



Attoyac Bayou Watershed Partnership Meeting Minutes

June 16, 2011

Nacogdoches County Courthouse Annex

6:00 PM

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

6:03 PM: Mr. Anthony Castilaw, CES: Meeting Opening and Introductions

- Added several new steering committee members to bring in people from St. Augustine Co.
- ANRA's *Upper Neches Basin Highlights Report* was mentioned as was the CRP meeting held in Lufkin on May 19th
 - o Water quality in the Attoyac Bayou as well as this project are both highlighted in the report
 - o 15 of 19 water bodies in Upper Neches that have impairments due to bacteria
 - o The report will be available online at: <http://attoyac.tamu.edu/reports>

6:10 PM: Ms. Sarah Schwab, SFASU: Sampling Update and RUAA Update

Presentation #1 on Project Website

Sampling Update

- Sampling about halfway complete
- DO levels have decreased and WWTF counts have been higher of late in the warmer temperatures
- Issues with beaver dams at 84, 59, West, Waffelow and Terrapin Creeks; we also need fecal samples and will be working to collect samples and remove a few beavers at the same time
- Issues at Waffelow Creek – still a popular dump site, this time TVs not animal carcasses
- Issues at FM 95 and Terrapin Creek – difficulties with large logs and logging debris
- Fecal sample collection continues and we would like to collect more samples if we can get them; we do need your permission for accessing some of those samples

RUAA Update

- Sarah Fuller will be doing the analysis
- Sampling sites have been identified and are being reviewed by TCEQ and TSSWCB; once this review is complete the field work should be able to begin
- Hopefully, field surveys will begin at the end of August
- Looking for contacts to assist with process

Q: can we get larger maps at next meeting to see where the RUAA sites will be located?

A: Sure, we can do that

Q: Can you remind us why the RUAA is needed for new attendees?

A: State of Texas is undergoing a standards change where there will be different levels of "contact recreation" which will determine which levels of contaminants are allowable based on an assessment unit basis. This exercise will use interviews to determine if a waterbody can be classified as primary or secondary contact.

6:20 PM: Ms. Jasjeet Kaur, Texas A&M: Load Duration Curves

Presentation #2 on Project Website

- Flow Duration Curves graphically represent how a stream's flow can be separated into flow categories: low flows, dry conditions, mid-range flows, moist conditions, high flows
- Illustrated as percentage of days within a year that exceed a certain flow rate
- Load Duration Curves combine the Flow Duration Curve with monitored pollutant concentrations
- Concentration X Flow Rate = Loading at a given point in time
- Using some regression equations, the Load Duration Curve developed can be compared to a load duration curve developed at the water quality standard
- The difference between the two curves is the amount of needed reduction
- These are simple models that can help us predict what type of pollutant loading we are seeing: either point source or non-point source
- Using historical data only, Load Duration Curves were developed for the Attoyac Bayou at US 59, SH 21 and SH 7
- SH 7 didn't have adequate data to support the development of needed percentage reductions
- Reduction curves for pre-existing data at 3 sites shows reductions needed at all flow conditions except very low flows

Q: That graph is just an example, correct?

A: Yes, it made a pretty graph so we used it as an example

Q: On HWY 21, is there a USGS gauge?

A: Yes, but it's not active anymore.

6:30 PM: Mr. Neil Boitnott, CES: Landuse/Landcover Mapping

Presentation #3 on Project Website

- Landuse: how humans use the land
- Landcover: type of physical cover on the land's surface: i.e.: forest, house, pasture...
- Top four classes of land in Attoyac make up 90% of the watershed
- Urban only accounts for less than 3% of the watershed
- Used 2008-2009 leaf-off aerial photos (winter) to update land use and land cover
- Used GIS to identify land areas of the same land use
- Total Average Accuracy Assessment = 86%
- Ground truthed by selecting sites, driving to that point in the watershed and verifying the landuse/landcover of that site

Q: Could you give a better explanation of what you called "riparian cover?"

A: Forested land, close proximity to streams, but we used "hardwood dominated" when possible. Average Accuracy is 86% (from office and field accuracy tests).

- based on stakeholder feedback, riparian forests will be re-evaluated

Q: How long will this map be valid for the project?

A: unless significant development occurs in the watershed, then there should be no need to update it further since the ongoing modeling will depend on this map - updating it again could cause some difficulties.

6:45 PM: Break to Look at Large Landuse/Landcover Map and Point Out Errors

7:05 PM: Ms. Jasjeet Kaur, Texas A&M: SELECT Model

Presentation #4 on Project Website

- SELECT = Spatially Explicit Load Enrichment Calculation Tool
- Tool used to assess potential for bacteria loads coming from small areas within a larger watershed
- Factors considered in the model are the landuse, human and animal population densities, watershed slope, soil types and distances to the creek
- Helps to identify which areas of the watershed may pose the greatest risk of bacteria contributions
- Specific data inputs include:
 - o WWTF inputs
 - o Census data

- Cattle population estimates
 - Deer population estimates
 - Feral Hog population estimates
 - On-Site Sewage Facility numbers
 - Poultry contributions
 - Wildlife contributions
- Animal population estimates are based on available data and stakeholder input (this will be a point of discussion at the next meeting)
 - Example SELECT model outputs were shown illustrating how the model can and does predict how potential loadings from the different sources vary geographically

Q: Cows and deer are mentioned – what about chicken litter?

A: Working with TSSWCB using WQMP data to account for this.

Q: Is it a significant source?

A: It's supposed to be composted so it shouldn't be a significant source.

Comment: it's applied "hot," not composted, all throughout the Attoyac. If composting is used at all, it's by very few producers.

Q: E. coli die-off – is that taken into account?

A: To some extent. Its common knowledge that E.coli usually takes about 4 days to die off, but recent research shows that may not be the case all the time.

Q: Are WPPs being conducted in other watersheds heavy with poultry?

A: Yes, there is one and several assessment projects are ongoing on in watersheds with significant poultry activity.

Q: May be misunderstanding – not sure how many people are composting or not since it's not understood that well.

A: Sanderson Farms is supposed to be composting all of their litter, but I don't think they're doing it long enough.

Comment: Actually, there are quite a few actually doing composting within the watershed, more so than you'd expect.

A: We don't have record of them, so please ask them to contact their local TSSWCB officials so that we have that on paper.

Q: How will all these OSSF systems with "lateral lines" running across the ground (illegal septic) be accounted for?

A: We use 911 and census data and city boundaries to estimate where septic are. An applicable failure rate for the watershed will be determined based on stakeholder

input, a review of soil data, and health department surveys which should help account for these faulty or otherwise non-compliant systems. If you know specific information on any of these lateral pipes let us know.

Next Meeting: September 22nd at 6 p.m. here in the Nacogdoches County Annex

Topics of discussion will include:

- quick overview of Landuse/Landcover map changes
- discussion of animal densities and total watershed numbers
- bacteria source tracking