



## **DOUBLE BAYOU WATERSHED PARTNERSHIP**

### **STAKEHOLDER MEETING 5**

**Tuesday, March 18, 2014**

**5:30 - 7:45 P.M.**

**Double Bayou Community Building**

**2211 Eagle Ferry Road**

**Double Bayou, TX**

### **MEETING SUMMARY**

**Attendees:** David Boyd (Sierra Club), Linda Broach (TCEQ), Tom Douglas (Sierra Club), Tom Fahring, Becky Fancher, Clint Fancher, Ryan Gerlich (TX Ag-Life), Aaron Humphrey, Guy Jackson (CHART), Charles Johnson, Kim Laird (TCEQ), Regina Lewis, Lisa Marshall (GBCP), Ollie Mayes, Katie McCann (GBF), Tom McNeely, Creola Moore, Brad Neish (HARC), Kathy Paden, Jennifer Peterson (TX Ag-Life), Alice Rivon, Bob Scherer (TPWD), Jerry Shadden (TBCD), Bill Tinnerman (University of St. Thomas), Rex Tunze (Chambers County Environmental Health), Bertha White, Pudge Wilcox (Chambers-Liberty Counties Navigation District), Catherine Williams (CHART)

**Team Members:** Stephanie Glenn (HARC), Brian Koch (TSSWCB), Brandie Minchew (Shead), Linda Shead (Shead), Danielle Vinette (Shead)

#### **1. Welcome – Jerry Shadden**

Jerry Shadden, General Manager of the Trinity Bay Conservation District (TBCD), provided the welcome to the group, noting the food in the back, provided by TBCD.

#### **2. Introductions and Agenda Review – Linda Shead**

Linda noted that the purpose of the day's meeting was to gain some information about potential management measures to deal with the sources identified during earlier stakeholder meetings. Two presentations on management measures will be provided by guest speakers. Then the results of discussions on management measures from the most recent set of workgroup meetings will be presented, with the opportunity for discussion and/or suggestions. Linda then led self-introductions.

#### **3. Onsite Wastewater Treatment Solutions – Ryan Gerlich**

Ryan Gerlich, Program Specialist with Texas A&M AgriLife Extension, provided a

4800 Research Forest Drive The Woodlands, Texas 77381 Tel: 281-367-1348 [www.doublebayou.org](http://www.doublebayou.org)

*Double Bayou Watershed Partnership is a project of the following entities:*



presentation about OSSFs – Onsite Sewage Facilities. He described what they are, why wastewater is a concern, the evolution of onsite wastewater treatment over the years, how OSSF issues are identified and addressed, and education and outreach. Other names for these facilities are: septic systems and OWTS, which is an acronym for Onsite Wastewater Treatment System. A summary of his presentation is provided below.

Over the last few years, there have been jumps in technology, moving from out-of-sight/out-of-mind to improved technology and management that address both removal and treatment of wastewater. Onsite wastewater treatment systems consist of 4 components: house (generator of wastewater), collection and storage (piping from house to pretreatment tank), the pretreatment tank, and final treatment and dispersal, which occur in the soil.

He described the different elements and processes of conventional septic systems and the newer aerobic systems, which are especially necessary if the water table is too high or there is clay in the soil. He noted that disinfection, a step in the process, is not sterilization. That is, it does not kill all of the bacteria and germs, so the processed water is not drinking water.

Ryan then went on to describe some wastewater practices that can affect the operation of septic systems, including: role of vegetative cover, septic system additives, dishwashers, garbage disposals, fats/oils/grease, laundry, flushed items, toilet paper, cleaning products, drain cleaners, septic tank pumping, and measuring solids. Many of the best practices can also affect the operation of public wastewater system.

One example is that homeowners sometimes use swimming pool chlorinator tablets (which are less expensive, but acid). However, these are different from wastewater system tablets (which are base). Using the wrong ones, or both, can impair the chemistry in the system.

