

**Texas AgriLife Research  
Texas Water Resources Institute**

**Preventing Water Quality Contamination Through the Texas Well Owner Network  
FY 10 CWA 319(h)  
TSSWCB Project No. 10-04, FAMIS Account #07-428570**

Quarter no. 9 From 10/1/12 through 12/31/12

**I. Abstract**

Five well screenings were held during this quarter, and selection of targeted counties for TWON program delivery continued. Since April 2011, 30 screenings have been held with more than 1,800 samples screened. The TWON Handbook was published and the first TWON workshop scheduled.

**II. Overall Progress and Results by Task**

**TASK 1: Project Administration**

Subtask 1.1: *TWRI will prepare electronic quarterly progress reports (QPRs) for submission to the TSSWCB. QPRs shall document all activities performed within a quarter and shall be submitted by the 15<sup>th</sup> of January, April, July and October. QPRs shall be distributed to all project partners.*

The following actions have been completed during this reporting period:

- a. TWRI submitted the 8<sup>th</sup> Quarter, Year 2 report to TSSWCB on October 12, 2012.

**68% Complete**

Subtask 1.2: *TWRI will perform accounting functions for project funds and will submit appropriate Reimbursement Forms to TSSWCB at least quarterly.*

The following actions have been completed during this reporting period:

- a. As of January 4, 2013, \$255,677.56 or 53% of federal project funds had been expended.

**53% Complete**

Subtask 1.3: *TWRI will host coordination meetings, conference calls, or TTVN meetings, as appropriate, with project partners in order to efficiently and effectively achieve project goals, coordinate efforts and summarize activities and achievements made throughout the course of this project. TWRI will develop lists of action items needed following each project coordination meeting and distribute to project personnel.*

The following actions have been completed during this reporting period:

- a. A meeting between TWRI, TSSWCB and the project partners was held on December 10, 2012, to discuss project deliverables and status. Action items are included in Appendix A.

**74% Complete**

Subtask 1.4: *TWRI and SCSC will attend and participate in the Texas Groundwater Protection Committee and subcommittee meetings, Texas Alliance of Groundwater Districts conferences, and other meetings as appropriate in order to communicate project goals, activities and achievements accomplishments to affected parties.*

The following actions have been completed during this reporting period:

- a. The TWON Coordinator presented information about the TWON program and schedule at the Texas Alliance of Groundwater Districts quarterly meeting in Conroe, Texas on October 31, 2012. Extension Water Resources Specialist co-chaired the Texas Groundwater Protection Committee Public Outreach and Education (TGPC POE) Subcommittee quarterly meeting December 4 and provided status reports regarding TWON screenings, and publications and workshop development and scheduling.
- b. Information regarding TWON project activities and program goals was displayed at the Texas Groundwater Protection Committee booth at the annual Plant Protection Association meeting in Bryan, Texas, December 6-7, 2013.
- c. Extension Water Resource Specialist presented on TWON at WCSC in Columbus on December 13, 2012.

**65% Complete**

Subtask 1.5: *TWRI in collaboration with SCSC, will create (Months 1-3), host and maintain (Months 4-36) a website to serve as a clearinghouse for TWON information and resources including updated and renamed, web-adapted Tex\*A\*Syst educational materials and online delivery of TWON.*

The following actions have been completed during this reporting period:

- a. The Texas Well Owner Network website went online on June 10, 2011, and continues to be maintained and updated. It can be found at <http://twon.tamu.edu/>. Since the website went online, it has been viewed by a total of 2,696 unique visitors with 538 of those in the last quarter.
- b. The website is currently being updated to provide for online registration for TWON trainings and to better display publications – both TWON and other related publications.

**65% Complete**

Subtask 1.6: *TWRI and SCSC will develop a project final report.*

The following actions have been completed during this reporting period:

- a. No activity to report this quarter.

**0% Complete**

**TASK 2: Development of TWON Educational Materials/Curriculum**

Subtask 2.1: *SCSC will employ a TWON Coordinator to develop and deliver the TWON curriculum in selected watersheds.*

The following actions have been completed during this reporting period:

- a. This task is complete. Drew Gholson was hired on September 17, 2012.

