



Attoyac Bayou Watershed Partnership Meeting Minutes

March 8, 2012

Nacogdoches County Farm Bureau Conference Facility

6:00 PM

26 people attending

All presentations summarized below are available on the project website at: <http://attoyac.tamu.edu/meetings>

6:00 PM: Mr. Anthony Castilaw, CES: Meeting Opening and Introductions

- Welcomed everyone to the meeting and thanked them for their attendance

6:05 PM: Mr. Sean Pessara, SFASU: Relationship Between Streamflow and E. coli Levels

Presentation #1 on Project Website

Graphics Presented

- Graphs were presented that illustrated paired streamflow and E. coli levels and compared them to the water quality standard.

- Graphs were presented for the following monitoring locations

- Attoyac Bayou @ SH 21
- Attoyac Bayou @ SH 7
- Terrapin Creek @ FM 95
- Attoyac Bayou @ FM 138
- Naconiche Creek @ FM 95
- Big Iron Ore Creek @ FM 354
- West Creek @ CR 2913

- the gaps in the flow data line are there due to lack of flow measurements; these were either caused by no flow being present, or in some cases the streams were too deep to wade thus preventing a flow measurement from being taken

- overall, the graphs illustrated that E. coli levels generally do increase with increases in stream flow, this could be caused by several factors including:

- rain events washing pollution into the waterways from upland areas
- increased flows disturbing stream and bank sediments and releasing E. coli that was trapped within those sediments

- these results are merely preliminary findings

- a more in depth analysis with accompanying statistics will be conducted following the completion of water quality monitoring

No questions were asked regarding this presentation

6:20 PM: Mr. Lucas Gregory, TWRI: Modeling Support for the Attoyac Bayou Watershed: Initial SELECT Model Outputs

Presentation #2 on Project Website

SELECT Model Refresher

- a quick refresher of the SELECT model, what it is, what it does and the input information that it utilizes was provided as this model was last discussed in detail during the June 2011 partnership meeting

- a review of the watershed specific input information that was used and how it was arrived at was also covered

- all animal or septic numbers, their fecal bacteria and material loading rates were agreed upon by partnership members during the December 2011 meeting

- several maps of the Attoyac Bayou watershed were also shown

- the first was of the basin delineated into 13 watershed subbasins for use in SELECT modeling; this watershed sub-delineation will be used by the SELECT model to predict what areas of the watershed have the highest potential to contribute bacteria to the Attoyac Bayou

- the second was of the watershed LU/LC map as agreed upon by watershed stakeholders following discussions at early partnership meetings; associated LU/LC acreages were also included

Draft SELECT Model Outputs

- Septic Systems were presented first as described in the slides; project personnel did raise the question about the appropriateness of the 50% failure rate. Other investigations report numbers lower than 50% percent failures for East Texas. After some discussion, Attoyac Bayou Partnership members reaffirmed their belief that a 50% failure rate is most appropriate for the watershed due to system age, watershed soils, and lack of system maintenance

- SELECT outputs presented for Hunting Camps and Dogs didn't raise any questions

- WWTF outputs were presented along with some additional information on actual reported flows from each of the three WWTFs. This information is reported in the table on the next page.

WWTF Name	Permitted Maximum Flow	Modeled Flow	Reported Average Flow
Chireno ISD	10,000 gpd	5,000 gpd	480 gpd
City of Garrison	120,000 gpd	60,000 gpd	80,000 gpd
Martinsville ISD	8,000 gpd	4,000 gpd	3,200 gpd

