

Minutes
March 12, 2008 Meeting
Trinity River Bacteria TMDL Project
Fourth Public Meeting
North Central Council of Governments
Centerpoint II Building
Regional Forum Room
Arlington, Texas

Attendees:

Darrel Andrews – Trinity Regional Water District
Sam Brush- North Central Texas Council of Governments
Shawneille Campbell- EPA Region 6
Mark Ernst- Tarrant Regional Water District
Moss Fennel- North Texas Tollway Authority
Glenn Harwell- United States Geological Survey
Virgil Helm – Dalworth Soil and Water Conservation District
Angela Kilpatrick- Trinity River Authority
Pat Lambert- North Texas Council of Governments
Donna Long- Texas State Soil and Water Conservation Board
Webster Mangham – Trinity River Authority
Cathy Matthews- City of Dallas
Craig Mobley- United States Geological Survey
Gregg Moss- City of Fort Worth
Muhammad Rafique- DFW Airport
Bob Ressler - City of Arlington
Gene Rattan- Tarrant County
Echo Rexroad- City of Grand Prairie
Bob Sewak- City of Dallas
Trey Shanks- Freese and Nichols
Karen Siddall – City of Irving
Vicki Stokes- City of Fort Worth
Richard Talley- City of Fort Worth
Chris Tolar – Texas Department of Transportation
Elizabeth Turner – City of Dallas
Tony Walker- TCEQ Fort Worth
Adam Whisenant- Texas Parks and Wildlife Department Tyler
Tim Wentreck- DFW Airport
Ellen Yost- North Central Texas Council of Governments

Support Staff:

Dania Grundmann- Texas Commission on Environmental Quality (TCEQ)
John Mummert- TCEQ
Larry Hauck- Texas Institute for Applied Environmental Research (TIAER)
Jimmy Millican- TIAER

Administrative Issues

The fourth public meeting of the Trinity River Bacteria TMDL met on Wednesday, March 12, 2008 from 1:30 PM – 4:00 PM at the North Central Texas Council of Governments facility in Arlington, Texas. The meeting was conducted to inform the public about the status of the ongoing Trinity River bacteria TMDL project and to provide the TMDL allocations found in the final draft of the technical support document. Larry Hauck, Deputy Director at TIAER, opened the meeting, and self-introductions were made by support staff and attendees.

Overview of 303(d) Changes in Project Watershed

Dania Grundmann of TCEQ presented information on the project history and recent 303(d) lists. The impairment history in relation to 303(d) listings was discussed for each segment including locations within each segment that have been determined to be impaired. Attendees were informed of the recent release of the draft 2008 303(d) list that no longer includes Segment 0806. Ms. Grundmann informed the attendees that even though Segment 0806 is no longer listed as impaired it will still be included within the Trinity TMDL project, because the segment contains other impaired tributaries and the TMDL will likely be completed prior to EPA approval of the draft 2008 303(d) list. Listed tributary segments to Segments 0806 and 0841 will be included in the Trinity River TMDL document when it is drafted later this calendar year. Ms. Grundmann informed attendees of current TMDL work being performed on the bacteria impairment of Grapevine Creek (Segment 0822A) and Cottonwood Branch (Segment 0822B) in the Irving and DFW Airport area.

TMDL Overview

Larry Hauck presented introductory material in order to familiarize attendees with the TMDL process. Dr. Hauck discussed Section 303(d) of the Clean Water Act and the process of water quality assessment. He also defined TMDLs, explained the function of TMDLs, presented the elements of a TMDL, and discussed the process involved in TMDL development and implementation.

Dr. Hauck presented background information concerning the non-support of contact recreation use in Segments 0806, 0841, 0822 and 0805 of the Trinity River. He defined contact recreation use and discussed basic information concerning fecal coliform and *E. coli* bacteria and provided a definition of the specific criteria used to determine if impairment exists within the Trinity River segments. Dr. Hauck presented a summary of the assessment data that indicated why portions of all four segments did not support contact recreation along with maps showing the non-support reach or reaches in each segment.