Another example is the “septic safe” logo, which means that an object can flow through a 4” pipe, but it does not necessarily mean that the object will degrade.

[The practices/recommendations are described in more detail in the presentation that is available at the Double Bayou website: [www.doublebayou.org](http://www.doublebayou.org).]

Ryan then described his project that is addressing coastal anaerobic OSSFs. Some of the project goals are to identify areas with chronic OSSF failure, develop an OSSF inspector training course, partake in public outreach, conduct visual inspections of anaerobic OSSFs, and replace failing OSSFs if needed. The owners are also encouraged to have pump-outs and inspections done. The boundary of this project is coastal zones. [Chambers County is in the coastal zone.]

Ryan presents a two-hour Homeowner Maintenance of Septic Systems program, which includes free pump-outs and inspection of systems. There are no penalties if the system is not found to be meeting standards, and the system may even be replaced for the owner. [A workshop is being planned for Double Bayou.]

Question: An aerobic system has water all around it – how can it be checked? Also, the spray head stopped spraying. Answer: There are licensed maintenance suppliers that can come out on a quarterly schedule. They can look at the control box to see if lights are

incorrectly lit, or if the buzzer is going off. The box should have the contact information for the maintenance provider. The maintenance provider should be called to come out and check the system.

Question: Do you prefer one of the system types? Answer: The project funds anaerobic systems. Most areas don't have conventional soils, so they are limited in the type of system they can have. The original systems are better for long-term operation and maintenance.

Question: Are there rental places with sludge judges? Answer: You could call maintenance providers or a plumbing store.

Question: Do anaerobic systems need to be licensed by a maintenance provider? Answer: If it's anaerobic, it does not have a set maintenance provider.

#### **4. Lone Star Healthy Streams Solutions – Jennifer Peterson**

Jennifer, also a Program Specialist with Texas A&M AgriLife Extension, helped develop the Lone Star Healthy Streams program. She noted that more than half of the water quality issues in the state are caused by bacteria, and that everyone and everything can be a potential contributor of bacteria. The livestock industry is the focus of today's presentation, but is only one of many potential sources, and agriculture is not being blamed.

Lone Star Healthy Streams is working with TCEQ to create some best management practices (BMPs) to reduce bacterial contamination caused by animals, and has already published several resource manuals of BMPs for different aspects of the industry. These include information on background, water quality law/policy, bacteria fate and transport, and BMPs. The BMPs include a description, bacteria removal efficiency, and the cost. The manuals are available for download online, along with an online training course.

BMPs have been determined to be the most effective, practical means of preventing or reducing pollution from nonpoint sources (diffuse sources). The categories of tried and true BMPs are: grazing management, runoff management, riparian area protection and management, and mortality management. She went on to describe elements of these BMPs and how they can work.

For example, improved grazing practices showed: 200% reduction in *E. coli* levels when grazing intensity was switched from heavy to moderate, 90-96% reduction in fecal coliform levels when grazing intensity switched from heavy to no grazing, and 72% reduction in *E. coli* levels when prescribed grazing was implemented with contour farming, grassed waterways, and nutrient/pest management. Similar information was provided for the other BMPs (runoff management, riparian area protection and management, and mortality management).

Some places offering technical assistance are SWCD, TSSWCB, NRCS, and Ag-Life. Financial assistance can be acquired through TSSWCB, NRCS, and FSA.

In summary: livestock can contribute to bacteria; BMPs are important; and people should know their options, so they can make an informed decision about which practices to implement.

## 5. Potential Management Measures

Linda introduced the topic of potential management measures for the Double Bayou watershed, informing the group that the information from the two presentations will be useful for the rest of the meeting, which will be reports and discussion from the workgroup meetings.

