

**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**

Quarter no.   5   From  10-01-11  through  12-31-11 .

**I. Abstract**

Five well screening were held during this quarter, and selection of targeted counties for TWON program delivery began. Since April 2011, seventeen screenings have been held with more than 647 samples screened.

**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 4<sup>th</sup> Quarter, Year 1 report to TSSWCB on October 13, 2011.

**42% 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 September 30, 2011, \$56,315.00 or 12% of federal project funds had been expended.

**12% 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. No activity to report this quarter.

**42% 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) Diane presented the TWON program to the Northeast Private Well Conference in Connecticut in November.
- b) Kristine attended the National Ground Water Association meeting and presented TWON on December 2.
- c) On October 11, Kristine presented the TWON program to the Public Awareness and Outreach Committee of the Texas Water Development Board, and to the Ground Water Protection Committee (agricultural chemicals subcommittee) on Oct. 12<sup>th</sup>.
- d) Kristine had a TWON promotional booth at the Soil Board meeting on Oct. 24<sup>th</sup> and spoke on the TWON program that same day.
- e) On December 6<sup>th</sup> Kristine made a presentation on the TWON program to the Llano Estacado UWCD and Gaines County for the ‘Innovative Farming: integrating Limited Water Resources into Today’s Farming’ workshop.

**42% 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. It can be found at <http://twon.tamu.edu/>. Since the website went online, it has been viewed by a total of 805 unique visitors. 293 of those in the last quarter.

**42% 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.

**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. Updating of materials continues. TWON anticipates a January 1, 2012 delivery of the TWON Handbook to TSSWCB for review.

### **55% 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. TWON anticipates a curriculum delivery date of January 1, 2012 to the TSSWCB for review.

### **55% 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.

### **60% 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, New Waves 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. Press releases were sent out promoting well screenings to local areas.

**42% 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. No activity to report this quarter.

**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 18 of the 30 required well screenings have been held.
- b. Well screenings were held in;
  - i. Dimmit County, Oct 4,5
  - ii. Webb County, Oct 6,7
  - iii. Young County, Oct 11
  - iv. Parker County, Oct 12,13
  - v. Hood County, Oct 24

**60% 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.

### **30% 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**

- Timely internal review and feedback of draft materials is essential for the TWON Coordinator to compile the Best Manual Possible.

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

- Three well screenings have been scheduled for next quarter.