Minutes
Elm & Sandies Creeks (Segments 1803A & 1803B)
Dissolved Oxygen and Bacteria Total Maximum Daily Loads
Public Meeting

Pilgrim Community Center
June 23, 2008
6:30 pm

Attendees

Bill Hyman, Independent Cattlemen's Association of Texas
Craig Hines
Janice Burns, NRCS & Landowner
Don Hyatt
Buddy Clark
John L. "Bubba" Cook
Roger Krause
Greg Sengelmann, GCUWCD
Debbie Magin, Guadalupe-Blanco River Authority
Laura Chandler
John Robinson, S-R Ranch
Sue Ortman, Culpepper Ranch
Terry Raddock
Richard Eyster, TDA
Robert Culpepper
Matt Reidy, TPWD
Shari Johnson, TSSWCB
Leroy Mikeska, NRCS
Bob Peck, Cattle & Chicken grower
Lias Steen, Rancher
Bill Quinney, B&B Cattle Co.
David Floyd
Others attended whose names could not be deciphered from the sign-in sheets

Charlotte Aitkens, DeWitt Co. SWCD
Tracie Kelley, DeWitt Co. SWCD
Edward Keseling
Millie Stevens, USDA-NRCS
Joye Davis
Verne Colwell
Karen Brewer
Clemence Weber
Lynn Cochran
Linda Warzecha
Gary Schroeder
Marjorie Lee Burnett
Kenneth Haskie
Clark Ward
James Grimm, Texas Poultry Federation
Robbie Davis, NRCS
Tim Pennell, Rancher, DeWitt Co. SWCD
Liz & Ern Mooney, Rancher
JoAnn Ortmann, Cattle Grower
Beverly Meissner
Janice Menking, Chicken & Cattle
Mark Ploeger

[Apologies are provided for the misspelling of any names incorrectly taken from the sign-in sheets.]

Support staff
Greg Easley - Texas Commission on Environmental Quality (TCEQ)
Chip Morris - TCEQ

Andrew Sullivan - TCEQ
Aaron Wendt- Texas State Soil & Water Conservation Board
Larry Hauck- Texas Institute for Applied Environmental Research (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 Monday, June 23, 2008 from 6:30 pm to 8:30 pm at the Pilgrim Community Center in Pilgrim, Texas. The meeting was conducted to inform the public about the status of the ongoing Elm & Sandies Creeks Dissolved Oxygen and Bacteria TMDL project. Hard-copies of the PowerPoint presentations were provided to meeting attendees. An open-house type format took place prior to the meeting from 6:00 PM to 6:30 PM.

Introductions

Mr. Chip Morris from TCEQ opened the meeting and he introduced support staff in attendance.

Overview of Water Quality Impairments

Mr. Andrew Sullivan provided an overview of the impairments to Elm and Sandies Creeks. He discussed the bacteria impairments resulting from elevated *E. coli* levels based on TCEQ sampling activities within the assessment units (AUs) located on the creeks. TCEQ divides streams into AUs based on location of monitoring stations. For Sandies Creek, the lower AU was indicated to go from the confluence with the Guadalupe River upstream to the confluence with Elm Creek. Mr. Sullivan indicated that this AU remains impaired due to elevated *E. coli* based on the draft 2008 303(d) list. He further explained that the upper AU on Sandies Creek above the confluence with Elm Creek and the single AU for Elm Creek were assessed as not impaired and, thus, supporting the contact recreation use based on the draft 2008 303(d) list. Mr. Sullivan summarized this information by stating that only the lower AU on Sandies Creek was indicated to not support the contact recreation use. He then went on to discuss issues in these creeks regarding depressed dissolved oxygen levels that indicate nonsupport of the designated high aquatic life use. The data indicate that all AUs in Elm and Sandies Creek do not support the aquatic life use based on low concentrations of dissolved oxygen. Mr. Sullivan also mentioned that it is possible that even though the dissolved oxygen concentrations are depressed when compared to applicable criteria that the creeks are still supporting the high aquatic life use and that support would be indicated by looking at sampling of the biological community such as occurred back several years ago. An evaluation of the water quality standards will be undertaken to determine the appropriate criteria. He also mentioned that flowing artesian wells are affecting dissolved oxygen levels in the creeks and that this will also be evaluated.

Source Assessment

Mr. Sullivan next discussed the issue of bacteria source assessment. He indicated that generally point sources, such as wastewater treatment facilities (WWTFs), were more highly controllable than nonpoint sources such as wildlife sources and agricultural runoff. He then presented an overview of the TCEQ inspections of the Nixon and Smiley WWTFs that were performed January 2008. It was indicated that several infractions were noted at both facilities and some of these infractions have been corrected while some others were still unresolved. Mr. Sullivan then presented an overview of load duration curves (LDCs) as a simple assessment method that takes

advantage of existing data to graphically present results to discern the broad categories of point and nonpoint sources of bacteria contribution. Another source assessment method that was presented was that of targeted monitoring where bacteria samples are collected near suspected sources and in smaller areas to refine where bacteria are originating. Mr. Sullivan presented watershed surveys as yet another source assessment tool that involves actual reconnaissance of the watershed under various conditions of rainfall and streamflow, which then combined with local knowledge, can assist in isolating bacteria sources. Bacteria source tracking (BST) was also presented by Mr. Sullivan as a viable tool that could be used in this watershed that employs various bacteriological laboratory methods to discern sources of bacteria at the levels of human, livestock/poultry and non domestic animals. He further stated that BST could be employed in this watershed. Together this toolbox approach of source identification includes facility inspections, LDCs, targeted monitoring, watershed surveys, and BST.

