

Attoyac Bayou Watershed Partnership

Meeting Minutes: May 16, 2013

Nacogdoches County Farm Bureau Conference Facility

Dr. Matthew McBroom, Associate Professor, Arthur Temple College of Forestry and Agriculture, Stephen F. Austin State University

Supreme Court Ruling on NPDES permit requirements in forestry

- ruling has broader implications for locally developed plans
- environmental group sued Oregon on the grounds that forest roads are a point source
- claimed that logging sets were industrial facilities due to changed operations (sizing, delimiting, merchandising, etc.)
- this could have easily applied to other arenas: agriculture, oil and gas, etc.

SFA research looked at road contributions of sediment to a creek

- roads crossing the creek were large source
- no roads crossing creek did have less sediment contributions
- adding gravel to road surface reduced sediment runoff from roads, however roads were a temporary structure
- this and other results support argument of environmental group

9th Circuit Court sided with environmental group

- left specifics open ended on who got the permits, what they needed permits for, etc.
 - would have been a regulatory nightmare that would not improve water quality had it stuck

Ruling appealed to the Supreme Court which had several options:

- Court could not hear it; circuit court ruling stands and applies to that circuit only
- Court hears, upholds circuit court ruling; now applies to entire US
- Court hears and overturns

Before court heard, EPA clarified that stormwater from forest roads is not an industrial activity

EPA also stated that BMPs were the best way to manage this and other nonpoint sources

Society of American Foresters submitted Amicus Brief in support of local management

- signed by approx. 40 scientists and specialists
- supported EPA's approach of letting local entities use BMPs to manage runoff

Supreme Court heard arguments in December of 2012 and issued its ruling on March 20, 2013

Court Ruled 7-1 in favor of forest industry

- court ruled that these activities are NOT industrial activity and is part of normal forestry operations
- EPA has jurisdictional authority to say what activities will be managed by NPDES permits
- states like Oregon have made extensive efforts in implementing BMPs and they have expertise in this arena
- substantial investment has been made in these efforts
- court defers to the expertise of the states which have science backed results
- CWA prompts EPA to work with the States
- further regulation could be counterproductive and duplicative

Ruling vindicated use of BMPs as a shield from regulation and litigation

Implications:

- federal government recognizes NPS management strategies like BMPs
- voluntary measures are superior to regulation

Must Maintain Vigilance

- future lawsuits will likely arise from environmental groups
- EPA did receive a lot of latitude interpret this ruling further

Dr. Terry Gentry, Associate Professor, Department of Soil and Crop Sciences, Texas A&M University

Bacterial Source Tracking Results for the Attoyac Bayou

Project has employed various approaches to identify the sources of fecal contamination in the watershed

- source survey
- modeling
- bacterial source tracking

BST approaches used include library dependent and library independent

BST is not a predictive tool like a computer based model is, it actually evaluates real water quality

Library Dependent BST

- 2 Approaches: - ERIC-PCR and RiboPrinting
- both equate to a barcode

- allows sources to be ranked: what is most prevalent
- more discriminating
- more expensive

Current E. coli BST Library has 1454 E. coli isolates from around the state

- additional isolates are being added from ongoing and future BST projects

E. coli from water samples are compared to E. coli in the library

- DNA sequence has to be $\geq 80\%$ similar to be considered a match
- $< 80\%$ match is considered unidentified

Can split isolates into a 3 way or 6/7 way split

- 7 way split was used in the Attoyac

Library Independent Approach

- looks at the presence or absence of a targeted organism: Bacteroidales in this case
- have markers for humans, ruminants, horses and hogs
- more broad and generic
- less expensive than the library dependent approach

Library Independent applied to 250 water samples

Library Dependent applied to 100 water samples

Independent BST results

- results very similar to other rural watersheds
- human present in only 5% of samples; no horse found
- ruminant and hog most common
- General marker is used as a check on the method; but also shows that we may be missing markers for some sources
- storm flow resulted in higher number of positively identified markers
- the two sites with the most bacteroidales were Attoyac at SH21 and Big Iron Ore at FM 354

