

Meeting Summary  
Elm & Sandies Creeks (Segments 1803A & 1803B)  
Dissolved Oxygen and Bacteria Total Maximum Daily Load  
Public Meeting  
DeWitt Technology Center  
August 23, 2007  
7:00 – 9:00 pm

**Attendees**

Tim Voelkel  
Bubba Steen  
Harvey R. Kahlden- 319 Program  
Robert S. Lory  
Brian Koch- Texas State Soil & Water Conservation Board (TSSWCB)  
Kendria Ray- TSSWCB  
Wain Fairchild- Tyson Foods  
Debbie Magin- Guadalupe-Blanco River Authority (GBRA)  
Bill Peterson- Holmes Foods  
Lynn Coctivan  
Carl A. Sample  
Jamie Lord Barnes- Natural Resources Conservation Service (NRCS), Cuero F.D.  
Lamar Lessor- Lessor Holdings L.P.  
Stephen Twidwell- Texas Parks and Wildlife Department (TPWD)  
Elizabeth Wilde  
Buddy Clark  
James Grimm- Texas Poultry Federation (TPF)  
Richard Eyster- Texas Department of Agriculture (TDA)  
Sherrie Robinson  
John Robinson  
John L. Lessor  
Mary C. Lessor  
Betty Sample  
Errol Dietze  
Harold High  
Don Sronce- Barnhart Ranches  
Tim Pennel- Pennel Cattle  
Jim Crain  
Melissa Keseling- Keseling Boldt Ranch  
Edward L. Keseling- Keseling Boldt Ranch  
Roger Krause  
Sue C. Ortman

**Support staff**

Andrew Sullivan- Texas Commission on Environmental Quality (TCEQ)

Aaron Wendt- TSSWCB

Larry Hauck- Texas Institute for Applied Environmental Research (TIAER)

Bing Du- TIAER

Alex Tanter- TIAER

**Administrative Issues**

A public meeting on the Elm & Sandies Creeks (Segments 1803A & 1803B) Dissolved Oxygen and Bacteria Total Maximum Daily Load (TMDL) project was conducted on Thursday, August 23, 2007 from 7:00 pm – 9:00 pm at the DeWitt Technology Center in Cuero, Texas. The meeting was conducted to inform the public about the status of the ongoing Elm & Sandies Creeks Dissolved Oxygen and Bacteria TMDL projects. Hard-copies of the PowerPoint presentations were provided along with reports and maps.

**Introductions**

Andrew Sullivan, the project manager from TCEQ, opened the meeting and self-introductions were made by support staff and attendees.

**Introduction to TMDL Process**

Mr. Sullivan presented a general introduction to the TMDL process in Texas. He explained the legal history of TMDLs including the Clean Water Act (CWA) then outlined the water assessment process, data and results reporting, 303(d) listing, and restoration options. He defined TMDL and described the benefits to the community. A flow chart of the TMDL process was presented, including the points at which members of the watershed stakeholders have opportunities to inform the process (TMDL allocation report & development of the implementation plan). Two kinds of restoration processes were described: Implementation Plans (I-Plans) for impaired waters and Watershed Protection Plans (WPPs) for either remedial or preventative programs. *Control actions* for point source discharges and *management measures* for nonpoint sources were explained. It was emphasized that remediation may take many years and undergo several iterations. Control actions may affect permits for point sources. Best Management Practices (BMPs) are voluntary and may be implemented on nonpoint sources. The iterative process for management measures was described.

**Overview of Water Quality Impairments**

Larry Hauck explained TMDLs in the context of Elm and Sandies Creeks. The geography and designated uses of the river were described with emphasis on the aquatic life use and contact recreation use. Dr. Hauck also described the reasons why some segments on the Elm and Sandies creeks were 303(d) listed and offered a brief tutorial on the roles of dissolved oxygen (DO) in watershed ecology and aquatic life use and the indicator bacteria *Escherichia coli* (*E. coli*) in assessing the recreation use. Dr. Hauck used an example from a 24-hour DO survey in the Clear Fork Trinity River to explain the assessment methodology in terms of the average and minimum criteria for DO. He also explained that under present Texas surface water quality standards all streams and rivers are assigned a contact recreation use.

### **Sandies/Elm Creeks Impairment Verification**

Mr. Sullivan outlined the TMDL project history, verification assessment study design, and potential outcomes. Results showed non supporting percentages of samples exceeding the high aquatic life use criteria levels for DO in both Elm and Sandies Creeks. Additionally, both Elm and Sandies Creeks exceeded the geometric mean criteria for *E. coli*, of 126 colonies\100ml, indicating non support of the contact recreation use both creeks. Mr. Sullivan indicated that a TMDL would be performed to address the low DO levels in Elm and Sandies Creeks and the corresponding nonsupport of the high aquatic life use. The high *E. coli* concentrations and resulting nonsupport of the contact recreation use in Elm and Sandies Creeks will be also addressed through development of a TMDL. Mr. Sullivan also apologized for some confusing on sampling site locations and graphics used in the presentation, and he indicated that he would correct those oversights.

