Update on coordination of Attoyac On-Site Sewage Facilities (OSSF) database

To: Jessica Uramkin, Project Manager at the Teas Commission on Environmental Quality

From: Emily Monroe, Extension Program Specialist at Texas Water Resources Institute, Attoyac Bayou WPP Project Manager

Subject: Recommended actions for coordinating the development of a standardized geodatabase for Attoyac Bayou Watershed counties and tracking on-site sewage facilities

Date: January 31, 2020

CC: Kelley Holcomb, Angelina & Neches River Authority (ANRA) General Manager; Jeremiah Poling, ANRA Information Resources Manager; Mike Parrish, ANRA, San Augustine Co. DR; Jay Eagle, ANRA, San Augustine Co. DR; Carla Ethridge, ANRA CRP Coordinator and Attoyac Bayou Watershed Coordinator; Ronnie Hebert, TCEQ Region 10 DR for Shelby Co.; Jeff Harman, Rusk County DR; Tommy Wheeler, Nacogdoches Co. Dr; Lucas Gregory, Senior Research Scientist at Texas Water Resources Institute; Ken Awtrey, Program Director of Pineywoods Resource Conservation & Development, Inc.

I. Introduction

Over the course of the Attoyac Bayou Watershed On-Site Sewage Facility (OSSF) Repair and Replacement project[1], the OSSF project team[2] has worked with the Texas Commission on Environmental Quality (TCEQ) Designated Representatives (DRs) for the project Counties to gain insight into current data management practices. This goal of this update and the information provided within is to inform the TCEQ of those current practices and future plans, and to suggest options for implementing a decentralized but cohesive geodatabase management plan. This update will serve to formally report the Attoyac Bayou Watershed Protection Plan project team's suggestions and it is not intended to impose any regulations, restrictions, or requirements on the counties represented within the Attoyac Bayou watershed.

II. Roles in development of geodatabase

The following table designates the responsibilities for the representatives listed in this document.

Entity	**Role**
Texas Water Resources Institute	Primary OSSF project implementers
Angelina & Neches River Authority (ANRA)	Project team member; DR for San Augustine County
TCEQ Region 10 Office	DR for Shelby County
Tommy Wheeler, Nacogdoches Co EHS	DR for Nacogdoches County
Jeff Harman, Independent Contractor	DR for Rusk County

[1] OSSF repairs and replacements are funded by TCEQ through a Clean Water Act Section 319 grant from TCEQ through the Environmental Protection Agency and Supplemental Environmental Projects funds.

[2] Attoyac Bayou OSSF R&R Project Team Members: Texas Water Resources Institute at Texas A&M AgriLife Extension Service, Angelina & Neches River Authority, and the Pineywoods Resource Conservation & Development, Inc.

III. Background

In August 2018, after several preliminary one on one conversations via phone and email, project implementers and DRs from TWRI, ANRA, San Augustine County, Shelby County, and Rusk County met to discuss standardizing OSSF data collection and management for the Attoyac Bayou watershed counties[3]. TWRI and ANRA provided an overview of the Attoyac Bayou Watershed Protection Plan and its goals, explaining stakeholder perspectives on OSSF issues in the watershed and highlighting the management recommendations included in the plan: 1) repair and replace failing OSSFs, 2) provide education and outreach to installers/service providers and homeowners on OSSF operation and maintenance, and 3) work to develop a combined database to better manage OSSF information across the watershed.

After discussing the Attoyac Bayou WPP[4], the counties reported on their current OSSF data management practices. The Shelby County DR uses TCEQ's Consolidated Compliance and Enforcement Data System (CCEDS) as their primary database, but keeps some data in the SAFE Software[5], and the Nacogdoches County DR uses the SAFE Software to store and retrieve data. The San Augustine County DR currently uses their own proprietary digital database. The Rusk County DR currently keeps paper copies of his records and does not have a digital management system in place. The Rusk County DR reported that their County Commissioners and Judge are supportive of updating their management system and sharing data but were not willing or able to purchase software for the DR at the time of the meeting. All county DRs were all willing to share data and open to the possibility of adjusting the data they're collecting to facilitate data sharing. The next steps from the August 2018 meeting were to: evaluate existing database resources (like the SAFE software); determine the potential for aggregating data collected among the counties; and to find a way to digitize Rusk County's records and acquire SAFE Software (or similar) so that they can begin storing their data electronically.

During a follow-up discussion in November 2018, the following updates were provided as options for a path forward: Nacogdoches County DR plans to continue using the SAFE Software for their record keeping; TWRI and the Attoyac Bayou WPP project partners have secured FY20 grant funding to digitize Rusk County's records and acquire a digital management platform. San Augustine DRs planned to evaluate the SAFE software in order to determine if it was worth investing in to help standardize data collection with other entities as it has been a popular option throughout Texas. They also planned to evaluate the data export capabilities of the SAFE software to gauge its potential for interoperability; Shelby County committed to sharing their data and working with ANRA to integrate the datasets.

