



DOUBLE BAYOU WATERSHED PARTNERSHIP

WASTEWATER/SEPTIC SYSTEMS

WORKGROUP MEETING

Monday, February 24, 2014

5:30 - 7:30 P.M.

Chambers Recovery Team
509 Washington Avenue
Anahuac, TX 77514

MEETING NOTES

Attendees: Jarrod Abalos (TBCD), Robin Deville (Anahuac), Dan Irby (Anahuac), Jerry Shadden (TBCD), Kenneth Standley, Rex Tunze (CCEH), Pudge Wilcox (CLCND), Tracy Woody (Jeri's Seafood)

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

1. Sign-In, Welcome, Agenda Review, and Introductions – Kristi Alexander

Kristi explained that a (digital) recorder is being used to help improve the meeting notes, and the recording will be deleted after the notes are finished. It is meant to help provide the general gist of the questions and comments, while still keeping them anonymous. She reviewed the agenda, noting that Kim Laird with TCEQ would be late, so the order of the items will be adjusted to accommodate having her arrive for the wastewater treatment plant discussion, since TCEQ has some resources that might help with that. Kristi then led self-introductions, with each member of the project Team explaining their role in the project.

2. Review of Potential Sources – Linda Shead

Linda noted that this section is a review from the last workgroup meeting in November, at which the group discussed what they knew about the wastewater systems issues in the Double Bayou watershed and identified what could be sources of bacteria from the wastewater systems. For those who had not attended a meeting before, she also briefly explained the workgroup structure of the project.

During the previous meeting, this Wastewater Workgroup had identified the following list of potential sources of bacteria that are related to wastewater/septic systems:

4800 Research Forest Drive The Woodlands, Texas 77381 Tel: 281-367-1348 www.doublebayou.org

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



- Aerobic Septic Systems
- Anaerobic Septic Systems
- Anahuac Wastewater Treatment Plants – one owned by the City of Anahuac, one by TBCD, with both operated by the City of Anahuac and discharging to a tributary of Double Bayou
- Anahuac Collection System – wastewater collected within the City and treated at the plant
- TBCD Collection system (in watershed) –wastewater collected outside the watershed and transported through the watershed to treatment plants (more later)
- Straight Pipe Discharges
- Urban Runoff – entering the wastewater system through I&I (infiltration and inflow)

No new sources were identified for the list. The goal of tonight's meeting is to learn more about these topics and to identify potential solutions to these sources.

3. Septic Systems and BMP Resources

Linda introduced Rex Tunze, who is the inspector of septic systems for Chambers County. He provided handouts for the meeting – a map of the Onsite Septic System Facilities (OSSFs) in the watershed and a list of the permitted systems. Those on the map are primarily aerobic systems, as the conventional/aerobic systems have not been added. Rex's map has an older version of the watershed boundary, which will need to be revised, once the updating of that boundary has been completed. In addition to the unmapped conventional systems, there are probably some straight pipes, too. Also, Pudge had done some mapping of the houses in the watershed that do not have a sewer system, but he had no way of telling whether they have a conventional or an aerobic septic system.

The County operates on complaints, rather than policing of pipes. Currently, there are no active complaints in the watershed, and the five that have been received by the County since January were mostly in the western part of the county. During the winter time, they get more complaints, because the water table goes up, which is when many of the older conventional systems fail. Even if the soil is perfect, the water table can be problematic. Typically, they receive smell complaints from aerobic system, and straight pipe discharge complaints from conventional systems or gray water, such as washing machines.

The course of action for complaints is as follows: The County goes out to see what's wrong, and the homeowner is given a certain number of days to fix the problem. If the problem is not fixed, it goes to court, and permits will likely be needed to update the condition. Sometimes, the septic system will need to be re-permitted and possibly replaced. The information from complaints is not in a database.

A presentation by AgriLife at the March stakeholder meeting will go into detail on their program to assist with failing septic systems, with Chambers County recently added to that program. It focuses on anaerobic systems, and can assist with about 60% of the cost of replacing those. A workshop will also be provided for the watershed.

Linda shared a copy of the County's application for a septic system, with useful information for the County and also with resource information for the homeowner. A suggestion was to have AgriLife information added as a resource, because there is a possibility of cost-share.

A suggestion was also made for Rex to compare Pudge's map to the data he has, with the difference likely being the conventional systems.