- Recreation/Hunting – *Linda Shead*

The Recreation/Hunting Workgroup developed some factors to consider for the effectiveness of management measures. These considerations can probably apply to other workgroups, as well:

- Buy-in from Local entities
- Education
  - Existing materials
  - Local contact
  - Back-the-Bay pledge
  - Continuous ad in newspaper
  - Chamberswild website, and others
  - Citizen science in the classroom
  - Events (GatorFest, boat parade, ...)
  - Test-your-knowledge game
  - Sings
  - Exhibits
  - Log violations in paper
- Connections with Other Organizations
- Economic Benefit
- Target Audience

The workgroup developed the following Potential Management Measures for bacteria resulting from recreation/hunting sources. The items in italics were added by attendees in response to a request for any other potential measures.

- Boater Waste
  - Pump station at Job Beason park
  - Education (as noted above)
- Lack of Sanitation Facilities
  - Add info to local maps & websites
  - Partner for other restroom facilities
- Carcasses
  - Education
  - Operation Game Thief
- Concentration of Scavengers
  - Treat as background
  - *Rain gardens at outfalls of pool gutters*

The workgroup developed the following Potential Management Measures for other water issues resulting from recreation/hunting sources:

- Litter
  - Clean-up days
  - Education
  - Monofilament collection at bridges
  - Keep \_\_\_\_ (America) Beautiful
  - *Trash Bash and Adopt-a-Beach*
- Oil Sheen From Motorboats
  - Education
  - Encourage newer motors
  - TERP program/legislation
- Sediment From Erosion and/or Loss of Vegetation
  - Education
  - Enforcement
  - *Riparian vegetation*
  - *Drop structure/grade stabilization structure*
- Invasive Species
  - Education
  - Enforcement
  - Removal days

Other measures may be identified with other workgroups and during workshops.

- Ag/Wildlife/Feral Hogs – *Brian Koch*

Brian reviewed the following Potential Management Measures for bacteria sources, which had been suggested by the Agriculture/Wildlife Feral Hogs Workgroup. The potential measures in italics below were added during the discussion.

- Wildlife
  - Not treat/feed as pets
  - More buffer – manage flooded fields away from the bayou
- Feral Hogs
  - More hunting/removal
  - Bounty
  - Sterilization
  - Commercial processing subsidies
  - Need statewide program
  - *Education- workshop*
- Livestock
  - Prescribed grazing
  - More enrollment in conservation programs (*e.g. Water Quality Management Plans*)
  - Alternate water sources and access, *including stream crossings*
  - *Drop Structures*
  - *Education*
  - *Get shade structures incorporated in standard practices (so eligible for funding*

- Carcasses
  - Education
  - Alternate disposal options
  - Enforcement?

Other discussion items included:

- ~ Feral hog bounty and specific programs, funded by things such as Hog-out, are really effective. Giving money to counties to encourage programs could help, possibly through Texas Department of Agriculture.
- ~ Sterilization is a difficult solution that is still being researched and improved.
- ~ Commercial processing is an option, and there has been a serious demand for hog meat in the past.

Question: In the Geronimo watershed plan, they recommended creating stabilized structures over water for people and animals to cross on. Would that apply here? Answer: Believe that it would. Concentrating access to small stream crossing areas decreases areas where animals have been by the stream, and decreases the time in which they spend at the stream and getting to the stream.

- ~ Nutrient and sediment practices help each other. If fix one, then the other will also improve.
- ~ In June, there will be a feral hog workshop that will cover all of the details about feral hogs. It will include the laws about moving hogs and doing other things with hogs. Currently, only educational programs are available, and there is no physical removal in the programs.
- ~ For buzzards and vultures, they are native wildlife, and protected as migratory birds. Red-winged blackbirds are also protected under the same rules, despite their crop destruction. There are practices that can be used to get the birds to disperse more, so the bacteria aren't kept in one area. One possibility is using spikes to discourage roosting in some areas. Some other solutions are education, alternative disposal of carcasses, and enforcement of carcass disposal.

Question: Can management measures for livestock be used for goats and horses, or are they really that different? Answer: They can be used for all of them. Some people will have too many animals and not enough land to feed them, meaning they are throwing away money to feed the animals because they have too many.