### **Addressing Recommendations from the Joint Task Force on Bacteria TMDLs**

Mr. Sullivan provided an overview of the findings from the Joint Task Force on Bacteria TMDLs. The major issues facing bacteria TMDLs were presented by Andrew Sullivan including the recent increase in the number of impaired segments on the draft 2006 303(d) list. The task force members (individuals and agencies) were listed as well as their activities such as examining approaches in other states. The task force report discussed bacteria fate and transport models, bacteria source tracking (BST), and research and development needs. The task force also recommended a three tier approach which Mr. Sullivan presented and placed into the context of the Elm and Sandies Creeks TMDLs. He concluded this portion of the presentations with a web address where interested parties could find out more information on TMDLs: <http://twri.tamu.edu/bacteriatmdl/> .

### **Project Status**

Dr. Hauck presented the status of the Elm and Sandies Creeks project beginning with milestones already achieved and a summary of the recent monitoring that has been completed in years 2006 and 2007. He showed several photographs of sampling sites in the project watershed, including Elm and Sandies Creeks and some major tributaries. He concluded with a discussion of the remaining steps in the bacteria and DO TMDL process, including continuing public participation meetings and comments, the application of appropriate tools to determine the TMDL allocations for bacteria and DO, writing draft TMDL documents, approval of a final TMDL and developing I-Plans.

### **Technical and Financial Assistance for Cattlemen and Poultry Growers: Implementing Best Management Practices (BMPs)**

Aaron Wendt explained that role of TSSWCB in the Elm and Sandies Creeks watershed is to provide assistance to reduce water pollution from agricultural nonpoint pollution in conjunction with other agencies. The TSSWCB also partners with farmers and poultry growers to implement BMPs on their land. Activities of the TSSWCB relevant to the watershed include:

- 1) Developing site-specific, voluntary Water Quality Management Plans (WQMPs) based on Natural Resources Conservation Service (NRCS) standards that represent best available technologies. The TSSWCB provides assistance to write the WQMPs.

2) In cooperation with NRCS (who has access to cost-share money through the Environmental Quality Incentives Program (EQIP), the TSSWCB helps acquire money for distribution in the Elm and Sandies creek watershed.

Mr. Wendt stressed the importance of taking advantage of TSSWCB resources to develop WQMPs.

### **Future Activities**

Mr. Sullivan closed the meeting stating that data would be put together to initiate a draft TMDL and I-Plan. He projected that the next public meeting would occur in six to nine months and that the details of the upcoming meeting would be communicated at a later date. He pointed to the contact information in the provided handouts. The meeting concluded at 9:00pm.

### **Questions during Presentations**

#### *Introduction to TMDL Process*

Q: What are definitions of point and nonpoint sources of pollution?

A: Point sources are sources of pollution from a particular location; usually wastewater treatment plants (WWTPs) or industrial sources. These sources are usually subjected to some sort of treatment before it enters a waterbody. Nonpoint sources of pollution reflect runoff from rainfall events entering waterbodies, resulting from natural, urban and agricultural sources. This type of pollution is not as readily controllable as point source solution.

#### *Overview of Water Quality Impairments*

Q: Several related questions by various attendees were along the basic lines of the following: Why is contact recreation use listed as a designated use for Sandies and Elm Creeks? Is there any contact recreation use actually occurring in these creeks? If not, why is this being applied?

A: All water bodies in Texas have a designated contact recreation use, except for a few water bodies, such as, the Houston Ship Channel. In Texas all water bodies are assigned primary contact recreation use. There is presently not a mechanism to allow designation of a recreation use other than primary contact. There is currently an ongoing water standards review process, part of which is focusing on this contact recreation issue.

Q: Why are we doing the TMDL right now, if changes are being made to the contact recreation use criterion?

A: The outcome from the standards review process is far from certain. The 303(d) listing of the creeks occurred several years ago and the TMDL for Sandies and Elm Creeks has been in progress for several years. These TMDLs need to proceed since the outcome of the standards review process unknown and could still take several more years. The Implementation Plan, process can account for some of the realities of the situation and the actual presence of absence of contact recreation.

Q: When did the Sandies and Elm Creeks project start?

A: The project started in 2001.

Q: Are you doing testing and water quality sampling at different locations?

A: Yes, we are sampling at number of stations. Not all the sampling locations listed were sampled initially, but the ones not used in the initial sampling, were sampled last year.

#### *Sandies/Elm Creeks Impairment Verification*

Q: Were the samples taken at bridges? Have you collected samples away from the bridges, because more pollution and trash is often located at these bridge crossings?

A: Yes, samples were taken from bridges, except for the site at the Lazy F Ranch. Samples taken on the upstream side of the bridge wherever possible, in order to minimize these potential bridge based distortions.

Q: Did you contact landowners in the watershed to get samples on their land (away from bridges).

A: Yes we did. But except for Lazy F ranch, no permission to sample was given.

Q: Were the samples at the Martin Ranch taken on the bridge?

A: These samples were taken a fair distance away from the bridge.

Q: When did the last TCEQ and TIAER sampling occur?