3. TBCD Wastewater System in Double Bayou Watershed – Jerry Shadden

Jerry Shadden, General Manager of TBCD, pointed out that TBCD is laying a 4-inch force main up Bayshore, part paid by a homeowner and part extended by TBCD, which would address the septic systems on the bayside of Bayshore. There is a question of whether homeowners will be required to tie into the sewer line, which could be a problem for those who have recently spent a substantial amount to install an aerobic septic system. The group could recommend an incentive for them to tie in, although finding a funding source for that is an issue.

He went on to describe, in general, much of the sewer system improvements that TBCD has been putting in place around the county, all of which is pressure system. The pressure systems don't have an opportunity for I&I (infiltration and inflow) leading to discharges of wastewater, but could have overflows or breaks in pipes. Most of those issues occur at the house, and result in immediate calls and repairs.

Jerry noted that TBCD has no collection within the East Fork portion of the Double Bayou watershed. Around the West Fork, what collection there is occurs along Bayshore, with that flow going to the plant at Oak Island, which discharges to the Bay (and not to Double Bayou).

In response to a question about the status of pipe infrastructure, he noted that TBCD is currently conducting a pipe-bursting project with \$350,000 in funding, and with another \$350,000 for next year. Because it was for a low-income area, they were able to get a matching grant, and will be able to get another for the area inside Winnie for the same reason. Much of the system was installed in the 1950s, and if it was concrete, it's time to be replaced.

For another question, Jerry described that the line collecting from the Ollie Point area will be able to dump either into an existing 2-inch line (the Anahuac plant), or into the new 4-inch line going to the Oak Island plant, depending on the level.

The City of Anahuac has two plants, one owned by TBCD and one by the City, with the City operating both, and TBCD paying a portion of the operations, depending on their share of the flow to the plants (typically, 6-16%).

4. City of Anahuac Wastewater System in Double Bayou Watershed – Dan Irby

Dan Irby, Public Works Director for Anahuac, reiterated that the sewer system within Anahuac is the City's, and that everything outside of the city is taken care of by TBCD. The City has three lift stations. Some pipe bursting was recently done on the north side of the city, from low-income grants.

In response to a question, he noted that they had also recently done a \$500,000 refurbishment of their wastewater plant, but that was a band-aid compared to what's needed for the system. They find it difficult to get grants for the south part of the city, because it is not low income. Also, the City recently had to borrow money to get their [drinking] water treatment plant up and running.

Manhole replacement is a big issue, with some needing to be worked on at least once or twice per year. They are replacing sewer lines with PVC, and manholes with concrete. The line-bursting work was about \$300,000. He explained that “line-bursting” is where they run a PVC pipe inside an old pipe, which breaks apart the old, deteriorating sewer pipe.

Regarding what is a priority in their system, he noted that everything is, because it’s all old, old, old sewer line, much of which hasn’t ever been replaced.

The City doesn’t have much funding, with grants only available for the low-income side. The City is in an SSO program [more about that later in these notes].

5. Wastewater System BMP Resources – Kim Laird

Kim Laird is with the Houston-region office of TCEQ. She is in the regulatory part, but worked as an operator for years, and so is aware of the problems that exist, including having worked with a city with a lot of I&I problems. She decided to work for TCEQ because of the assistance she’d had from TCEQ, and that’s what she tries to do – help people get the grants or help they need, and get the work done.

TCEQ’s SSO (Sanitary Sewer Overflow) program is voluntary and proactive in addressing those unauthorized discharges of wastewater. EPA has a related program that it’s been trying to use for ten years – CMOM (capacity management operations and maintenance) – but it is more prescriptive and expensive. The SSO program is a simplified version and can be used before the matter goes to enforcement. It allows the entity to identify how best to fix its collection system, and how they are going to accomplish it. That way, funds are spent on improving the situation instead of going to fines that end up in the State treasury. The purpose of the initiative is to reduce the number of SSOs, some of which are inevitable, and thus protecting human health and the environment. Only municipalities or public entities can participate, including subscriber systems.

Since Anahuac and TBCD own the plants, theirs is not a subscriber system – one where an entity discharges to a plant owned by someone else. They both have permits and are thus both responsible.

While TCEQ’s SSO program is an enforcement-type program, there is no penalty associated with it. An entity has to be accepted into the program, based on SSOs, daily-average, and two-hour-peak-flow violations. Participation prevents having to pay an enforcement penalty, as long as an entity continues to work on the problems, and dedicates an appropriate amount of funding to do so. She distributed a packet about the TCEQ SSO program. After a violation notice has been sent, the entity has 180 days to submit an SSO plan.

In response to a question about how SSOs are reported to TCEQ, Kim noted that permittees report, as do people who observe a problem and call in a complaint. Most often, a city may not have been aware of the problem, because they don’t have the funding/staff to drive around to find SSOs. Both TCEQ and the City of Anahuac try to explain that, and encourage the public to notify the City first, so the City can address it.

