

**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. 3 From 04-01-11 through 06-30-11 .

I. Abstract

Kristine Uhlman was hired on as the TWON coordinator, and Justin Mechell left as the BAEN Program specialist; Brent Clayton will replace him on this project. Eleven well screening were held, and selection of targeted counties for TWON program delivery has begun.

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 15th 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 2nd Quarter, Year 1 report to TSSWCB on April 11, 2011.

25% 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 June 30, 2011, \$28,960.00 or 6% of federal project funds had been expended.

6% 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. Project meeting was held on May 17, 2011 to introduce the TWON Coordinator to the project partners and to discuss the project as a complete group. In attendance were
- SCSC- Dianne Boellstorff, John Smith, Kristine Uhlman
 - BAEN- Brent Clayton, Ryan Gerlich, Justin Mechell
 - TSSWCB- Loren Warrick, Jana Baker
 - TWRI- Brian VanDelist

25% 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. SCSC attended TGPC Public Outreach & Education Subcommittee meeting, discussed project and introduced TWON Coordinator.

25% 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 25 unique visitors.

25% 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. Kristine Uhlman hired as TWON Coordinator

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*
- *Improving Milking Center Wastewater Treatment*

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. During the quarterly meeting, the Co-PIs decided that the TEX*A*Syst publication titled, “Improving Milking Center Wastewater Treatment” would not be included in the list to be updated for the TWON publication series. This is due to the fact that there are fewer, larger dairies, stricter regulatory laws, and improved dairy producer education than when the publication was first published.

15% 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. No activity to report this quarter.

0% 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 TSSWCB forwarded to SCSC a list of preferred locations for water well screenings and TWON trainings. SCSC is in the process of identifying all CEAs to be involved and in contacting agents, watershed coordinators, and other appropriate contacts to begin tentatively planning or scheduling programming.

50% 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 txH₂O, 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. *Well screenings, results available from the Texas Well Owner Network. Network will have May, June opportunities in South and Central Texas. AgriLife TODAY Press Release, 05/04/2011.*
- b. *Well Screenings and Training Available from the Texas Well Owner Network. April, 2011 edition of New Waves.*
- c. *Generic press releases and marketing flyers for local details were provided directly to agents in participating counties. The press releases were titled, "When Have You Tested Your Private Water Well?" and the marketing flyers were titled, "Water Well Screening Day."*

25% 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. *Well screenings were held in;*
 - i. *Mills and San Saba Counties for screening in Goldthwaite, 4-5 April 2011.*
 - ii. *Real County for screening in Leakey, 13 April 2011.*
 - iii. *Edwards, Kimble, Kinney and Real Counties for screening in Rock Springs, 14 April.*
 - iv. *Kendall and Blanco Counties for screening in Johnson City, 18-19 April 2011.*
 - v. *Starr County for screening in Alice, 2-3 May 2011.*
 - vi. *Brooks, Duval, Jim Hogg, Jim Wells, Live Oak, Kenedy, and Kleberg Counties for screening in Rio Grande City, 4-5 May 2011.*
 - vii. *Jack County for screening in Jacksboro, 31 May 2011.*
 - viii. *Stonewall County for screening in Aspermont, 1-2 June 2011*

37% 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. No activity to report this quarter.

0% 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.

1% 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

- Justin Mechell will be leaving AgriLife and Brent Clayton will take his place in the project

I. Projected Work for Next Quarter

- On 12 July 2011, meet with AgriLife Extension Service evaluation specialist, Paul Pope, to automate analyses of screening evaluations and to discuss development of evaluation instruments for TWON trainings.
- Provide screening for Victoria County in Victoria on 26-27 July 2011.
- Develop TWON handbook outline and circulate the outline to project Co-PIs for input.
- Contact agents, watershed coordinators and others as appropriate to begin to tentatively scheduling screenings and TWON trainings for Years 2 and 3.
- Meet with the TGPC POE subcommittee on 20 September 2011.
- Deliver TWON presentation at the Southern Region Water Resource Conference in Atlanta, GA on 14 September 2011.
- Moderate Well Owner Network and Private Well Water Concerns session at the Southern Water Resources Conference in Atlanta, GA on 14 September 2011. On 13 September, convene national panel to discuss approaches utilized by Well Owner Networks and other wellhead protection programs in the U.S.