- the need to remodel the WWTFs using their reported average flows was discussed; however, due to the relatively minimal potential bacteria input from these systems it was not deemed necessary. The model will be rerun with these modified numbers so that results can be compared.
- horses, cattle and deer garnered no discussion as the SELECT outputs were presented
- feral hog model outputs were questioned as their similarity to deer and cattle seemed unrealistic. After discussion amongst the partnership, it was decided that the Feral Hog model will be rerun with hogs being applied throughout the watershed using a 100 ft buffer around the stream network
- following the presentation of SELECT outputs, a graphic was presented that showed the relative difference between potential loadings from each modeled source
 - this slide generated quite a bit of discussion regarding the potential bacteria contributions among the sources modeled
 - the similarities between cattle, deer and feral hogs was the bulk of this discussion
 - a question about the amount of fecal material production modeled for each animal was also raised; appropriate fecal material production rates will be further researched and discussed
 - once this information has been sought out and refined, an email to the watershed partnership list serve will be sent out notifying every one of the findings
- poultry operations and how the application of litter produced will be modeled was discussed next
 - information presented was provided by TSSWCB from their WQMPs on poultry operations in the watershed
 - the validity/accuracy of these numbers was discussed at length; to ensure the accuracy of this information, TSSWCB will double check these numbers prior to the initial poultry simulation using the SELECT model
 - it was further decided that of the litter produced in the watershed and planned for application on properties covered under the poultry WQMPs that:
 - 1/3 of this excess litter leaves the watershed
 - 2/3 is land applied within a 5 mile buffer of the actual chicken houses
 - of this land applied manure
 - 2/3 is applied to hay fields
 - 1/3 is applied to managed pastures
 - it was pointed out that the current land use/land cover map does not distinguish between managed pastures and hay fields, but treats them as equals
 - it was pointed out that Dr. Leon Young at SFA is able to use spectral analysis of infrared imagery to determine the difference between hay fields and less intensively managed pastures
 - Dr. McBroom agreed to speak with Dr. Young about possibly conducting this assessment
- stakeholders also agreed that modeled E.coli levels should be consistent with E. coli numbers that have been produced from stockpiled chicken litter rather than fresh chicken litter

- the discussion on the SELECT model was concluded by describing how SELECT model outputs will feed into the decision making process later in the project
 - the SELECT model is one of three primary tools that will direct where and what type of management efforts are described in the WPP; water quality monitoring data and the Bacterial Source Tracking results are the other tools that will be used

7:20 PM: Mr. Lucas Gregory, TWRI: Management Options Overview and Stakeholder Survey

Presentation #3 on Project Website

A brief presentation of potential BMPs that could potentially be implemented in the Attoyac Bayou watershed to improve water quality was presented. BMPs and implementation strategies will be determined later in the project, but this presentation will begin the thought process about which BMPs are appropriate, effective, and palatable.

A brief overview of each practice as shown on each slide was given and partnership members were asked to complete a 2 question survey illustrating their opinion on the feasibility of each practice in the watershed and the willingness of landowners to implement each practice on their property.

7:45 PM: Mr. Neil Boitnott, CES: Overview of Draft WPP Chapters 1, 2, 3 and 6

Brief descriptions of the four Draft WPP Chapters distributed for review were provided as discussed below.

Chapter 1 – Watershed Management

- this chapter overviews watershed management on a general scale and provides definitions or descriptions of:
 - a watershed and its impacts on water quality
 - the watershed approach
 - Watershed Plan Protection plan development process
 - the role of the watershed coordinator
 - protection of private property rights
 - adaptive management strategy

Chapter 2 – Regional History

- this chapter provides a look back at the historical significance of the watershed and the surrounding area. The chapter includes discussion on:
 - native americans
 - European settlement
 - The Republic of Texas
 - and the expansion/significance of railroads, forestry, agriculture and oil and gas production

Chapter 3 – Watershed Characteristics

- this chapter provides a look at the physical characteristics of the Attoyac Bayou watershed. Within this chapter, discussion is provided on the following:
 - watershed boundaries
 - topography
 - soils

- land use and land cover
- ecoregions
- climate
- groundwater resources
- surface water resources
- population

Chapter 6 – Potential Sources of Pollution

- this chapter describes the existence of the potential sources of pollution to the watershed identified during the watershed source survey. Within this chapter, the following sources are described:

- OSSFs
- Pets
- Livestock
- Poultry
- WWTFs
- Oil and Gas OSSFs
- wildlife
- feral animals
- illegal dumping

The presentation concluded with the solicitation of comments on these draft chapters of the WPP. Printed copies of the chapters were provided to those in attendance and electronic copies of these chapters can be downloaded from the project website. Comments can either be brought in writing to the next project meeting or delivered to:

Mr. Neil Boitnott
 Castilaw Environmental Services
 936-559-9991
nboitnott@castilawenvironmental.com

Next Meeting: Thursday, June 7th at 6 p.m. at the Nacogdoches County Court House Annex

Action Items from This Meeting

- double check chicken litter production numbers
- further research fecal production rates for individual animals: cattle, deer, hogs, horses
- explore ability to differentiate between hay fields and regular pastures and the ability to incorporate this into SELECT modeling
- rerun the SELECT model to keep hogs within 100 ft of streams, update the flow rates modeled for WWTFs to use their average reported discharge