MAY 2014 VOLUME 60, NUMBER 5

THE CROSS SECTION

High Plains Underground Water Conservation District News

THIS ISSUE

TO OUR READERS

There have been two major changes to *The Cross Section* as it celebrates its 60th year of publication.

In January, HPWD launched a digital version of the newsletter that is e-mailed to readers every two weeks. This provides more timely information to our constituents.

The print version of the newsletter is being continued in a smaller, redesigned format.

As a result, we are "cleaning up" our mailing list of *Cross Section* subscribers.

A courtesy reply card is included in the new HPWD 2013-2014 water level measurement report.

Using the card, persons can select which version (*digital or print*) of the newsletter they wish to receive. There is also space for contact information (*e-mail or mailing address*).

July 15, 2014 is the deadline to complete the card and return it to the HPWD office. **Your name will be deleted from *The Cross Section* mailing list if we have not heard from you by then.**

As stated in the first issue in June 1954, "we shall endeavor to present to you a cross section of the present day activities in the field of underground water..."

Now, 60 years later, we rededicate ourselves to providing even more coverage of water related issues, research, and conservation success stories.

--Carmon McCain, editor

Jim & Denise Doucette:

SUSTAINING WITH THE RAIN

By Adeline Fox

What is the value of groundwater? To many, it is an invaluable resource.

Jim and Denise Doucette of Lockney understand the value of groundwater, which compelled them to install a large-scale rainwater harvesting system for their 240 acre ranch.

Beginning in 1998, the rainwater collection system was initially installed to prevent runoff from their 100 foot x 125 foot barn from flooding cattle pens. However, the Doucettes soon learned that water collected in the eight 3,000 gallon tanks could be used for their five horses and to supplement their well water.

"Anything we can do to reduce our usage of the aquifer is a benefit," Jim says.

With the first quarter of 2014 being extremely dry, some may argue that there hasn't been enough rainfall to make collection feasible. The Doucettes disagree.

Their farm received 0.40 of an inch of rain in April. From that, they were able to collect 1,000 to 1,200 gallons in each of their eight tanks. This amounts to 8,000 to 9,600 gallons of harvested rainwater.

By collecting so much water with so little rain, Jim believes rainwater harvesting could help supplement future water supply for rural towns.

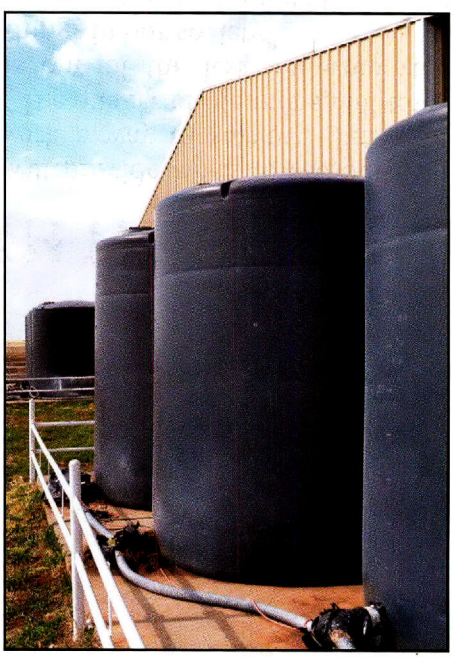
"I hope it (rainwater collection) will provide small towns out here with a way to survive," Jim says. "The quality of life in a small town is one of the less underreported things in our society."

Denise says an understanding of the value of water by all portions of society is important to encourage sustainable water practices, including rainwater harvesting.

"Just be without water for a day or two and you soon realize you really need to protect all the water that you do have. It's important to use it wisely and not waste it," Denise says.

Given the success of their

SEE DOUCETTES PAGE THREE



RAINWATER COLLECTION TANKS ON THE DOUCETTE RANCH

HPWD REINSTATES IRRIGATION ASSESSMENT PROGRAM

After a four-year absence, the High Plains Water District is bringing back its irrigation assessment program for the 2014 growing season.

