

**Response to Public Comment**  
***Three Total Maximum Daily Loads for Bacteria in the San Antonio Area***  
 May 17, 2007

Tracking Number	Date Received	Affiliation of Commentor	Summary of Request or Comment	Summary of TCEQ Action or Explanation
001	4/03/07	Professional Outfitter	I am interested in how the quality of the water is once it gets down to the San Antonio Bay. I have a business down there. I have a guiding service. Also, on the stretch of river below Blue Star and on down, the City and River Authority is going to; we think that becomes like a canoe trail. So, we're concerned that if you are able to enter the water wading, or maybe if you fall out of a canoe that the water will be clean. As this is the river city, I think we are going to have a lot of attractions. A lot of families besides tourists'; if we could be pretty assured that our children can jump out of the canoe. Maybe, we tell them don't go under water, but they do; it's a hot summer day. Within some type of frame work is what I would like to know about. I frequently hit the coast in San Antonio Bay, where the river comes right in there, and I am about 10 miles out pass the Delta, so is our Estuary in the hazardous bacteria?	<p>No changes have been made based on this comment.</p> <p>Though excessive amounts of fecal bacteria in surface water used for recreation have been known to indicate an increased risk of pathogen-induced illness to humans, the TCEQ is not aware of specific instances or increased rates of illness associated with the Upper San Antonio River impairment. Also, San Antonio Bay, Segment No. 2462, is <u>not</u> listed as impaired for contact recreation.</p> <p>For reference, infection due to pathogen-contaminated recreational waters includes gastrointestinal, respiratory, eye, ear, nose, throat, and skin diseases (USEPA, 1986).</p>
002	4/18/07 (letter)	Texas Parks & Wildlife	Page 21, Table 9 (Wildlife): We note that the TMDLs identify wildlife and exotic species, such as feral hogs, as potential sources of bacterial loading. We believe that the species presented in Table 9 of the document may not reflect the animals in the watershed that make the largest contribution to the riparian or in-stream bacterial load. As we noted in our comments to the Bacterial Task Force, "it is important to have a sense of the species in each watershed that may be contributing the largest	<p>No changes have been made based on this comment.</p> <p>The TCEQ appreciates TPWD's willingness to assist in the estimation of species in the watershed. Wildlife presented in Table 9 is a percentage of the nonpoint source load allocation (LA). Because TPWD does not currently have inventories of various wildlife</p>

			<p>bacterial load to the waterbody. In general, one would expect these to be the species that spend time on or near the water. These are not necessarily the largest species in the watershed, nor would they necessarily be the species with the greatest biomass in the watershed.” TPWD does not have inventories of various wildlife species, nor do we have resources to develop such inventories. That notwithstanding, our experts are available to assist TCEQ or their contractors in future TMDLs in estimating the species that are likely to make significant contributions.</p>	<p>species, these numbers are a general estimation of the overall potential load contribution. Differentiation in species at this phase of the project will not influence the LA or respective TMDL. Assistance from the TPWD in species identification is encouraged and appropriate for development of the respective Implementation Plan.</p>
003	4/18/07 (letter)	Texas Parks & Wildlife	<p>General: In regard to the modeling, we wonder if an analysis was performed to identify the input variables to which the results are most sensitive. It would be helpful to know this as a gauge of the uncertainties associated with the specified load and waste load allocations.</p>	<p>No changes have been made based on this comment.</p> <p>A full formal sensitivity analysis for the USAR was not done. It is expected that there is some translation from the Leon River below Proctor Lake sensitivity work done by the same contractor, James Miertschin and Associates, Inc., which as a result utilized the same modeling approach (HSPF) and execution.</p> <p>For example, like the Leon River below Proctor Lake sensitivity analysis, by modifying input +/- 50%, we found only a small effect on bacterial areal loading rates to land surfaces, a moderate effect on maximum accumulation of bacteria on land surfaces, a large effect on first-order decay rate, a small effect on the rate of surface runoff required to remove 90% of bacteria accumulated on the land surface, and a small effect on contributions of bacteria directly to the receiving stream from wildlife, livestock, and leaking septic systems.</p>
004	4/23/07 (fax)	Texas Department of	<p>The TCEQ TMDL analysis concludes that a 60% reduction in bacteria loading to Salado and Walzem</p>	<p>No changes have been made based on this comment.</p>