Mr. Sullivan concluded this portion of the presentations with an overview of project status. He indicated in the past the types of impairments and their locations had been verified, in the present potential sources are being evaluated, and in the future plan development and water quality standards revisions will be considered.

Water Quality Standards

Mr. Gregg Easley of TCEQ provided information on potential revisions of the State's water quality standards that could impact Elm and Sandies Creek. He began with an overview of the Federal Clean Water Act, including the "fishable/swimmable" goal for all waters that is part of the Act. The subcategories (exceptional, high, intermediate and limited) of aquatic life use and each supporting dissolved oxygen criterion were next presented by Mr. Easley. The present recreational bacteria criteria were presented along with the potential revisions to the criteria that included two levels of primary contact, a single level of secondary contact, and a noncontact recreation level.

Mr. Easley then discussed use attainability analysis (UAA) as a means of determining whether the aquatic life use was being supported despite dissolved oxygen concentrations lower than criteria. This process also provides an alternative for adjusting the subcategory of the aquatic life use if the adjusted subcategory could be justified by data. Six potential reasons for altering the subcategory were presented by Mr. Easley, of which natural low flow conditions was mentioned as a possible condition in Elm and Sandies Creeks because of the "weak" perennial flow conditions, due to seasonably very low flows.

Implementation – Technical and Cost-Share Assistance

Mr. Aaron Wendt and Ms. Shari Johnson of the TSSWCB and Tracie Kelley of NRCS provided information on the technical and financial assistance for cattle raisers and poultry growers in the Elm and Sandies Creek watershed. Mr. Wendt explained the partnership arrangement of the local soil and water conservation districts with the TSSWCB at the state level and the NRCS at the federal level. He presented information on how the TSSWCB has been established by the Texas Legislature to be the lead agency for planning, implementing and managing programs and practices for preventing and abating agricultural nonpoint sources of pollution. Further, he stated that the implementation strategy by the TSSWCB is totally voluntary for the landowner and producer, except for certain types of poultry operations that are required to have water quality

management plans (WQMPs). Mr. Wendt further mentioned that WQMPs provide protection from the liabilities of a complaint based on water quality issues, because an implemented WQMP indicates adherence to all accepted practices necessary to protect water quality.

Ms. Kelley presented information on grazing management plans in this watershed of which four WQMPs are now completed. Ms. Johnson presented information on poultry WQMPs of which 60 are now completed.

Mr. Wendt provided information on the Environmental Quality Incentives Program (EQIP) and stated that the Elm and Sandies Creeks watershed is considered one of the State's priority areas for that program. He concluded with an overview of the Lone Star Healthy Streams educational project and the poultry litter application effectiveness monitoring study.

Future Activities and Wrap-Up

Mr. Sullivan concluded the meeting with statements summarizing the pertinent points of the meeting. He restated that only the lower reach of Sandies Creek is still impaired by bacteria and not supporting the contact recreation use and that Elm Creek and upper Sandies Creek are no longer an issue of concern for bacteria. More studies are required for the dissolved oxygen and high aquatic life use for the creeks. The potential exists for modifications of the recreation use standard under the ongoing revision of the State water quality standards and this offers the potential for a criterion more suited to specific types of recreation that occur in the watershed. The next meeting will occur when there has been enough progress on the project to have some specifics to present. Mr. Sullivan also mentioned that he would like to obtain the list of potential stakeholders in the watershed that was mentioned by some attendees to be available.

Mr. Sullivan also indicated that a follow-up meeting could be planned to focus on compliance and enforcement related processes and actions in the watershed. This would include staff with knowledge of the program that could respond to questions about the issues associated with discharges in the watershed.

Questions and Answers

Numerous questions and statements were made by stakeholders attending the meeting. These questions, statements, and the answers provided are summarized below. Unless noted otherwise, answers were provided by the support staff of TCEQ and TSSWCB.

Q. How many listings for impaired water bodies are there in Texas?
A. Over 400 water bodies are on the present statewide 303(d) list, though some water bodies are listed for more that one impairment such as dissolved oxygen and bacteria on Elm and Sandies Creeks. It was estimated that 200+ individual water bodies are included with bacteria impairments.

