



WASTEWATER WORKGROUP

July 21, 2015

Double Bayou Community Building

MEETING SUMMARY

Stakeholders: Charles Johnson, Rex Tunze, Pudge Wilcox, Kay Wilcox

Team Members: Ryan Bare (HARC), Stephanie Glenn (HARC), Brandie Minchew (Shead)

1. Introduction

Stephanie Glenn opened the Wastewater workgroup session with an overview of session goals to: discuss each management measure and its lead entity, determine possible costs, and discuss a possible timeline for implementation of the measures. She also requested input as to what kind of technical assistance might be needed in implementing the measures.

2. Lift Station Upgrade, Wastewater Treatment Plant, and Collection System

Stakeholders opened the discussion with comment on the cost of the lift station upgrade measure. Stephanie noted that the upgrade had been suggested as being needed for the City of Anahuac system, and that the cost on the chart, of \$1,680,000 per lift station, came from examples in other WPPs. Regarding the management measure, "Lift Station Upgrades: Utilizing bypass pumps that are less likely to fail in a peak flow situation than the current generators in use." Which pumps were meant – whether for the WWTF (wastewater treatment facility) or other lift stations – was not clear. More knowledge about the system, costs and implementation was determined to be needed, and the City of Anahuac will be contacted for further input.

The topic of the wastewater treatment plant and city sewer system was brought up with regard to how they contribute to bacteria levels in the West Fork. Stephanie noted that in dry weather, the WWTF functions properly, and only has problems during heavy rain events. Stephanie said that Kim Laird of TCEQ had some notes on the plant design that might help. Stakeholders noted that high flows are routed to the pond, and then taken back out of the pond for treatment. However, when the overflow is backed upstream, it tends to blow out the manhole covers, as well as bypass the entire system. An increase in staffing capacity at the plant was briefly mentioned and tabled.

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:



HARC

Shead Conservation Solutions

USGS
science for a changing world

The group wondered if the collection system were properly maintained, then would upgrades to the lift stations be necessary. A collection system study was discussed, with recollections that a study had been conducted some years ago. To better determine costs and acquire previous study results, Stephanie noted that the City of Anahuac would need to be contacted on this item as well. The study was noted as being a \$50,000 cost. The collection system study was determined to have a high priority among the management measures under discussion.

The discussion moved to leaky private pipes, which go from private homes to the public collection system. There was concern that leaks could exist in the private pipes that homeowners maintain, rather than the city. It was determined that a smoke test of the collection system would cover both public and private pipes, and that testing and repairing the collection system pipes should be high in priority. From the testing, homeowners would be alerted that their pipes would need to be replaced. The subject was raised about finding funding sources for homeowners to replace pipes. If the leaky private pipes were repaired and the collection system maintained, this would fix several problems before the wastewater ever reached the WWTF.

Ryan Bare did some checking with stakeholders in concurrent workgroups and reported that the original residential pipes going into the collection system were cast iron, and that many have since been upgraded to PVC pipe, and thus were not likely to be a significant problem. He noted that it was believed that the biggest source of infiltration and inflow from private pipes was homeowners leaving the clean-out caps open, and suggested a possible education program for homeowners.

Ryan also reported from the stakeholders from the concurrent workgroups that the public wastewater collection system going into the WWTF is all clay pipe. Stakeholders noted that the clay pipe needs fixing.

Overall, pipe repair and replacement was determined to be a high priority item.

Theft of copper wire had previously been listed as a problem for the WWTF, but preventing wire theft was decided to be a low priority item.

3. Straight Pipe Discharges

The location of straight pipe discharges was not clear during the meeting, and the previous discussion on this point will need to be checked.

4. Cease the Grease Campaign

Stephanie noted that Charlene Bohanon with the Galveston Bay Foundation would be able to give a cost estimate on implementing the Cease the Grease campaign in Double Bayou. A question was raised as to whether the City of Anahuac required commercial establishments to use grease traps; the answer was yes, grease traps are required. A stakeholder noted

that it will be important to make sure they are maintained and cleaned out. Stephanie asked the group for input on the timeline of implementation for the Cease the Grease campaign. The group felt that newspaper articles/ads would be most effective for this campaign, and once a year would be a good timeline.

5. Patty Potty (No Wipes in the Pipes) Campaign

Stephanie and Ryan told the group that many of the promotional materials for the No Wipes in the Pipes campaign, including educational materials and video, were already available. Costs for the campaign had been mostly absorbed by SJRA, so that implementation costs for Double Bayou would be low. Stephanie asked whether wipes being flushed into the collection system were a problem in the Double Bayou watershed; it was suggested to check with the WWTF on that issue. The timeline recommended for the campaign was once every three years.

6. Bacteria Operations Class

The Bacteria Operations Class had been recommended for wastewater professionals. The workgroup paused to read page 9 of the Outreach and Education chapter, to clarify that this class was not a required class for operators. Stephanie noted that they could research the cost and see if the course could be offered for the City of Anahuac.

