mean counts of 17 cfu/100 mL and 26 cfu/100 mL respectively. On June 5-8, 2004, samples collected under runoff conditions at Flatonia and Waelder WWTFs showed mean counts of <1 cfu/100 mL and 46 cfu/100 mL respectively. From 2001-2004 Flatonia's 5/week average was 41 cfu/100 mL, and Waelder's once/month average was 63 cfu/100 mL. TMDL data was collected to conduct the watershed modeling exercise. Sampling stations are selected to provide data that are most likely to be representative of the water quality in a particular subwatershed, including watersheds where the two cities exist. Subwatershed delineation contributes to the calibration of model parameters used to further enhance characterization of water quality in specific areas.
5. Impact from wild animals not adequately addressed. Numbers for feral hogs are underestimated.	5. Though wildlife deposition represents a background condition, it is an existing condition, and must be accounted for in the model. In response to this issue, the TCEQ conducted an exercise and presented results to stakeholders at the October 8, 2007 meeting. As demonstrated in the exercise, removing wildlife from the LA would reduce the allowable allocation and increase the percent reduction for nonpoint sources. This result is unfavorable to stakeholders in the watershed, as expressed at the October 8 meeting.

6. Sampling data collected at or near the Flatonia WWTF did not exceed criteria. More data should be collected to better identify nonpoint sources.	6. Data collected at or near the City of Flatonia are typically well below the bacteria criteria associated with the contact recreation use. For these reasons, no reduction in point source loading has been prescribed. Additional sampling at appropriate locations and frequencies will allow tracking of progress toward meeting the water quality standard. These steps, including the better identification of nonpoint sources, will provide reasonable assurances that the regulatory and voluntary activities necessary to achieve the pollutant reductions will be implemented. Preparation of the I-Plan for Peach Creek will begin after Commission approval of the TMDL.
7. Numbers used to estimate contribution from cattle are inaccurate, therefore entire study is flawed.	7. In the model for this project, a general estimation of the contribution of cattle was needed. The TCEQ attempts to use the best available and accessible information for model inputs. In the instance of cattle or other livestock numbers, there is no data source publicly available except at a countywide level. The TCEQ agrees that more specific information, at a subwatershed level, would improve accuracy of the model results. TCEQ has indicated in several stakeholder forums that the agency would substitute more specific information if it were provided.
The Texas Department of Agriculture and Texas Poultry Federation (TPF) submitted written comments and request a delay in approval of the TMDL to allow time to consider revisions to the water quality standards.	Please refer to the response earlier in this document, relating to water quality standards.
(1) They also raised questions about the use of fecal coliform data in the modeling analysis, and reference to a 91-day geometric mean.	1. Please refer to the response earlier in this document relating to the use of fecal coliform data. Also, the HSPF model output can be plotted in various alternative ways to display differences between existing conditions and predicted allocation conditions. The 91-day geometric mean was chosen to coincide with TCEQ's quarterly assessment schedule to monitor compliance with water quality standards.
(2) They recommended TCEQ provide technical and financial assistance to WWTFs to comply with water quality standards.	2. The TCEQ appreciates the existing resources that cities in the watershed have committed to treatment of wastewater and recognize that additional efforts to optimize compliance and to more closely monitor effluent quality would add to the financial burden of wastewater treatment. It is anticipated that during the implementation phase of the project, the TCEQ would

	provide some technical assistance to evaluate contribution from wastewater treatment plants. The TCEQ does not provide funding for wastewater treatment/collection capital improvements. Other public funding and loans are available from various sources state and federal entities.
The TPF also raised questions with regard to data used for inputs and assumptions in the modeling analysis. In particular, concern was expressed related to: (1) recommended load reductions from point and nonpoint sources, (2) considerations from fate and transport of bacteria, (3) and differences between model outputs and bacterial source tracking results.	1. Please refer to the response earlier in this document relating to equity between point and nonpoint sources. 2. The TCEQ recognizes the uncertainties with respect to bacterial survival and transport. Recognition of these uncertainties and the limited understanding of the fundamental processes should not preclude inclusion of assumptions related to bacterial transport in modeling analyses. All of the inputs to the model are described in either the modeling report, and/or TMDL report. Fate and transport of bacteria that is discharged is addressed as a process in the HSPF model. Further, model calibration adjusts the model to match up with actual measured in stream. 3. The BST data provided by Texas A&M El Paso Agricultural Research and Extension Center (AREC) provides an indication of the sources of bacteria in the study area. The BST results are expressed as percentages of various source categories, but these percentages are not precise. It would not be appropriate to translate them into a load. As shown in AREC's report, the capability of the method for discrimination of different sources is such that the results are two to three times better than random. In other words, the fact that the human source was detected in 11 percent of the samples and the cattle source in 22 percent of the samples should not be interpreted as hard numbers, but instead as a general confirmation that both human and cattle sources were detected.
The Texas Parks and Wildlife Department supported approval of the TMDL, offered assistance with implementation related to wild animal population estimates and load contributions, and made suggestions for improvements to modeling efforts for other TMDLs.	The TCEQ appreciates TPWD's support to move forward with the Peach Creek TMDL, and their willingness to assist in the estimation of species in the watershed. This information provided by TPWD is very useful and essential for ensuring development of appropriate water resource protection plans and stakeholder confidence. Assistance from the TPWD in species

	identification is encouraged for development of the respective Implementation Plan. Enhancements to the water quality model, such as the order of washoff concentration rates from commercial/industrial areas and waste application fields, could be addressed further through the re-calibration of the model in implementation to be more consistent with literature values or additional sampling data collected as a result of the I-Plan initiative. Any additional modeling done in implementation will consider the recommended larger ranges of variation with respect to a sensitivity analysis