

Elm Creek and Sandies Creek TMDL Public Meeting

DRAFT (07-27-05) Meeting Summary – July 14, 2005

Attendees:

Curtis Wild, Bill Blackwell, Clemence Weber, Shari Johnson, Janice Barnes, Barry Miller, Edward L. Keseling, Kirk Nixon, Robert J. Lorp, William R. Miller, Glenn Rea, Bill Peterson, B.J. Carpenter, Wain Fairchild, Harold Grauke, Lillian Smith, Chris Anzaldna, Lee Munz, Robbie Davis, Ken Horton, Kendria Ray, Bill Braden, James K. Crain, Bob McCurly, Shea Cockrum, Lias Steen, Frances and Doyle Colwell, John and Cynthia Sue Hamilton, Jessica Watts, Debbie Magin, Linda Trevino, Erro L. Dietze, Lynn Cochran, Mary Lessor, Lamar Lessor, James Grim, Lowell and Sherill Keonig, Doyce Justiss, Roger Crouch, and Paul Baumann.

Also present was TCEQ - Project Manger Andrew Sullivan, and TCEQ contracted staff representing: Shoreline Environmental Research Foundation (SERF) – Robert Wilkinson and Tope Ojo,; Ecological Communications Corporation (EComm) Facilitator Jeremy Walther; and Limno-Tech – Scott Hinz and Dave Dilks.

CALL TO ORDER/WELCOME/INTRODUCTIONS:

Jeremy Walther (EComm) opened the public meeting to provide results from data collected on the Elm Creek and Sandies Creek TMDL project, discuss how the data will be used, and to initiate the formation of a stakeholder group (watershed steering committee). Introductions were made, handouts distributed, and the evenings' agenda was reviewed.

The purpose of the meeting was to inform the public and potential stakeholders on the status of work that was being performed under a Total Maximum Daily Load (TMDL) project for Elm Creek and Sandies Creek as required under the 1972 federal Clean Water Act. Some data has been presented during past meetings, but new information will also be presented, as well as what to expect during the implementation phase of the project.

Public participation is very important and ensures that state government considers local perspectives in its decisions. The Elm and Sandies Creek(s) project will be a joint effort among the state and local stakeholders.

PRESENTATION INTRODUCTION

Mr. Sullivan began by comparing the Sandies and Elm project to the Peach Creek project, which involves similar or identical constituents. He outlined the goals of the meeting, which were to review the overall project, present the current status, discuss implementation activities upon the completion of the TMDL, and the direction of the project from this point. He asked the group in general if there for expectations that the group might have for the meeting. Mr. Walther asked if anyone had a strong reaction to the newspaper article in the Victoria Advocate that announced the meeting. One attendee

answered that he came to the meeting to understand the problem, and that didn't know one existed.

PROJECT BACKGROUND

Mr. Sullivan explained that Sandies and Elm Creeks were originally included on the impaired waters list due to low dissolved oxygen levels and high bacteria counts.

One attendee asked about the contact recreation use, and why it applied to these segments. Mr. Sullivan explained that all water bodies in Texas are required by law to meet the contact recreation use.

Mr. Sullivan began by presenting the data that has been collected to date. He revisited the standards. For the high aquatic life use, a criteria of 5mg/L (average criteria) must be met, as well as a minimum criteria of 3mg/L. If levels drop below these standards, the high aquatic life use is not being met. For contact recreation, the indicator is bacteria concentration, specifically of E. coli. There are two criteria for this as well: single sample of 394 colonies per 100 mL; and geometric mean of 126 colonies per 100 mL.

For the contact recreation use, removal from the 303(d) list was ruled out as a possibility, since E. coli concentrations exceeded the established criteria. Further data collection was also negated as a possibility, as data collections associated with this project provided more than enough information to make a decision. The primary contact recreation use can only be changed in very limited cases due to such factors as accessibility or safety. Therefore, there is no alternative to the development of a TMDL for contact recreation.

Data was collected at seven different stations within the Sandies and Elm watershed over a three year period to define the problem.