7. Identify OSSFs and maintain an OSSF database

Stephanie noted that the OSSF database management measure came from another watershed protection plan, and that the watershed had hired someone to coordinate the OSSF database. It was determined that funds for this was not needed for Double Bayou, since an OSSF database has been started for Double Bayou, through this project, and is contained in a spreadsheet, which can be transferred to the County and can easily be maintained.

8. Increase capacity for septic system review and inspection

Stakeholders noted that because the county has fewer than 40,000 people, it's up to the County to determine whether they require people to do their own maintenance or get maintenance contracts. At the moment, Chambers County has opted for allowing homeowners to do their own maintenance, although they could get a maintenance contract with a professional maintenance provider if desired. OSSFs are addressed on a per complaint basis; no one is patrolling or actively looking for OSSFs.

Stephanie noted from previous discussions that increasing capacity for septic system review and inspection was something the stakeholders had felt they could get funding for. Stephanie also noted that "increase capacity" meant an increase in budget capacity for

handling review and inspection. It was noted that an increase in personnel would be needed if the County were to start requiring people to do maintenance.

9. Expand Sewer System to Serve Homes with Septic Systems

The discussion shifted to expanding sewer systems. For example adding homes in the old airport addition would make a notable difference to the watershed. Costs were determined to be approximately \$3,200 per home for purchase/installation of a grinder pump to allow for the airport addition to hook into the collection system. Stephanie noted that the number of septic systems could be estimated through the current OSSF database.

There was some concern about whether adding additional flow contribution to the Anahuac plant might be an issue. [Note: A new grinder pump system would use new force mains and not have the I&I issues of the old collection system within the City of Anahuac.] Another potential priority area discussed was Haynes Road, which would be routed to the Oak Island plant. There may also be other priority areas. The possibility was raised of a grant to make these installations.

10. Septic System Maintenance Workshop

The last item was the septic system maintenance workshop, similar to the workshop held for the watershed in the spring of 2015. It was noted by stakeholders that there was a need for workshops on aerobic systems, in addition to conventional systems. Stephanie asked about the implementation timeline; once per year was determined to be the appropriate timeframe for the aerobic workshop, if it were possible to get it implemented. Stephanie also mentioned developing a checklist for people having trouble with their aerobic systems. It was noted that conventional and aerobic systems cost about the same, and that conventional systems work very well if the conditions are right, but that the soils in the watershed are not generally suitable for conventional systems.

11. Wrap-up

Stakeholders asked what the next step in the process would be. Stephanie went over the sequence of events that would follow: the WPP would be written up, approved by stakeholders, and submitted to the EPA for review. Once accepted by the EPA as being consistent with their guidelines, the WPP could be used as a jumping board for financial incentives to implement the management measures. Implementation would involve the watershed coordinator, who would then be applying for grants and coordinating with agencies to put the management measures in place. Stakeholder meetings and water quality monitoring would continue, in order to determine whether the management measures were effective in reducing bacteria loads.

Stephanie reiterated that these management measures were voluntary, and that having them in the plan did not obligate implementation.

12. Summary Tables

Public Wastewater Systems

| Management Measure | Priority | Lead Entity | Unit Cost | Number/yrs | | |
|---|----------|-------------------------|------------------------------------|------------|-----|------|
| | | | | 1-3 | 4-6 | 7-10 |
| Leaky Pipe System Campaign Study, clay pipe replacement, homeowner ed (on caps) | High | City of Anahuac | | | | |
| Collection System Study | High | City of Anahuac | \$50,000/ study | | | |
| Upgrade Collection Lines and Replace Manholes | | City of Anahuac (TBCD) | \$250,000/ biennium | | | |
| Lift Station Upgrades (bypass pumps) | Low | City of Anahuac (TBCD) | \$1,680,000 per lift station - ?? | | | |
| Increase WWTF Staffing Capacity | delete | City of Anahuac | | | | |
| Prevent Wire Thefts | Lowest | City of Anahuac (TBCD?) | | | | |
| Pump Repair and Replacement (WWTF) | High | City of Anahuac (TBCD?) | | | | |
| Outreach and Education: Cease the Grease Campaign | | GBF | *check with Charlene Bohanon (GBF) | 3 | 3 | 4 |
| Outreach and Education: Patty Potty - No Wipes in the Pipes Campaign | | SJRA | | 1 | 1 | 1 |
| Outreach and Education: Bacteria Operations Class | | | | | | |

Septic Systems

| Management Measure | Lead Entity | Unit Cost | Number/yrs | | |
|---|-----------------------------|---------------------|------------|-----|------|
| | | | 1-3 | 4-6 | 7-10 |
| Identify OsSFs and Maintain OSSF Database | Chambers & Liberty Counties | | | | |
| Increase Capacity for Septic System Review and Inspection (Continued Enforcement of Complaints w/population growth) | Chambers & Liberty Counties | | | | |
| Expand Sewer System to serve septic homes | TBCD | \$3,200/home | | | |
| Outreach and Education: Septic System Maintenance Workshop | AgriLife Extension | \$2,500 each (est.) | 3 | 3 | 4 |
| Outreach and Education: Maintenance System Workshop for Aerobic Septics | | | 3 | 3 | 4 |