**100% Complete**

Subtask 2.2: *Update and rename existing TEX\*A\*Syst documents to reflect changes/improvements in laws and regulations and private well management, maintenance and protection. Revisions will be developed by the TWON Coordinator, with significant assistance from Project Co-Leads and the BAEN Program Specialist. Existing publications include:*

- *Improving Wellhead Management and Conditions*
- *Improving Pesticide Storage and Handling*
- *Improving Fertilizer Storage and Handling*
- *Improving Petroleum Product Storage*

- *Improving Hazardous Waste Management*
- *Improving Household Wastewater Treatment*
- *Improving Livestock Manure Storage and Treatment Facilities*
- *Improving Livestock Holding Pen Management*

*All documents, educational materials, etc. will be provided to the TSSWCB for review and comment prior to dissemination.*

The following actions have been completed during this reporting period:

- a. The TWON factsheets are in various stages of being written and reviewed by project Co-PIs.

**70% Complete**

*Subtask 2.3: Develop and adapt additional educational resources to create a TWON curriculum. Resources will be developed by the TWON Coordinator, with significant assistance from Project Co-Leads and the BAEN Program Specialist. Specific components or modules of the curriculum may include:*

- *Watershed and groundwater hydrology and the importance to neighbors and the public of safeguarding aquifer integrity and groundwater quality*
- *Proper siting of drinking water wells and avoiding improper well construction techniques*
- *Proper maintenance and protection of the wellhead*
- *Solid and hazardous household waste management*
- *Aging and failure of well construction materials*
- *Locating and properly plugging abandoned wells*
- *Improperly sited and functioning on-site wastewater treatment systems*
- *Maintenance, aging and failure of on-site wastewater treatment systems*
- *Effects of land use changes on well water quality*
- *Successful methods of sharing TWON information with neighbors and community.*

*TWON curriculum will include a handbook for participants, standardized presentations for program delivery and availability of program materials online.*

*All documents, educational materials, etc. will be provided to the TSSWCB for review and comment prior to dissemination.*

The following actions have been completed during this reporting period:

- a. The TWON Handbook was published this quarter. This task is now complete.
- b. Presentations continue to be developed for the training.

**92% Complete**

**TASK 3: Deliver updated and renamed TEX\*A\*Syst Publications, Well Water Screenings, and TWON trainings**

*Subtask 3.1: SCSC will develop a preliminary list of watersheds where the Well Water Screenings and TWON trainings will be delivered. SCSC will work with the TSSWCB and other state and local organizations to select locations for these training events. SCSC will coordinate efforts with state agencies and organizations already involved in WPP/TMDL processes or who are planning future WPP/TMDL processes in specific watersheds.*

The following actions have been completed during this reporting period:

- a. The TWON schedule continues to be updated to reflect requests from local communities as well as from the TSSWCB.

**80% Complete**

Subtask 3.2: *SCSC with assistance from TWRI will develop and disseminate informational materials in order to actively market well water screenings and TWON trainings including news releases, internet postings, newsletter announcements, public/conference presentations, flyers, etc. As appropriate TWRI will include information on the project in the txH<sub>2</sub>O, Conservation Matters e-letter, and AgriLife news. All announcements, letters, and publications will be provided to the TSSWCB for review and comment prior to dissemination.*

The following actions have been completed during this reporting period:

- a. TSSWCB-approved press releases were sent out promoting well screenings to local areas.
- b. A press release was developed for the first TWON training. It was approved by TSSWCB and is in the final stages before publishing.

### **68% Complete**

Subtask 3.3: *Deliver 6-hour TWON trainings in selected watersheds, with the minimum goal being 6 trainings in year 2, and 8 trainings in year 3 to increase local understanding of the factors which can adversely impact well water quality and provide access to the knowledge and tools which can be employed to prevent and/or resolve them. Trainings will be delivered by the TWON Coordinator, and a combination of the BAEN and SCSC Program Specialists and the SCSC Assistant Professor and Extension Specialist.*

The following actions have been completed during this reporting period:

- a. The first two trainings were scheduled this quarter for January 31, 2013 in the Geronimo Creek Watershed and March 28, 2013 for the Buck Creek Watershed.

