DOUBLE BAYOU WATERSHED PARNERSHIP

WASTEWATER/SEPTIC SYSTEMS

FIRST WORKGROUP MEETING

Monday, November 18, 2013
5:30 - 7:00 P.M.
Chambers Recovery Team
509 Washington Avenue
Anahuac, TX 77514

MEETING NOTES

Attendees: Kim Laird (TCEQ), Sidney Lewis (Chambers County), Pudge Wilcox (Chambers-Liberty Navigation District), Hon. Tracy Woody (Jeri's Seafood)

Team Members: Kristi Alexander (Shead), Stephanie Glenn (HARC), Brian Koch (TSSWCB), Linda Shead (Shead), Danielle Vinette (Shead)

1. Welcome, Agenda Review, and Introductions – Kristi Alexander

Kristi welcomed everyone and thanked them for coming. She indicated that if anyone wanted notes or handouts from previous meetings, copies would be provided to them. There were also copies of watershed protection plans available for stakeholders to view. Brian noted that watershed plans from other watersheds are also available on the Soil Board website, and he can send hard copies. The links will be added to the Double Bayou website. Kristi then summarized the agenda and started introductions.

2. Review of Water Quality, Impairments, and potential Sources – Linda Shead

Linda started by noting that the information sources are not included on the slides, but they will be included by the time the slides are posted online. She then gave a short review of the material in the Texas Watershed Stewards training, including a very short overview of water quality and impairments. She stated that Double Bayou is considered impaired, but it is not far off from meeting the standards; therefore we have an opportunity to clean it up before it gets bad and before the State makes the stakeholders take action to improve the water quality. This way the East Fork can also be prevented from getting onto the 303(d) list . She stressed the importance of the stakeholders in helping the project managers figure out the source of potential pollutants.

Stakeholder questions on specific testing in Double Bayou were addressed. [Note: These will be added to the larger list of questions from stakeholders regarding water quality, with the answers to be posted eventually on the website.]

Linda then presented potential sources of bacteria, such as a wastewater treatment plants, septic systems, livestock, wildlife, domestic animals, and feral hogs. She also described the potential causes of low dissolved oxygen, including decomposing matter, high temperatures, and sluggish flow.

Linda and Brian briefly discussed something they learned from recent feral hog workshops, that if the hogs are on your land, then they are considered your property and you can do what you want with them. Once they are transported off your land, they are under different regulations.

3. Nine Elements of Watershed Protection Plans – Brian And Introduction to Role of Workgroups

Brian Koch reviewed the Watershed Protection Plan process. He reminded everyone that watershed protection plans are flexible and voluntary, and stressed that only the stakeholders approve the plan. The project team will write the stakeholders' ideas into the plan, and bring the plan back to the stakeholders for review, until the stakeholders are satisfied. After that, the EPA looks at the plan, and decides if it meets the requirements to be eligible for grant funding.

Brian then outlined the Nine Elements of a watershed protection plan, which are:

a. Identify the causes and sources,
b. Estimate the needed load reduction,
c. Describe management measures,
d. Estimate technical and financial assistance,
e. Plan for information/education,
f. Schedule for implementation,
g. Describe measurable milestones,
h. Criteria for determining if reductions are achieved, and
i. Monitoring plan to evaluate its effectiveness.

He concluded this section by stating that once the plan is consistent with these elements and is approved, then funding becomes available.

Brian said that once you scratch the surface, there are many other details that come up. The protection plan is not exclusive to the causes of the problems that the watershed is listed for. The partnership can do other things to improve the watershed that are unrelated to the listing.

Brian then gave a brief presentation of land use in the watershed, reporting that the primary land use is grassland/pasture, and the second is cultivated land. His presentation listed the different land uses in the watershed and a description of each.

Brian stressed that collecting information is a continuous process. He said that stakeholders have been updating the maps, providing more accurate data to plug into the models. He also noted that the percentages of land use in the Double Bayou watershed are very close to those for the whole state, making this area a great model.

4. Introduction to Watershed Models - Stephanie

Stephanie Glenn started her presentation by stating that models are an analytical approximation of the real system, and that models use calculations to get approximations that are as close to the real system as possible. She quoted industry professionals, "Garbage in is garbage out," emphasizing that we need good data to go into the model in order to get good data out.

She then defined a "load," which is a measurement of how much pollutant is in a particular body of water, as well as "best management practices" (BMPs), which are practices that can be put in place to reduce the load. She emphasizes that the watershed model will help target the places that need to be focused on for implementation.