Question: What about shade structures? Currently there are no approved practices for structures for shade. It has been proven effective, but not listed.

Question: How would it get onto a list? Answer: Need to talk to NRCS. We need to explore if there is a national standard for it, and if it's on their list, then it's eligible for the Soil Board to fund it. Cost share can cover a lot of these things.

Question: Is there a way to make these resource manuals available for the community? Answer: Yes, that can be done through the grant process.

Brian moved on to Potential Management Measures for other water issues, which had been identified by the workgroup. As before, the potential measures in italics below were added during the discussion.

- Fish Kills
  - Grazing practices
  - Buffer zones
  - Nutrient management / *soil testing*
  - Alternate water sources
  - Education (especially herbicide use *and soil testing*)
  - Vegetated banks
  - *More shading over bayou (cooler)*
- Collections of Vegetation
  - Integrated pest management
  - Careful use of herbicide – *especially non-native species*
  - Physical removal
  - Work with TBCD

Other discussion items included:

Question: Some areas of Double Bayou are really shaded, so doesn't that help keep the water cooler and more oxygenated? Answer: Yes. Question: So couldn't we increase the shaded areas on Double Bayou to improve the oxygen levels? Answer: Yes.

Brian noted that we could try to bring in a program to do free soil testing. It would be beneficial for residential sources, even though there is not a full residential workgroup yet.

Question: Can use herbicides be used to control some of the nonnative species? Answer: Yes, we can use target herbicides, rather than the broadcast method.

- Wastewater/Septic Systems – *Stephanie Glenn*

Stephanie reviewed the following Potential Management Measures for bacteria sources, which had been suggested by the Wastewater/Septic Systems Workgroup. The potential measures in italics below were added during the discussion.

- Aerobic Septic Systems
  - Maintenance
  - New homeowner program
  - Expand sewer system
  - Homeowner education
- Anaerobic Septic Systems
  - 319 grant program
  - Enforce complaints
  - Expand sewer system
- Anahuac Wastewater Treatment Plant
  - Upgrade collection system – *need money for infrastructure and backup!*
  - GBF's "Cease the Grease" program
  - Cameras to catch wire thefts
  - Education about community notifications

- TBCD Collection System
- Straight Pipe Discharges
  - Testing for leaks into the system
  - Education
  - Grants for low-flow devices
  - 319 program
  - *Reporting process for boaters*

A participant noted that when you complain about problems to the City, they say that they don't have money to fix it. Kim provided some information to help with that, regarding funding sources that the City might be able to use.

Question: Explain Straight Pipe Discharges. Answer: A pipe that is going straight out to the bay/stream and not going through a collection or treatment system.

- Residential – *Linda Shead*

Linda noted that there isn't a residential workgroup, as there are not enough people to commit to meet, so she has been interviewing people individually, and will compile their information into one report.

Question: Is there a city ordinance for dumping in ditches? Answer: Probably, but this will need some checking to determine what is allowed or not.

Pharmaceuticals are dumped down drains, and this is a growing issue, one that we don't yet know the consequences of these actions. One suggested solution was to have a household hazard and waste collection day, and perhaps also an agriculture waste collection day. In each instance, you would take your stuff to them, and they would take it and dispose of it properly with no questions asked.

## 6. **Wrap-Up and Next Steps**

Stephanie reported that the data collection is on track and going well so far. We now have new data for land use and land cover. The maps are looking great. The next step is more updating and the final tweaking.

Linda noted that the next workgroup meetings will be done as needed for reviewing maps and data. The next public meeting could be as soon as May 20<sup>th</sup>. There will be a feral hog workshop in June, a riparian workshop in September, and a Stream Team Training April 11. Stream Team people could eventually be the data collectors.

Brian reported that April 10<sup>th</sup> is a Wetland Field Day at Sheldon Lake State Park, Wetlands are a great treatment for improving water quality, and restoring wetlands may also work for Double Bayou water quality.

## 7. **Adjourn**