Dissolved Oxygen

For Elm Creek, the minimum criteria was exceeded 33%, 33%, and 16% of the time at the most upstream, middle, and most downstream sampling site, respectively. The average criteria was exceeded 33%, 42%, and 44% of the time from the most upstream to most downstream site, respectively.

For Sandies Creek, the minimum criteria was exceeded 9%, 23%, 10%, and 0% of the time from upstream to downstream. The average criteria was exceeded was exceeded 9%, 37%, 23%, 15% of the time from upstream to downstream.

One attendee asked about sampling frequency, and Mr. Sullivan responded that there was no set frequency, but that low flow conditions were targeted, as required by the monitoring plan.

Bacteria

From upstream to downstream for Elm Creek, single sample results exceeded standards 0%, 13%, and 19% of the time. For Sandies Creek, from upstream to downstream, single

sample criteria was exceeded 23%, 13%, 18%, 13% of the time. Average criteria for both creeks were exceeded as well.

One attendee asked what changes could be made to the aquatic life use . Mr. Sullivan explained that there were four levels, exceptional, high, intermediate, and limited.

Another attendee asked how much of the segment was actually used for contact recreation, and Mr. Sullivan responded that he didn't know, but that the project was based on requirements of the standards, which do not distinguish between existing levels of contact recreation.

Mr. Sullivan stated that during the last fiscal year, work has been initiated to address the water quality problem and to start taking remedial action. He explained that the team has been sampling during high flow conditions, to determine how bacteria levels are affected by rain events as water runs off from the surrounding the watershed. He then explained that this data will be used in computer models to develop the TMDL. There will also be some kinetics studies to support modeling.

A question was presented regarding event monitoring. Mr. Sullivan answered that the data will be collected every eight hours during the event, and that Mr. Wilkinson would be presenting more information about that later in the meeting.

Mr. Sullivan then emphasized the importance of developing a watershed committee, and stated that the formation of this group is a major goal at this stage of the project.

PROGRAM OVERVIEW

Mr. Sullivan then briefly presented an overview of the TMDL program. There are two key elements of the program: the TMDL, which determines the maximum load and allocates the load to sources throughout the watershed; and the implementation plan, which uses best management practices, permitting, and other available tools to try to fix the problem.

He explained that there are six parts to the TMDL part of the program: 1) define the problem, 2) endpoint identification, 3) identify sources, 4) identify linkage between sources and water body, 5) margin of safety, and 6) complete load allocation. Once a TMDL is approved by the EPA, the project moves into the implementation plan, which is largely carried out by the watershed committee.

He then reviewed the two kinds of implementation plans. These are TMDL implementation plans and a watershed restoration plan. Both have the same goals; to improve water quality and restore uses. Implementation plans are remedial, while watershed restoration plans are either remedial or preventative. The Sandies and Elm project will be using an implementation plan, since a TMDL will be developed.

Mr. Sullivan then provided a map showing all water bodies that are not meeting the contract recreation uses to demonstrate how widespread the problem is throughout the state.

Mr. Sullivan then discussed the Texas Surface Water Quality Standards in relation to contact recreation. He stated that the standards are very hard to change, and that all water bodies in Texas are required to have a primary contact recreational use, even unclassified water bodies. There are two categories of recreational use: contact recreation use and non-contact recreation use, each with their own criteria. The only way to change a use is through a Use Attainability Analysis (UAA). Water quality standards are supposed to be revised every three years, although the last revision occurred in 2000. There are only two water bodies that have a non-contact recreation use: the Houston Ship Channel and portions of the Rio Grande. Several factors may support a UAA to determine that a water body should have a non-contact recreation use. These are: 1) the water body may not be physically amenable to contact recreation; 2) no evidence of recreation (though very hard to prove); and 3) seasonal recreation could not occur during low flow conditions. Mr. Sullivan then called for questions.

One attendee asked if sources have been identified and what kind of long term plan can be expected to fix the problem. Mr. Sullivan stated that sources have yet to be identified, but that resources are currently focused on getting the TMDL established. He said sources of bacteria could be waste water treatment plants, agricultural operations, wildlife, etc., and that the project will evaluate whether or not the Peach Creek bacterial source tracking can be used for Sandies and Elm. He then explained that Mr. Wendt would be providing details on implementation later in the meeting.