### **0% Complete**

Subtask 3.4: *Deliver well screening events to provide well-head protection information and recommendations for remediating well contamination, if appropriate. Screenings will be delivered by the SCSC Assistant Professor and Extension Specialist, TWON Coordinator and/or the SCSC Program Specialist as appropriate. A minimum of 30 well screening events will be delivered throughout the course of the project. Well screening event educational programming will include an overview of the topics discussed in more detail during comprehensive TWON trainings. Well screening events will be conducted in conjunction with TWON trainings as well as other Texas AgriLife Extension programs.*

The following actions have been completed during this reporting period:

- a. A total of 30 of the 30 required well screenings have been held.
- b. Well screenings were held in;
  - i. Bastrop County, October 4
  - ii. Nacogdoches County, October 17 & 18
  - iii. Live Oak County, October 31 & November 1
  - iv. Frio County, November 2
  - v. Andrews County, November 13

### **90% Complete**

#### **TASK 4: Evaluate the effectiveness of the TWON trainings**

Subtask 4.1: *SCSC will develop and deliver pre-test/post-test evaluation strategy to evaluate increased knowledge by individuals participating in the TWON trainings regarding program principles, appropriate BMPs, and other activities; to address proper private well management, to evaluate participant satisfaction with the program; and to evaluate participant's intentions to change their behavior as a result of the TWON training.*

The following actions have been completed during this reporting period:

- a. Survey development continues. Example surveys from other similar programs are being assessed, working towards incorporating into TWON.

**45% Complete**

Subtask 4.2: *SCSC will develop and deliver 6 month follow-up survey via online techniques to assess behavior changes adopted and other activities (such as number of neighbors contacted) by TWON training participants.*

The following actions have been completed during this reporting period:

- a. No activity to report this quarter.

**30% Complete**

Subtask 4.3: *SCSC will analyze results obtained from the pre-test/post-test and 6 month follow-up evaluations using descriptive, correlational, and analysis of variances statistical procedures.*

The following actions have been completed during this reporting period:

- a. No activity to report this quarter.

**0% Complete**

Subtask 4.4: *SCSC will modify educational program and materials as appropriate.*

The following actions have been completed during this reporting period:

- a. No activity to report this quarter.

**0% Complete**

### **III. Related Issues/Current Problems and Favorable or Unusual Developments**

- No activity to report this quarter.

### **IV. Projected Work for Next Quarter**

- Four well screenings have been scheduled for next quarter.
- TWON trainings will continue to be scheduled.
- TWON trainings will begin to be delivered with the first held January 31, 2013.
- TWON fact sheets will continue to be developed and published.
- TWRI will schedule quarterly meeting with program leaders and TSSWCB.

## APPENDIX A

### QUARTERLY COORDINATION MEETING — NOTES *Preventing Water Quality Contamination Through the Texas Well Owners Network* December 10, 2012 @ 3:00 pm

*Attendees* – Diane Boellstorff, Ryan Gerlich, Drew Gholson, Danielle Kalisek, Jana Lloyd, John Smith

#### *Goals*

- Discuss current project activities, project schedule, communication needs, deliverables and any other issues

#### *Discussion Points*

##### TWON Manual & Trainings

- TWON manual completed
- Drew continues working on the PowerPoint modules for the training
- Drew is working to schedule the trainings
  - Geronimo Watershed, Guadalupe County, January 31, 2013
  - Buck Creek Watershed, Collingsworth County, March 28, 2013

##### Fact Sheets

- Pesticide and septic fact sheets ready to go for review

##### Screenings

- Met 30 screenings set out in proposal
- Two more are scheduled for January with three or four left of TSSWCB listed watersheds
- Have done more screenings than just what TSSWCB wanted

##### Articles or briefs for media publications (Conservation Matters, txH2O, etc.)

- Training news releases is being developed for dispersal

##### Website updates

- In progress – adding registration, additional publications, rearranging

##### Project communications

- Conducted weekly/bi-weekly internal meetings of TWON personnel on-campus

#### *Action Items*

- Continue scheduling trainings
- Continue developing news release(s) about trainings
- Continue screenings
- Finalize evaluation/survey
- Continue internal project meetings at least twice a month