A: The last TCEQ sampling for assessment purposes was in 2004. TIAER was sampling through early 2007.

Q: Do you measure stream flow when collecting samples?

A: Yes, the flow is measured when samples are collected. Flow is measured at intervals across entire width of the waterbody.

Q: Which station had the worst quality (in terms of bacteria) on Sandies Creek?

A: The middle ones had the worst readings. Station 17895 was the worst, the station near the point where Elm Creek enters into Sandies Creek.

#### *Addressing Recommendations from the Joint Task Force on Bacteria TMDLs*

Q: Do we have a DNA library for the watershed?

A: There is no DNA library for this watershed, but one was created in the Peach Creek watershed; a watershed that is close by.

Q: If there is no DNA library how do you know the sources of bacteria?

A: We have not conducted bacterial source tracking on this project, which is where a DNA library is required. But we can do an analysis of the broad categories of point and nonpoint sources using Load Duration Curve (LDC) analysis. We may need the DNA library for the implementation process, but not for the TMDL.

### *Project Status*

Q: Several observations were made about the very heavy rainfall and flooding in the watershed this year, and the question was asked as to whether TIAER sampled since the flooding?

A: No, TIAER has not sampled since the flooding.

Q: Was TIAER able to get wet-weather (high flow) samples last year when it we had drought conditions. It was also commented that sampling should have occurred during runoff events of the present year.

A: Yes, we were able to get to samples at times when the flow was up. One sampled storm event would have been appropriate for any year, the other sampling occurred during a small runoff event that was suitable for a dry year occurrence. It was emphasized that the sampling had to occur when the funding was available.

Q: How many dollars have been spent on this project so far?

A: Unsure of the amount.

Q: What good does public input do in this process?

A: Public input is very important, provides information for us to use. For example the information on the creeks being spring fed is very useful, as are the areas of concern expressed by the attendees.

Q: It was noted that the City of Nixon has nine notices of violation at their WWTP, which lead to several questions about the city of Nixon WWTP, sampling of its outfall, results of the sampling, permit limits on bacteria, etc.?

A: Yes, the outfall was monitored. Most times the samples were acceptable, although a few times the bacteria levels were high. These high concentrations will be taken into consideration in the development of load allocations in the TMDL. Compliance history of the City of Nixon WWTP will be considered in the TMDL and Implementation Plan process. Presently no sampling is being conducted by TIAER for bacteria at the city's outfall. The WWTP has disinfection requirements that occur by having to maintain a certain chlorine residual in their discharge, and that chlorine residual is monitored by the city.

Q: Are all sampling activities in the Sandies and Elm Creeks complete?

A: TIAER's sampling is complete, but routine sampling continues by the Guadalupe-Blanco River Authority (GBRA).

Q: 2005 and 2006 were very dry years. Is it logical to base analyses of DO impairments on sampling from this drought period? For example, it is easier to pollute a 5 gallon bucket, than a big flowing creek. Drought conditions make analysis untrustworthy.

A: Yes, it is ok to base analysis on this period. Even though the period is not representative of normal conditions we can make predictions. The DO model has predictive capabilities. We are able to use DO data at given flows (like drought conditions), and predict what they would be in other flow situations. But admittedly flow conditions were more extreme than normal during the sampling period.

Q: Will TCEQ change the standards, to make an exception for conditions regarding the actual recreation use of creeks in this watershed?

A: The standards review process may consider the contact recreation standards.

Q: There is a strong sulfur smell from our well water. Could this be a source of the pollution?

A: DO impairment is not typically linked to sulfur levels.

Q: What about the effects from the uranium pits?

A: There might be some total dissolved solids effects (and perhaps low dissolved oxygen), but high bacteria would not be anticipated from the pits.

*Technical and Financial Assistance for Cattlemen and Poultry Growers: Implementing Best Management Practices (BMPs)*

Q: How do you define crossfencing?

A: Fences used to subdivide fields, and to protect the part by water.

Q: The rancher/farmer participation in these programs is voluntary? Can EPA or TCEQ force you to comply with voluntary actions?

A: It is a totally voluntary process, and EPA or TCEQ can not force compliance. However, if you agree to a water quality management plan, for example, then you have to follow it with oversight from the NRCS and TSSECB.

Q: What happens if you implement voluntary measures, but the person upstream doesn't, and a complaint is filed – how is it figured out who is to blame?

A: The TSSWCB will check your plan, and if you are complying with it, the assumption made is that the pollution is not from you.

Q: Can you explain who can file a complaint?

A: Anyone can file complaint with TCEQ - it can be an individual or a group.

Q: Who owns surface waters of Texas?

A: The State owns the surface water, but the water rights for use are owned by individuals.

Q: Is TCEQ the lead investigator for complaints?

A: Yes, TCEQ is, unless you have a WQMP. The TSSWCB is the lead follow-up when a WQMP is involved.

Q: Were water quality management plans implemented before the project started?

A: Yes, the TSSWCB started implementing WQMPs in 1999. The oldest farms had until 2007 to implement them. But any new poultry operation needs them or they will be unable to get bank loans. The banks now require these plans before they will make any loans for new operations.