TMDL Allocation Process

Dr. Hauck presented an introduction to the load duration curve method, which was the tool selected for this project in determining load allocations. The steps involved in developing flow and load duration curves were explained, and examples from each of the four segments were presented. He explained the reasoning behind the partitioning of the load duration curves into four separate flow regimes (high, upper mid-range, mid-range, and low). Dr. Hauck explained how load duration curves were used in determining percent reductions required to meet contact recreation use criteria based on the 75th percentile and geometric mean of historical *E. coli* data.

The TMDL allocation equation used for this project was presented, which includes a component that takes into account loadings allocated to upstream and tributary segments entering into impaired segments. Each component of the allocation process equation was defined and the method of determining the loading applied to each component was explained. For each of the four segments and each of the four flow regimes, the total maximum allowable loading was presented along with the amount of that loading allocated to permitted municipal wastewater treatment facilities, permitted municipal separate storm sewer systems (MS4s), and non-regulated nonpoint sources. The required percent reductions in *E. coli* concentrations to achieve support of the contact recreation use were also provided.

Open Discussion

Attendees were given an opportunity to review and discuss a letter sent by EPA to the TCEQ Wastewater Permitting Section that addresses the EPA's expectations for Phase I MS4 Permits that discharge to 303(d) listed water bodies.

Next Steps in the TMDL Process

Dania Grundmann presented a brief overview of the steps required to complete the TMDL process that includes the initial 303(d) listing, and then TMDL project initiation, allocation report development, and ultimately development of an implementation plan. The required approval of TCEQ and EPA was also explained and a possible timeline of early next year was indicated as when the TCEQ Commissioners could adopt the Trinity River bacteria TMDLs for Segments 0805, 0806, 0822, and 0841.

Meeting Conclusion

Prior to adjournment, attendees were given the opportunity to ask questions and discuss the information presented during the meeting. A meeting evaluation form provided by TCEQ was made available for all attendees.

Questions during Presentations

Questions and discussion occurred throughout the meeting and the following provides a summary of those portions of the meeting.

Q: Why weren't Segments 0822 and all of the tributary segments included in the year 2004 303(d) list?

A: Dania Grundmann explained that every two years assessments are performed and the data used for the 2006 assessment indicated impairments due to elevated bacteria levels for Segment 0822 whereas the data for the 2004 assessment did not. John Mummert of TCEQ explained that the tributary segments likely did not have sufficient data until the 2006 assessment based on his knowledge of the timing of monitoring on the tributaries.

Q: Why was 0806 included in this TMDL since according to the 2008 303(d) list it is no longer considered impaired?

A: Dania Grundmann answered that the decision to include Segment 0806 was because the TMDL work has already been performed and that approval of the TMDL will likely occur prior to approval of the draft 2008 303(d) list by EPA. Ms. Grundmann also indicated that there was a reasonably good chance that Segment 0806 may be included in future 303(d) lists since the bacteria data indicate only marginal support of the contact recreation use. Shawneille Campbell of EPA Region 6 also added that the TMDL for Segment 0806 would be considered voluntary once the 2008 303(d) list was approved.

Q: Bob Ressler with the City of Arlington asked about the number of bacteria TMDLs that have been developed using the load duration curve method versus mechanistic models.

A: Larry Hauck answered that he didn't have specific numbers for either; however, the complex nature of bacteria due to die off during transport to and within a water body make using mechanistic models very difficult and applying the load duration curve a often preferred method. Shawneille Campbell also added that much research had been performed by the EPA on the appropriate model to use and the result has been that the load duration curve was the preferred method and also that this method was widely used by other states. Donna Long of the Texas State Soil and Water Conservation Board (TSSWCB) also added that the Bacteria Task Force established by the TSSWCB and the TCEQ examined approaches used by other states for the development of TMDLs. The Task Force concluded that the load duration method was preferred for initial TMDL development.

Q: What is the status of the standards revision process and what impact will this have on the Trinity TMDL project?

A: Dania Grundmann answered that completion of standard revisions is still a few years away; however, if the bacteria criterion are raised the percent reductions required will be reduced accordingly. Dr. Hauck added that regardless of the standard the methodology used to develop TMDL loadings and percent reductions will remain same, though the actual calculated values will change.

