

Response to Public Comment
TMDL for Dissolved Oxygen in Segment 1913 - Mid Cibolo Creek
 May 15, 2007

Tracking Number	Date Received	Affiliation of Commentor	Summary of Request or Comment	Summary of TCEQ Action or Explanation
001	4/30/2007	Consultant for CCMA	<p>Runoff loads are not relevant to this TMDL. Segment 1913 was placed on the 303d list because the minimum dissolved oxygen (DO) criterion was not satisfied during low-flow conditions, while the average DO criterion was fully satisfied. Although calculation of runoff loads may be required, the allocation discussion should clearly state that this is a low-flow issue, and no reduction of runoff loads (MS4 or NPS) is required, Including these loads arbitrarily establishes an allowable load for these sources without identifying a cause and effect relationship or linkage between the water quality problem and the source analysis.</p>	<p>A sentence was added to the first paragraph of the “Pollutant Load Allocation” section which states that this is a low flow issue and reductions in runoff loads will not be necessary under this TMDL.</p>
002	4/30/2007	Consultant for CCMA	<p>The stream will have a greater assimilative capacity as the low-flow volume increases over time. The TMDL should be developed with at least two values or limits identified as endpoints for this TMDL:</p> <ul style="list-style-type: none"> a. One TMDL establishing limits for carbonaceous biochemical oxygen demand (CBOD) and ammonia nitrogen (NH₃-N) corresponding to the limits in the existing CCMA TPDES permit, and b. A second TMDL establishing limits for CBOD and NH₃-N for a future permit condition, based on QUAL-TX model results that demonstrate attainment of the average and minimum DO criteria using projected 2017 loads. <p>This approach will provide the needed MOS due to</p>	<p>The TMDL can only establish one maximum load based upon the approved values or limits in place at the time. The QUAL-TX model will provide results and limits based upon the most recently approved limits as inputs, and any future site specific conditions provided by CCMA. CCMA’s allowance for growth may be managed by more stringent effluent limits in the future according to the QUAL-TX output.</p>

			both the conservatism of the QUAL-TX model and the projection of future growth.	
002	4/30/2007	Consultant for CCMA	The permitted wastewater discharger to segment 1913 is the Cibolo Creek Municipal Authority (CCMA) not the Cibolo Creek Municipal Water Authority (CCMWA) as identified in the Draft.	All instances of CCMWA have been changed to CCMA
003	4/30/2007	Consultant for CCMA	CBOD traditionally represents carbonaceous biochemical oxygen demand not carbonaceous biological oxygen demand as defined on page 1 of the Draft.	This has been changed
004	4/30/2007	Consultant for CCMA	Documentation is not provided that establishes a linkage between nutrients and depressed DO levels; therefore, it is inappropriate to identify nutrients as an issue in the second paragraph of the Executive Summary.	The reference to excessive nutrients has been removed from this paragraph.
005	4/30/2007	Consultant for CCMA	In paragraph 3 of the Executive Summary it is inappropriate to characterize the single point source as "most likely responsible." The objective of the TMDL is to identify a linkage between water quality problems and sources, so it is more appropriate to characterize the single point source as "the most likely source of load that contributes to the impairment."	This change has been made to paragraph 3.
006	4/30/2007	Consultant for CCMA	The USEPA (1991) document entitled <i>Guidance for Water Quality-Based Decisions: The TMDL Process</i> is referenced in the third paragraph of page 2. This document outlines the following steps for "TMDL Development Activities." <ul style="list-style-type: none"> • Selection of the pollutant to consider. • Estimation of the waterbody assimilative capacity. • Estimation of the pollution from all sources to the waterbody. 	Changes made as per comment 001 address this comment.