One attendee asked how far back historically data collection goes. Mr. Sullivan responded that in 2000, indicator bacterial for bacterial monitoring was switched from fecal coliform to E. coli. Prior to that, sampling goes back at least 20 years.

Mr. Walther then summarized what Mr. Sullivan had presented and introduced Robert Wilkinson.

DATA COLLECTION UPDATE

Mr. Wilkinson stated that two out of three required sampling events has been complete, and occurred in May and June 2005. Mr. Wilkinson explained that dissolved oxygen, temperature, pH, and conductivity were measured using scientific probes, and that water samples were taken every 8 hours and sent to a lab in San Antonio. Additionally, pathogen samples were taken every 8 hours and analyzed in a field lab during the sampling event.

He then presented a map showing sampling locations, and presented the results. He stated that an event appropriate for sampling produced at least one inch of rain in a six hour period.

Mr. Wilkinson stated that the May event produced pathogen spikes that reached as high as 25,000 colonies, which more than exceeded the standard of 394 colonies per 100 mL. The spike moved as a mass from the upstream site to the downstream site during the event. Similar results were found during the June event. He stated that additional work is required (one more event) and that it is dependant on more rain.

He then stated that bacterial source tracking may be used in the future for this project, and that a time of travel study and cross section surveys will also be performed near the end of summer. All of the data will be used by modelers to determine load and to determine sources of the pollutants. He stated that the time of travel study will use a non-toxic dye and fluorometers to measure the leading edge, maximum concentration, and trailing edge of the dye mass.

One attendee asked about dissolved oxygen levels. Mr. Wilkinson stated that surprisingly, dissolved oxygen levels remained relatively low during the storm events.

Another attendee asked about flows during event sampling. Mr. Wilkinson responded that flows were as high as 900-1,100 cfs, compared to the single digit levels that the creek typically exhibits during ambient conditions.

A question was posed regarding specific models that will be used, and Mr. Hinz and Mr. Sullivan explained that various models may be used depending on what resolution is needed and what types of information the data provides.

Mr. Walther then called for a 10-15 minute break.

IMPLEMENTATION AND MODELING

After the break, Aaron Wendt of the Texas State Soil and Water Conservation Board, presented the role that his agency would play in the implementation phase of the TMDL project, citing the example of the Peach Creek TMDL project, which is further along than the Sandies and Elm project. He explained the programs administered through the TSSWCB, including soil and water conservation district assistance, water supply enhancement, and non-point source pollution abatement. Mr. Wendt also explained that the implementation strategy for this project would most likely include voluntary implementation of best management practices (BMPs) by private landowners. Using Peach Creek as an example, he described poultry operation BMPs that are already in place, as well as cattle operation BMPs that will be used.

One attendee discussed the effectiveness and disadvantages of some specific BMPs.

Another attendee questioned the potential pollution source of agricultural operations, and stated there hasn't been a drastic change in livestock concentrations in the area for over the past 100 years. Mr. Sullivan and Mr. Wendt stated that sources have not yet been identified, and that they were using Peach Creek as an example at this time, which had no real conclusive single source. Mr. Sullivan said other factors could be contributing,

including wildlife, but at this point, the project needs to focus on controlling only those sources that are manageable.

One attendee asked about funding for the cost share programs. Mr. Wendt and one other TSSWCB staff member stated that federal funding will be available for Sandies and Elm once implementation of the TMDL has begun, and will be a much more significant amount than what is available now, although some funding is currently available.

Mr. Wendt closed by stating that there are other agencies that provide programs as well, which have additional resources for local landowners.

WATERSHED COMMITTEE FORMATION

Mr. Walther then presented a sign-in sheet for those interested in signing up for the watershed committee. Mr. Sullivan explained that the watershed committee plays the most important role during the implementation phase of the project, and that a large and diverse group is crucial. The committee will be approved by TCEQ, and has a maximum of 24 members.