Q: How are the loadings from wastewater treatment facilities located within the East Fork Trinity River allocated in this TMDL?

A: Dr. Hauck answered those loadings from wastewater treatment facilities within the East Fork Trinity River are included within the upstream component of the TMDL equation used for Segment 0805, since the East Fork is not impaired and is supporting the contact recreation use.

Q: Has any thought been given to the fact that during very high flows contact recreation use will likely not occur?

A: Dr. Hauck answered that the TCEQ standards revision group has discussed this; however, defining when contact recreation use will or will not occur is difficult.

Q: Were samples collected at the same locations and were the same methods used throughout the study?

A: Dr. Hauck answered that the locations of sampling stations remained the same and at one general location the data from two stations in very close proximity were combined for the TMDL. He also added that most of the data was analyzed using the same method (IDEXX Colilert); however, a different method (modified mTEC) was used in order to isolate and collect bacteria colonies to be analyzed for bacteria source tracking.

Q: What is the minimum number of samples required to develop a TMDL based on the load duration curve method?

A: Larry Hauck answered that 24 samples has been determined to be the minimum number required to develop a TMDL using the load duration curve method based on recommendations of the bacteria task force of TCEQ and TSSWCB.

Q: How will reductions required be achieved?

A: Dr. Hauck acknowledged that many of the percent reductions encountered in TMDLs are intimidating. He added that many things can be attempted such as reconnaissance of streams to identify things such as illegal discharges. John Mummert with the TCEQ added that the implementation plan will contain measures to be taken to reduce bacteria loadings. Dania Grundmann with the TCEQ also added that a phased implementation plan will be used that will include a variety of approaches to be used in reducing bacteria loadings.

Q: Tim Wentreck with the DFW airport asked if bacteria source tracking will be utilized in the implementation plan.

A: Dr. Hauck answered that this information may be used in later phases of the implementation plan, but the first phases would likely utilize options such as stream reconnaissance.

Q: Bob Ressler with the City of Arlington asked if there were studies regarding the effectiveness of any best management practices used to reduce bacteria levels.

A: Dr. Hauck answered that he didn't know of any urban studies that have been performed but studies have occurred in rural areas. He also added that research will likely occur in urban areas since bacteria TMDLs are becoming the most numerous type of TMDL's nationwide. Dania Grundmann added that the implementation plan will utilize management options that have worked in other areas.

Q: Bob Ressler with the City of Arlington asked how waters are designated for contact recreation use.

A: Dr. Hauck answered that with the exception of a couple of water bodies in Texas, all water bodies are assigned a contact recreation use based on the present Texas surface water standards.

Q: Are there any studies that have been performed in regard to how many people actually become ill from certain bacteria levels?

A: Dr. Hauck and John Mummert of TCEQ answered that the *E. coli* concentrations that comprise the present criteria are based on illness rates from epidemiological studies for coastal and the Great Lakes beach and swimming areas and these study results are being used as the basis of protective criteria to all water bodies throughout the nation.

Q: Will information contained in the letter from EPA concerning expectations for Phase I MS4 permits in Harris County become the standard used in the future?

A: Shawneille Campbell with EPA Region 6 answered that information in the letter was considered a proactive approach for Harris County in that it was encouraging stakeholder input.

Q: Would it not be better to use a percent reduction that is attainable?

A: Shawneille Campbell with EPA Region 6 answered that EPA shares the concerns of the regulated community regarding the high percent reductions required in many bacteria TMDLs. She went on to explain that EPA realizes that some percent reductions may not be attainable and if this occurs modification to the TMDL will likely occur. She further indicated that she and others at EPA are very sympathetic to the difficulties associated with bacteria TMDLs, the high percent reductions often found in TMDL documents, and the implications of these matters on the regulated community. Ms. Campbell and Ms. Grundmann emphasized the phased nature of implementation plans, the need to take proactive steps to reduce bacteria in impaired water bodies, and the use of phased implementation approaches that recognize the difficulties in the process.