			<ul style="list-style-type: none"> • Predictive analysis of pollution in the waterbody and determination of total allowable pollution load. • Allocation (with a margin of safety) of the allowable pollution among the different • Pollution sources in a manner that water quality standards are achieved. <p>The second step of this process is the basis for the first General Comment identified above.</p>	
007	4/30/207	Consultant for CCMA	The information presented in Table 2, associated text, and Figures 4a, 4b, and 4c do not correspond.	Table 2 only represents instantaneous grab samples used in the 2004 305b Assessment while Figures 4a, 4b, and 4c represent 24-hour average data collected during impairment verification monitoring activities. The descriptions for Figures 4a, 4b and 4c have been changed to better describe this.
008	4/30/207	Consultant for CCMA	In the first paragraph of page 8 it is conjectured that increased pollutant loadings have resulted from water conservation efforts. There is no supporting information provided to substantiate this statement. The increased loading could result from reduced infiltration and inflow from pipe system improvements, drought conditions, increased individual loads in the system, water conservation, or other factors.	The statement concerning increased water conservation measures and pollutant loadings has been removed from the document.
009	4/30/207	Consultant for CCMA	In the first paragraph of page 8 the report <i>Troubled Waters: An Analysis of CleanWater Act Compliance, July 2003-December 2004</i> (ETRPC 2006) is referenced. This report is based on information contained in TCEQ files. As such, it does not provide additional data or information that is relevant to the completion of this TMDL, reference to this document should be deleted from	References to the ETRPC report have been removed from the document and replaced with citations to the compliance record as Attachment 1.

			the report. If the intent of this reference is to demonstrate that CCMA has been out of compliance with their permit, then it would be more correct to cite the compliance history directly from the TCEQ records before moving to the next sentence which states "CCMA is currently under enforcement by the TGEQ and is in the process of upgrading the facility."	
010	4/30/207	Consultant for CCMA	Figures 5a and 5b on page 9 misrepresent "maximum" values, and do not reflect permit limits for maximum values. The data presented are a mixture of daily maximum values and monthly averages. If the intent of this figure is to depict an increase in CBOD and NH3-N discharges over time relative to the monthly average permit limits, then only the monthly averages should be shown.	The monthly maximum values have been removed from these figures to more appropriately characterize exceedances.
011	4/30/207	Consultant for CCMA	The nonpoint source component is described as "Load Allocation" on pages 10 and 11, but it is critical to note that these sources of load are not present when the minimum DO criterion is not satisfied during low-flow.	No changes have been made to the document based on this comment.
012	4/30/207	Consultant for CCMA	The flow and load values used for point source are inappropriate. Values used for both components of the calculation should be from the 2003-2004 period when non-compliant instream data were collected. This inconsistency affects conclusions shown on Tables 4 and 5, and Figure 6.	No changes have been made to the document based on this comment. The use of flows and concentrations from a longer time period are necessary to fully characterize the exceedances from the CCMA plant. Use of this restricted time period could underestimate load reductions which would fail to achieve TMDL endpoints.
013	4/30/207	Consultant for CCMA	It is inappropriate to incorporate a runoff component, which is identified as "Non-Continuous WLA" on page 11 into the low-flow waste load allocation. Even though the MS4 is a permitted	No changes have been made to the document based on this comment. The MS4 must be included as part of the WLA as per EPA requirements: "NPDES-regulated storm water