Q. Since the data used in the assessment of Elm and Sandies Creeks were taken in 1999-2004, were the data collected during drought conditions? And were most of the data taken from bridges?
A. Yes, the data for the 2006 assessment were taken during 1999-2004 and this included data collected during periods of drought. This time span also included periods of normal to high

flows. Most of the data were collected from bridge crossings, though perhaps 10 % of the data were not. Additionally, newer data was used to delist 1803A for contact recreation use, as described on the 2008 303d List.

Q. Why is the dissolved oxygen low during low flows?
A. Groundwater contributes much of the low flow and groundwater contains both low dissolved oxygen and chemical substances that can use up oxygen. Also nutrients and other materials discharge from WWTPs can use up dissolved oxygen and these discharges occur during all flow conditions, including low flow.

Q. What was the concentration of dissolved oxygen in groundwater?
A. Limited measurements indicate concentrations of about 2 parts per million (ppm) or milligram per liter (mg/L).

Q. With such low dissolved oxygen concentrations that are below 5 ppm, how are any fish alive?
A. Fish communities in Texas can often survive under low dissolved oxygen concentrations, and it is possible in some Texas systems, especially in east Texas, for fish communities to maintain a high aquatic life use even under low dissolved oxygen concentrations.

Q. Regarding WWTF inspections, how much advance notice was given prior to inspections?
A. The January 2008 inspections were not surprise inspections, so an unknown amount of advance notice was given. Even with the advanced notice, some problems were observed during the inspections.

Q. Have all the WWTP issues noted during the inspections been resolved? If not, why not?
A. No, not all the issues are resolved, though some have been resolved. The enforcement process and actions on notices of violation take time and provide due process to all involved.

Note: Several other questions arose, relating to the compliance by WWTPs. Since more detailed discussion on this matter was outside the scope of the June 23rd meeting, TCEQ committed to hosting a follow-up meeting.

Q. What is the duration of these studies that have taken place on Elm and Sandies Creeks?
A. The first listing 303(d) listing actually goes back to 1996 and this listing was based on routine monitoring that historically occurred in the watershed. Once every two years a new 303(d) list is developed and the continued impairment listings prompted special studies of intensive monitoring to verify the impairments and these studies were conducted from 2001 to 2004. In summary, the focused efforts on Elm and Sandies Creeks began in 2001, and so they have been ongoing for a little less than a decade.

Q. In identifying bacteria sources, how are wildlife bacteria sources separated from agricultural sources?
A. Bacteria source tracking provides a means to do this, and such testing is an option for this watershed.

Q. Is there any good map available for this watershed?
A. Yes, and TCEQ will make that map available to all interested parties.

Q. Where are the highest bacteria concentrations presently?
A. The highest bacteria concentrations are found in the lower portion of Sandies Creek below its confluence with Elm Creek.

Q. Have the tributaries to Elm and Sandies Creek been tested for bacteria? These should be tested to determine areas contributing high bacteria.
A. The tributaries have not been tested for bacteria, but such testing is planned for the future and should begin within the next few months.

Q. Why is contact recreation use designated for these creeks? Is that designation applicable to this system? Comments were made that landowners are not going swimming at places of private access to the creeks and that sampling could be biased since it occurs at public access roads where dumping may be prevalent.
A. Under present Texas water quality standards, the vast majority of water bodies are designated for contact recreation use with the most notable exceptions of ship and barge channels. The potential revisions of the water quality standards that are being developed offer the opportunity of additional categories of recreation use that may provide a category more applicable to the uses that occur in these creeks and where intensive contact recreation use does not occur. The Guadalupe River was mentioned as an example of an area of intensive contract recreation.

Q. How do we participate in and impact the process of contact recreation use designation and the present standards revision process?
A. We will provide information to the group on how you may participate in this process.

Q. Does anyone sample the creeks currently for bacteria?
A. Ms. Debbie Magin of the Guadalupe-Blanco River Authority indicated that her agency samples one site monthly and that these data are used in TCEQ assessments, though the most recent data are not included at this time. Ms. Magin also elaborated on aspects of the recreation uses and why one may not want designation of non-contact recreation for such situations as young children (for example, grandchildren) playing in and about the creeks.

Q. If Sandies Creek were dammed, would its water be suitable for drinking and recreation? Are we cleaning up the creek so someone else can dam the creek and take the water to San Antonio?
A. This question solicited much discussion and several interruptions that prevented a full answer to be presented. It was mentioned, however, that the expertise to answer that question was not available from the TCEQ staff present at this meeting, but the answer would be found.

Q. Do all poultry operations have WQMPs?
A. Most operations have plans, though it is not known if every operation does. Mr. James Grimm of the Texas Poultry Federation offered that to the best of his knowledge all operations by Holmes Foods and Tyson Foods must have a WQMP to be supplied by them.

Q. What was the purpose of this meeting?
A. The purpose was to provide information on the project including the latest regarding impairments and listings, source assessment tools, inspections of wastewater treatment facilities, potential standards revisions regarding the contact recreation use and bacteria criteria, and agriculturally related programs to assist in water quality improvements.

Meeting Adjourned at 8:55 p.m.