Stephanie discussed two commonly used tools, noting that it will take another year's worth of sampling before one of them can be used, and that the discussion for this meeting will focus on a geographic model– SELECT. SELECT was developed at A&M for use in Texas rural watersheds and uses GIS. GIS (Geographic Information System) is a grid-based system that takes layers of data and puts them on top of each other to build up a map. The map can then be used to do calculations. Examples of data layer sources that can be used that are relevant to this workgroup are: septic system locations, waste water treatment plants, and population. Pudge reported that he has started compiling a list of known septic systems in the Double Bayou watershed. The layers are created and then shown to the stakeholders, who then say how accurate the data are and help to tweak it. SELECT will take the watershed and divide it up into smaller drainage blocks. For calculating the loads in SELECT, the where, how many, and how much will be put in. SELECT will then calculate and rank the loads of the contributing sources for the entire watershed Stephanie gave an example based on a theoretical watershed and dog waste. The conclusions from SELECT will be analyzed by the workgroups to see how accurate the data is based on actual observations.

5. Discussion of Potential Sources for this Workgroup – Linda et al

Linda started the discussion by saying that Stephanie is going to come back with possible sources (ideas for sources generated in the workgroups) and data layers that might help to define location and quantity for the sources. The stakeholders will then review the data to ensure the data locations and quantities are accurate. Linda showed a flow chart of the back and forth process that will happen before the results are finalized and best management practices can be defined.

She then led the group in a discussion about wastewater infrastructure potential sources. The group identified the following potential sources: aerobic or anaerobic septic systems that are not properly maintained, Anahuac wastewater treatment plant, Anahuac collection system, and straight pipe discharges. Discussion with the stakeholders [both during the meeting and later] revealed that: (a) the collection system for the City wastewater plant is in Anahuac and discharges to a tributary of Double Bayou; (b) TBCD collects from outside the watershed to its plant that is side-by-side with the City's plant in Anahauc, also discharging to that tributary; and (c) TBCD's Oak Island collection system (some of which is within the watershed) goes to a plant that does not discharge to Double Bayou. Sources from the collection system include manholes, joints, and older clay pipe. The condition of the collection system was not entirely known. One stakeholder provided a GIS map with green dots indicating septic systems.

Linda then said that the next step is finding a way to figure out what quantities of waste might be caused by the different sources. She asked the group, "What will be the sources of information for finding out the bacteria loads?"

Discussion revealed potential sources for septic information: CCN, HGAC, Pudge Willcox, and Sidney Lewis. Regarding changes and upgrades in septic systems since Ike, Stephanie asked if it is possible to get information about those changes so they can be analyzed. Kim Laird of TCEQ noted that the new systems should not be ruled out as a source, because many people are using

chlorine tablets rather than wastewater tablets – because of the price difference – and they aren't disinfecting as well as the wastewater tablets. In response to a question about how to know what the different types of sources for the bacteria are, the team noted that bacteria source tracking is new science and not proven yet, and is also expensive. Pudge and Sidney will work on getting the numbers for septic systems in the watershed.

Dan Irby of the City of Anahuac will be asked about the age and material used for the collection system to the City's wastewater treatment plant. Stephanie indicates that we have data from the TCEQ's ICIS (Integrated Compliance Information System) database, and could potentially get unauthorized discharges that are reported to TCEQ. The sites that are monitored for this project will have data collected at least monthly, possibly bi-monthly, as well as during rainfalls. Regarding a question on why we need the model if we have all of this data, Stephanie answered that the models will give probable sources, rank them, and analyze the quantities needed for load reduction.

6. Wrap-Up and Next Steps

Linda summarized by saying that we need to figure out the septic system information, get it on a map, compare the different data that we have, and then see if there is any concern or not. At the next workgroup meeting, the results of the collected data will be reviewed, including items such as amount of leakage from older vs. newer septic systems. Linda continued that at the December 10th general meeting, all of the results from the workgroup meetings will be brought together, so everyone can add their input and knowledge and ideas. Also at that meeting will be a presentation to begin answering the stakeholders' questions about water quality.

Regarding a question about whether the East Fork and West Fork are the only bayous being tested, the answer is that all of the bayous have routine monitoring by TCEQ. They may be impaired but not undergoing a WPP or TMDL process, because there is only so much grant money available. She explained that the idea for Double Bayou was that it is only a little impaired, so it could be worked on before it gets worse. Thus the team obtained a grant and started work. If this improves Double Bayou, then the plan used here can be used as a model for other local watersheds.

In review, Sidney Lewis is going to gather the data already stated, plus he is going to try to get the dates the systems were installed. He is getting the number of septic systems, age, location, and type. Linda will meet with the City about the collection system.

Regarding a question on what other water bodies in the county are worse off than Double Bayou, there is a website with impaired water bodies as well as a map, so it is easier to see what is impaired and not. This website will be sent out to the workgroup members.

The workgroups will not meet every month, but only when there action required by the workgroups. Third Mondays were acceptable to the group, and that would make a January meeting on the 20th.

7. Adjourn