		Transportation	<p>Creeks, and a 30% reduction to the Upper San Antonio River (USAR) are required. The analysis identifies the City of San Antonio’s municipal separate storm sewer system (MS4) as “the only significant point source” of bacteria loadings to Salado and Walzem Creeks, and the “greatest point source” of bacteria loadings to the USAR. TxDOT is a co-permittee with the City of San Antonio and the San Antonio Water System in the Phase I MS4 permit. Are these references to point sources of bacteria also meant to refer to the TxDOT MS4?</p>	<p>As a Phase I MS4 permittee with the City of San Antonio and the San Antonio Water Systems, TxDOT’s MS4 is a part of the TMDL’s Waste Load Allocation. Therefore, references to point sources of bacteria are also meant to refer to the TxDOT MS4.</p>
005	4/23/07 (fax)	Land Owner	<p>First, our 4-member family lives in Wilson County, approximately 3.5 miles North of Floresville. I travel to San Antonio nearly every work day (except for days spent at our Floresville office).</p> <p>Second, interest in the San Antonio River basin and its water quality is premised on the desirable public interest in restoring the quality of the San Antonio River. The San Antonio River receives high quality from the Medina River (above Leon Creek SA WWTPF). Otherwise, the San Antonio water in Wilson County is primarily a waste carrier.</p> <p>Third, the San Antonio River in Wilson County (including the resulting effect of unreliable Floresville WWTF) is to provide a watershed flow for seriously degraded levels of water including <i>organic</i> bacteria and elevated levels of nitrogen, phosphorous, salt and organic materials from stream sources including the San Antonio Zoo and surface run off ---including feed lot(s) in Wilson County.</p> <p>Having owned property (through 2005) on the San Antonio River due West of Poth (FM 220), where a physical touch of the water is like placing the human hand in a washing machine after soap has been loaded, I can say that the clean up for Segments 1910, 1910A, and</p>	<p>No changes have been made based on this comment.</p> <p>The TCEQ appreciates the encouragement to restore water quality in the San Antonio River and agrees that is will be helpful, beneficial, and in the public interest. The TCEQ looks forward to working with stakeholders and sister agencies to bring the Upper San Antonio River back into compliance with water quality standards.</p>

			<p>1911 will be helpful, beneficial, and in the public interest. But, likely not enough to restore the basin water quality.</p> <p>To achieve usefulness for swimming, i.e. contact recreation, much remains to be done to significantly upgrade the San Antonio River and the basin flow to achieve pleasing appearance, an acceptable quality for physical contact and safe water for health purposes.</p> <p>The upstream Medina River and the downstream San Antonio River offer a study in contrasts. The San Antonio River below the major ( and minor) wastewater treatment facilities and major urban run-off demonstrate the inherent limitation on a low/slow flowing stream basin to absorb and transport pollutants and nutrients generated by urban and agricultural waste. The River offers a study in waste loading (overload) that may or should provide education for the environmental limitations of the Riverine system. Basin educational institutions should find the San Antonio Basin an instructive and easy-to-see laboratory for learning.</p> <p>The TCEQ, San Antonio River Authority and U.S. Environmental Protection Agency are to be encouraged to work with the discharging and non-point sources to pursue further waste reduction, containment and water quality improvement. Much remains to be done.</p>	
006	4/23/07 (fax)	San Antonio Water System	<p>(Page 3, Middle page, 2<sup>nd</sup> Bullet) The listing of possible sources and/or causes of contamination includes “discharges from wastewater treatment facilities and other institutions”. Assuming that the contamination is bacteria, SAWS does not believe that this is a source worthy of listing. Unless the permitted wastewater treatment facility has an operational “upset”, the disinfection (Chlorine) retention time significantly removes bacteria levels from treated waters. If the bullet</p>	<p>No changes have been made based on this comment.</p> <p>Though the probability may be low, because operational upsets can occur, discharges from wastewater treatment facilities are in fact a possible source and/or cause of bacteria contamination.</p>