Sometimes people don’t trust that the City will take care of it. Anahuac is working to get everyone around town to work together, which, for a long time, didn’t happen. Kim noted

that the best thing to do is to communicate about what's going on, and to be honest about time frames, including letting people know about setbacks.

She went on to describe the elements required in a TCEQ SSO program plan:

- a) Identification of causes of the SSOs, if known. Some of the things that can cause SSOs are: roots, grease, rags, and, lately, disposable wipes. Another issue is inmates in jails and students in schools flushing large items, such as t-shirts.
- b) Identification of the measures to mitigate the effects of the SSOs until they are repaired
- c) A comprehensive evaluation of the sewer system, and can be partial or entire, depending on the funds available
- d) Planned corrective actions, with milestones, are needed. Emergencies may divert funds from the planned actions – provided TCEQ is notified.
- e) A timeline for completing the milestones
- f) A maintenance program
- g) A description of funding sources
- h) Finally, the SSO plan must include a plan for ways to evaluate the effectiveness of the actions.

The City's representative described some of the problems they are having with the very old lines in the ground, many with sinkholes, root blockages, disintegrated pipes, etc. They have TV'd (i.e., a camera floated through the sewer lines to document their condition) some of the lines, but there are blockages too big to allow a TV line through.

Kim and others talked about other programs/resources to help with the public, as examples, such as: signs about causes of the expense to repair the lines, and fats-root-oil-grease (FROG) programs, such as the one that Dallas has and GBF is starting ("Cease the Grease" program).

TCEQ has never had anyone pursue a human health issue reported to result from SSOs, but TBCD noted a related local experience about a sewer back-up.

Linda shared a chart of SSO reports around Galveston Bay, and what caused them, with FOG being the cause of the most SSOs, and equipment malfunction causing the largest overflow.

6. Discussion of Potential Solutions for Double Bayou Watershed – Linda Shead

Linda led a discussion of potential solutions for each of the potential sources of bacteria:

Aerobic

- Maintenance is critical. The County cannot force a maintenance contract, unless there is a complaint. But it's importance to fix the problem first, then get a maintenance contract. That's because maintenance contracts don't address major repairs. Important to address the issue of the use of swimming pool chlorine tablets, and the problems that causes.
- New homeowner program, including how the County addresses when the new homeowner comes in for electricity

- Expand sewer system – those with older systems would be more willing to join a sewer system
- Homeowner education – including working with TCEQ and AgriLife to expand the workshop program that’s been put on by H-GAC

Anaerobic:

- Anaerobic systems are grandfathered unless electricity disconnected or a complaint
- 319 grant program – may not apply to anaerobic systems, since must meet County requirements, including soil and site evaluation – issue of soils and water table in this area
- Enforce complaints
- Expand sewer system

Anahuac Plants and Collection System

- Existing – SSO program
- Upgrade collection system (some ongoing)
 - Smoke tests
 - Video the lines
 - Small Business program, including mentoring program
 - TWDB loan program (and potential for loan forgiveness)
- Thorough removal of grease, such as City of Galveston example
- “Cease the Grease”/education (especially businesses) – GBF
- Theft of wire – trying cameras and improving the gate
- Alarm notification on power failures being added (for after hours)
- New plant
- Have hired new personnel
- Educating the public to call the plant first, including possibly adding City phone number on manholes
- Rate structure being improved to cover capital improvements

TBCD Collection

- Not much collection in the watershed
- Join TCEQ’s SSO program to help in future
- Have upgraded pumps, generators, etc.

Straight Pipe Discharges

- Use TV to look for overflow pipes to relieve I&I (used to be common)
- Many features not be mapped

- Sinkholes and leaks from storm sewers may be affecting sewer lines
- A few homeowners still discharge directly – need to increase awareness, respond to complaints
- Educational awareness
- Grant funding for low-flow devices to reduce amount of discharge, including 319
- Tie gray-water-straight-pipe to sanitary

7. Wrap-Up and Next Steps

The March stakeholder meeting will present the results of this round of workgroup meetings.

The next workgroup meeting (possibly April) will address the new maps. There will be new land use information digitally. Bobby and Pudge are ground-truthing, and HARC is putting the new maps together. Meanwhile, HARC is still collecting data on some of the sources, so the information can be put into models. This workgroup may not need to meet in April, unless more information is needed from the group. We'll know in a few weeks if an April meeting is needed.

8. Adjourn