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[3] Meeting Attendees: Kelley Holcomb, ANRA GM; Jeremiah Poling, ANRA IS Manager; Mike Parrish, ANRA DR for San Augustine Co.; Jay Eagle, ANRA DR San Augustine Co.; Dylan Coleman, ANRA CRP Coordinator; Ronnie Hebert, TCEQ Region 10 DR for Shelby Co.; Jeff Harman, Rusk County DR; Mrs. Harman, Rusk County DR Assistant; Lucas Gregory, TWRI. Nacogdoches Co. DR Tommy Wheeler was unable to attend but informed and supportive of meeting notes.

[4] The Attoyac Bayou Watershed Protection Plan Implementation Project is funded by the Texas State Soil & Water Conservation Board through its State Nonpoint Source Management Program. Attoyac Bayou WPP project partners include Texas Water Resources Institute at Texas A&M AgriLife Extension Service, Angelina & Neches River Authority, and Stephen F. Austin State University.

[5] http://www.thesafeprogram.com/

Between February and June of 2018, ANRA attempted several times to obtain an evaluation copy of the SAFE software but have not yet acquired a copy. TCEQ region 10 attempted to export the Shelby County data from the SAFE software but after some difficulty, they sent an exported copy of their data from CCEDS in January 2019 instead. Despite these obstacles, the SAFE software is likely the best option for prepackaged OSSF tracking software but will be evaluated further by the project team for suitability.

IV. Data Management Options and Examples

Beginning in Fall 2019, the Attoyac Bayou OSSF project team will be implementing another OSSF repair and replacement project within the watershed. This project includes funding for purchasing a scanner and hiring or tasking an existing employee at ANRA to digitize Rusk County's paper OSSF records, as well as purchasing a digital management software program for Rusk County to keep electronic records going forward.

The US Environmental Protection Agency (EPA) provides several examples of other states' strategies for tracking and managing their septic system data[6] including what information is captured by their statewide databases, how they are managed, and lessons learned from implementation. Virginia Department of Health's[7] main challenges in implementing a statewide system were buy in from the counties and creating a balance between customizing the platform while maintaining standardization. Their main suggestions were to create and maintain standard user manuals, continually train users on data input, and create super-user groups to monitor and approve changes and data review.

Florida's Division of Disease Control and Health Protection (DCHP) developed the Environmental Health Database[8] to store all their water and wastewater public record data. This created better consistency and more detailed trend tracking. The OSSF information they tracked included the following:

1. Permit applicant's information, property address and parcel ID.
2. Permit types.
3. Establishment type (residential or commercial) and size.
4. Estimated flow, required drain field size and unobstructed area, available unobstructed area.
5. Sewer availability and source of water supply.
6. Application date, permit issue date, permit expiration date, construction approved date, final approval date.
7. Type and size of tank
8. Type of drain field
9. Setbacks / issues log
10. Soil information

In response to the issue of tracking reports by maintenance entities outside the Department of Health, DCHP paid for a 3rd party web-based reporting service (Carmody) using funds from either a 319 grant,

[6] https://www.epa.gov/septic/state-examples-septic-system-data-management
[7] https://www.epa.gov/sites/production/files/2018-09/documents/virginia_septic_database.pdf
[8] https://www.epa.gov/sites/production/files/2018-09/documents/ostds_data_management_in_florida.pdf

county health departments, or by the maintenance entity. They later developed an in-house reporting system for maintenance activity and are currently replacing the 3rd party system throughout the state.

Minnesota's Pollution Control Agency formerly used detailed Microsoft Excel Spreadsheets for counties/cities to report their OSSF data and transitioned in 2017 to an online annual reporting system.[9]

V. Next Steps

All information for the previously mentioned statewide systems is submitted at the county or city level but requires good centralized support and data review from the state offices. Texas A&M AgriLife extension program specialists have already made headway along the Texas Coastal Zones in documenting unknown systems by providing inspections and pump outs to homeowners and organizing known OSSF information.[10] During the next phase of the Attoyac Bayou OSSF Repair and Replace project, the project team will continue to discuss data management options and practices with DRs in each county. The project team recommends that the Attoyac Bayou watershed counties commit to initially collecting the following data on all new systems and add information to old records when there is an opportunity to do so:

- Homeowner Name
- Street Address the OSSF serves
- Geographical coordinates of the system itself
- OSSF type (Aerobic, Conventional, Etc.)
- Installation Date
- Date Permitted
- Size / capacity
- County Parcel IDs

Standardizing data collection 100% across all entities appears impractical at this point; however, opportunities for doing so moving forward will be explored as new tools are developed/available.

[9] https://www.epa.gov/sites/production/files/2018-09/documents/epa_webinar_mn_data_management.pdf
[10] https://ossf.tamu.edu/