Under the program, producers volunteer to have their center pivot or drip irrigation system evaluated by HPWD staff.

Several times during the growing season, water wells are metered with an ultrasonic flow meter to determine the total gallon per minute flow at each pivot or drip irrigation site.

"As drought continues on the Panhandle-South Plains region, it is important for producers to know exactly how much groundwater is pumped during an irrigation season," said HPWD Manager Jason Coleman, P.E.

"Because of this, the HPWD Board of Directors and staff felt it was important to reinstate the irrigation assessment program to give producers insight into the amount of water being applied to their crops."

As an extra service to the producers participating in the Irrigation Assessment program, district staff will take water quality samples at each site—including total dissolved solids and water pH.

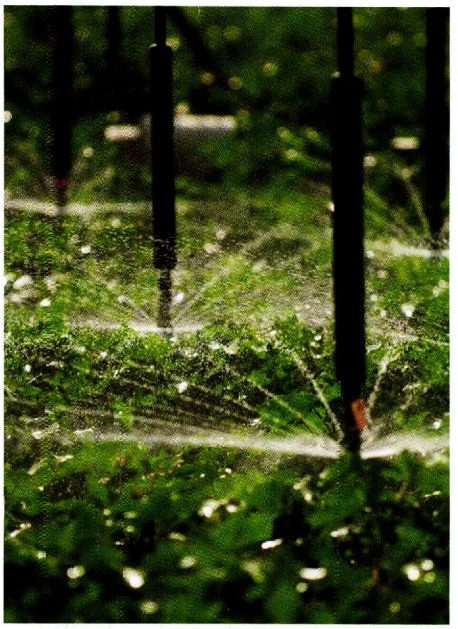
"It's important to understand water chemistry as it impacts the efficient use of supplemental nutrients applied to crops," Coleman said.

All information gathered by district staff will be entered into a database. At the end of the irrigation season, the total hours are obtained and a final pumping average is calculated from data obtained throughout the season.

Producers receive a report of all information gathered from their site, including irrigation amounts and pumping data.

"We encourage interested agricultural producers to participate in the program," Coleman said. "It helps them understand how much water they use each year, and it also helps the Water District in future water planning efforts where accurate irrigation pumping information must be considered. The program is free and all participants remain anonymous," he added.

For more information, contact Field Staff Supervisor Keith Whitworth at (806) 762-0181 or by e-mail at **keith.whitworth@hpwd.com**.



WATER LEVEL MEASUREMENTS

Results of the HPWD 2013-2014 winter water level measurements are being presented in a magazine format--rather than in a special issue of *The Cross Section* as in years past.

Newsletter subscribers will receive a copy of the report. Additional copies are available by contacting the HPWD office at (806) 762-0181.

THE CROSS SECTION

CARMON McCAIN, Editor
Information/Education Group Supervisor

Telephone: **(806) 762-0181**
Fax: **(806) 762-1834**
Web: ***www.hpwd.com***
E-mail ***info@hpwd.com***

THE CROSS SECTION (USPS 564-920) is a monthly publication of the High Plains Underground Water Conservation District No. 1, 2930 Avenue Q, Lubbock, Texas 79411-2499. Periodicals postage paid at Lubbock, Texas.

The Cross Section welcomes your comments. Please send Letters to the Editor to *The Cross Section*, High Plains Underground Water Conservation District No. 1, 2930 Avenue Q, Lubbock, TX 79411-2499. Letters addressed to *The Cross Section* become the property of the newsletter and it owns all rights to their use. Letters may be edited for space and clarity.

POSTMASTER: Please send address changes to *The Cross Section* (USPS 564-920), High Plains Water District, 2930 Avenue Q, Lubbock, TX 79411-2499.

DOUCETTES CONSIDERING MORE RAINWATER TANKS

FROM PAGE ONE

current system, the Doucettes say they would consider installing more rainwater harvesting tanks in the future.