			is to remain, it is recommended that it is modified to read, “discharges from wastewater treatment facilities that are not capable of adequate disinfection and other institutions”. This is especially true for Salado Creek where Figure 9 in the draft report shows that the effluent outfall contributes 0% to the fecal coliform sources.	
007	4/23/07 (fax)	San Antonio Water System	(Page 16, 3 <sup>rd</sup> Paragraph) For proper interpretation by the public, recommend adding the following as the second sentence of the paragraph: “Stormwater bacteria loading is a non-point source release entering into a MS4 collection system that is permitted and is considered a point source discharge under the NPDES Permit system.”	As suggested, the following sentence was added. “Bacteria loading in urban storm water originates from nonpoint sources. When storm water flows into a municipal separated storm sewer system (MS4), it is then considered a point source discharge and is subject to a TPDES permit.”
008	4/23/07 (fax)	San Antonio Water System	(Page 17, 1 <sup>st</sup> Paragraph, first line) As stated in comment 1, unless the permitted wastewater treatment facility has an operational “upset” the disinfection (Chlorine) retention time significantly removes bacteria levels from treated waters.	No changes have been made based on this comment.  As stated, point sources, such as municipal WWTFs, <u>can</u> contribute fecal coliform bacteria loads to surface water streams through effluent discharges. Therefore, this statement, as it is stated in the TMDL report, is true.
009	4/23/07 (fax)	San Antonio Water System	(Page 17, 2 <sup>nd</sup> Paragraph) SAWS does not sporadically discharge reclaimed water from outfall 004. Unless significant rain events occur, SAWS continuously supplies approximately 850 acre feet per year of Type I reclaimed water to outfall 004.	As suggested, the following has been removed from the second sentence of the second paragraph on page 17, “that is sporadic in frequency and quantity,” The sentence will now read as follows: “There is one discharger of reclaimed municipal effluent in the upper portion of the study area-the San Antonio Water System (SAWS) Outfall 4 in James Park.”
010	4/23/07 (fax)	San Antonio Water System	TCEQ bacteria requirements for Type I Reclaimed water is Fecal Coliform 20 CFU/100 ml ( <i>geometric mean</i> ) and 75 CFU/100 ml ( <i>single grab sample – not to exceed</i> ). SAWS’ introduction of reclaimed water supplement the base flow of Salado Creek was a significant activity resulting in the TCEQ removing dissolved oxygen as a	As stated, the following sentence has been added to the second paragraph of page 17, “TCEQ criteria for Type I Reclaimed water require that fecal coliform concentrations do not exceed: 20 cfu/100 mL as a geometric mean and 75 cfu/100 mL in single grab samples”

			constituent from the TMDL Implementation Plan.	
011	4/23/07	San Antonio Water System	(Page 20, 1 <sup>st</sup> Paragraph, first line) SAWS recommends that the following language from the Watershed Protection Plan (WPP) be included: “The primary recommendation for the City of San Antonio to address bacteria loadings that might arise from leaking sewer mains is to maintain the existing sewer inspection and rehabilitation program being implemented by SAWS. This program is currently addressing the maintenance of City sewers in an aggressive manner.”	No changes have been made based on this comment.  Maintenance of sewer mains and the existing sewer inspection and rehabilitation program is geared toward implementation and will be addressed in detail as a control action in the Implementation Plan.
012	4/23/07	San Antonio Water System	(Page 27, 1 <sup>st</sup> Paragraph, 3 <sup>rd</sup> line) As mentioned earlier, SAWS does not sporadically or intermittently discharge reclaimed water from outfall 004. Unless significant rain events occur, SAWS continuously supplies approximately 850 acre feet per year or Type I reclaimed water to outfall 004.	As suggested, the following has been removed from the 3 <sup>rd</sup> line, “is intermittent, and it”. The fourth sentence of the 1 <sup>st</sup> paragraph on page 27 will now read as follows: “This effluent discharge is required to maintain a disinfectant residual.’
013	4/23/07	San Antonio Water System	(Page 31, Implementation and Reasonable Assurances) SAWS recommends that more emphasis be placed on the development of the “Nine Key Elements” for reducing bacteria loads for the USAR as outlined in the WPP.	No changes have been made to the TMDLs based on this comment.  The TCEQ agrees that emphasis should be placed on the “Nine Key Elements”. The TMDL Implementation Plan will incorporate action items from the WPP, including the “Nine Key Elements” table in detail.