Known source sample collection was a concerted effort in the watershed to increase the reliability of the Library Dependent BST results

Library Dependent BST results

- all samples combined:

3 way split

Wildlife = 61%; Livestock and Domestic Animals = 21%; Unidentified Samples = 13%; Human = 6%

7 way split

Wildlife, non-avian = 46% (25% of these were feral hogs); Wildlife avian = 15%; Unidentified = 13%; Cattle = 10%, Humans = 6%, Pets = 5%, Other Livestock, Avian = 3%, Other Livestock, Non-avian = 3%
- Poultry was Not a large proportion of the E. coli BST results

3 way split in base flow vs. storm flow conditions were very similar
- only 18 samples analyzed, so results may not include all sources present in the waterbody
- wildlife dominated both base flow and storm flow conditions at 56% of samples
- Livestock and domestic animals came in second at about 33%

Questions:

Q: What level of samples are needed to have really good confidence in the BST results?

A: - depends on the questions asked and the information you want to get
- for the case of Attoyac, we are comfortable with the number of samples we have and the way the data are being used
- if we were really looking to be specific with results, then more samples would certainly be needed

Q: Could you speculate on what the BST results would have looked like 100 years ago? Are we any better or worse off than we were then?

A: - Its hard to say, but you really need to think about the way the water body was used

Anthony Castilaw: Watershed Coordinator, Castilaw Environmental Services

WPP Development Process

The effort to evaluate the Attoyac Bayou watershed and its water quality and develop a WPP to improve its water quality is now at the point in the process of putting the various pieces of the project together into the WPP

- science behind the plan has been completed
 - water quality monitoring
 - computer monitoring
 - bacterial source tracking
- the watershed characterization is complete
 - watershed survey
 - RUAA field work and survey
 - Land use and land cover updated

- now common sense solutions are needed to address the need to reduce bacteria levels
- not all issues can be easily addressed, but we need to do what we can to improve the waterbody

- There is of course still an option for the bacteria standard to be revised to a less stringent level, but this is not a certainty
- Since this is not a certainty, a plan to address the issues that we can is the best way to proceed...it develops a shield to prevent future oversight

Goal is to have the watershed steering committee meet on a much more frequent basis to really determine what should go in the plan

- using these items, a draft of the plan will be developed by early fall...September

Next Steps:

- solidify the goals for moving forward: sets the stage for what will be in the plan
- identify solutions....how can these goals be achieved

Options for solutions are endless: local stakeholders make the decisions on what to include...being creative with management recommendations is good

Steering committee membership should be revisited to ensure that even representation is present when the management measures are being developed

Proposed Steering Committee meeting schedule

- June: merge the science
- July: determine management needs
- August: refine management needs

Steering Committee Charge:

- set overall goals and objectives
- identify critical management needs
- develop management measures to achieve goals
- develop indicators and targets for implementation
- develop implementation schedule and milestones
- describe how progress will be measured
- describe monitoring needs and education needs
- discuss technical and financial assistance needs

Recommendations of the Committee will be discussed amongst the group and feed into the development of the plan

- the consensus of the group will dictate what is included in the plan

Lucas Gregory: Project Manager, Texas Water Resources Institute

RUAA Public Release and Comment Period

Highlights of the RUAA were presented during the March meeting
- comments were addressed and incorporated into this draft document

First public comment period is for 45 days
Starts with this meeting and ends on June 30, 2013
- this is an opportunity for the public to review the RUAA and provide comment before TCEQ reviews the document

Send comments to Lucas by email, mail, phone....

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RUAA was available in limited print copies at the meeting and on CDs

RUAA is posted on the project website
<http://attoyac.tamu.edu>

Next meeting date will depend on steering committee progress made. We will let you know when it will be as soon as we can.