			discharge, it does not contribute flow during the conditions when the minimum DO criterion is exceeded.	discharges must be addressed by the wasteload allocation component of a TMDL. See 40 C.F.R. § 130.2(h).” http://www.epa.gov/npdes/pubs/final-wwtmdl.pdf
014	4/30/207	Consultant for CCMA	The allowance for future growth (AFG) as shown on page 14 is not needed if the low-flow conditions and assimilative capacity are properly characterized, because of the conservative nature of the QUAL-TX model.	The AFG has been removed based on this comment. The limits characterized by the QUAL-TX model provide a conservative characterization of the low flow conditions and is therefore not necessary in these calculations. Requests for additional loadings will require further evaluations using the model.
015	4/30/207	Consultant for CCMA	In the "Total Loads" section on page 12 it is important to distinguish between low flow and high flow loads.	No changes have been made to the document based on this comment. The high and low flow loads are distinguished in the previous “Nonpoint Source (Load Allocation)” section.
016	4/30/207	Consultant for CCMA	In the discussion of the "Margin of Safety" on page 13, a 7.1 percent population growth estimate is said to be included, based on the 2004 Texas State Data Center predictions. Due to factors such as the development of State Hwy 130 and growth in the IH-35/SH130 corridor the 2004 growth estimates may not be accurate. A more appropriate growth estimate should be used to develop the expected future wastewater flows, with QUAL-TX used to estimate the assimilative capacity of the stream under these flow/load conditions.	Since the AFG has been removed from this document it is no longer necessary to estimate population growth. However, the TCEQ would be interested in adding another growth estimate if it is provided.
017	4/30/207	Consultant for CCMA	The QUAL-TX model as presented in this report does not predict daily minimum DO concentrations, but daily averages. (p. 15).	The TCEQ agrees with this comment. The last sentence in the first paragraph on page 15 has been changed to: “...Although not predicted by the QUAL-TX model, these reductions should also have a similar effect on the minimum 24-

				hour dissolved oxygen concentrations.”
018	4/30/2007	Consultant for CCMA	<p>On page 15 an explanation is given as to why the model predicts DO violations, even though none occurred. The conjecture is that QUAL-TX is a steady state model that does not account for DO dynamics that result from eutrophication caused by excess nutrients. It has not been demonstrated that there are excessive nutrients, and it is inappropriate to state that eutrophication is the cause of the oxygen dynamics when this has not been proven. The difference in the modeled and measured DO values may be due to:</p> <ul style="list-style-type: none"> a. Use of wrong flow quality values, b. The conservative nature of the QUAL-TX model, or c. Inappropriate assumptions with respect to the terms applied in the model. 	The second paragraph on page 15 has been changed to accommodate this comment.
019	4/11/2007	Stakeholder email	<p>"Land use in the area is primarily pasture and forest, However, land use is changing due to residential development ..."</p> <p>I think that an analysis of the present conditions removes "forest" from the second ranking. Figure 2 (Land Use) identifies the areas that were forests as "Natural" however studying recent aerial photographs show most of these zones to be almost completely populated with residential communities. I believe that the present conditions will support whatever classification is used for mixed suburban and urban usage as the second leading land use category.</p>	<p>No changes have been made to the document based on this comment.</p> <p>The most recent data available for landuse determinations was developed in the early to mid 1990s. As a result some of these classifications will not represent current conditions. The development of quantifiable data to adequately define land use classifications for the entire watershed would be time consuming and costly. The statement, “..However, land use is changing due to residential development...” attempts to address the lack of recent data.</p>
020	4/11/2007	Stakeholder email	"The upper portion of Mid Cibolo Creek is included in the Edwards Aquifer recharge zone; ..." Maps	The following change has been made to the last sentence of the 2 nd paragraph in the Problem

			from the TCEQ website as well as other websites about the Edwards Aquifer have the recharge zone ending about a half mile further upstream. In fact the upper-most mile of Mid Cibolo Creek (segment 1913) seems to mark the boundary between the Edwards Aquifer transition zone and the portion of Texas having no connection to the aquifer (frequently called the coastal plains).	Definition section. The upper portion of Cibolo Creek (this represents stream segment 1908 – Upper Cibolo Creek) is included in the Edwards Aquifer recharge and contributing zones; as a result, there is typically little to no flow into the headwaters of Mid Cibolo Creek under normal conditions.
021	4/11/2007	Stakeholder email	Some illustrations of segment 1913 (such as Figure 2) have its downstream limit about a half mile upstream of IH10, while other illustrations (such as Figure 1) show the limit to be downstream of IH10. Written descriptions of the segment support the location of the limit to be downstream of IH10.	Figure 2 has been changed to match the description of the segment extending to the area below IH10.