They say it would not be that difficult to equip their current system to supplement groundwater used in their home. All that is needed is a pump and a water treatment (purification) system.

"As the 2014 drought continues, many people will start to think about water conservation techniques, such as rainwater harvesting. It's important to plan ahead—since the price of water (or other resources) increases whenever there is a demand." Jim said.

The High Plains Water District salutes this Floyd County couple for their water conservation efforts.

Watch the Doucettes as they share their story at **www.hpwd.com/media/video.**

HPWD SUPPORTS TEXAS TECH TURFGRASS RESEARCH

By Carmon McCain

For many years, people have wondered which turfgrass variety is best suited for semi-arid climates.

A new research project by Texas Tech University, with funding from the High Plains Water District is designed to answer that question.

"Water quantity and quality are becoming increasingly important issues in the region. There has been a great deal of research focusing on agricultural water conservation—but not as much pertaining to urban water conservation. We believe that improved water conservation efforts in the urban landscape will provide greater water resources to all," said Dr. Joey Young of the Texas Tech University Plant and Soil Science Department (PSS). Young and Dr. Glen Ritchie are co-principal investigators for the project.

On April 8, HPWD Board members approved $6,000 in grant funding for the research project, which includes purchase of sod with freight and management equipment.

"The High Plains Water District not only has a vested interest in agricultural water conservation—but urban water conservation as well. This is important research for our area. HPWD is excited to assist with the research," said Precinct One District Director James Powell of Lubbock.

RESEARCHERS TO EXAMINE GRASS PERFORMANCE UNDER MINIMAL SUPPLEMENTAL IRRIGATION

Young said there are three primary objectives for the research:

1. Determine the precise amount of supplemental irrigation needed to sustain acceptable turfgrass quality in semi-arid climates.
2. Evaluate the performance and survival of various turfgrass species under minimal supplemental irrigation.
3. Provide an educational site to guide homebuilders, realtors, organizations, and others in making turfgrass decisions.

The research plots, located at the 130-acre PSS Quaker Avenue Research Farm in Lubbock, will include both warm-season and cool-season turfgrass species.

Common bermudagrass, hybrid bermudagrass, Japanese lawngrass, Manilagrass, Buffalograss, Seashore paspalum, and Lady Bird Johnson native mix (Buffalo, Curly Mesquite, and Blue Grama) are the warm-season grasses to be tested. Tall fescue and Kentucky bluegrass are the cool-season grasses.

Young said a portion of the research test plots will receive water through subsurface drip irrigation buried to a depth of five inches. Other research plots will receive overhead sprinkler irrigation.

"The research will simulate homeowner turf management practices. This includes mowing heights of 1.25 and 3 inches as well as general fertilizer applications," Young said.

Although the first data from the project may be a year away, Young said there will be a field demonstration day later this summer on July 21, 2014 at the Texas Tech Quaker Farm.

Additional information about the research project will be featured in future issues of *The Cross Section.*

THE CROSS SECTION *(USPS 564-920)*
HIGH PLAINS UNDERGROUND WATER
CONSERVATION DISTRICT NO. 1
2930 AVENUE Q
LUBBOCK TX 79411-2499

MAY 2014 ISSUE

Address Service Requested

PERIODICALS PERMIT

T19 P2 3939
TEXAS STATE PUBLICATIONS
CLEARINGHOUSE
PUBLIC SERVICES DEPT
PO BOX 12927
AUSTIN TX 78711-2927

WWW.HPWD.COM

USGS CONDUCTS GEOPHYSICAL SURVEY OF HPWD WELLS

By Jason Coleman, P.E., General Manager

The U.S. Geological Survey (USGS) conducted a geophysical logging survey of three wells in the HPWD in mid-March.

The survey included one well in Parmer County, one well in Deaf Smith Co, and one well in Randall County.

The Parmer County well is completed in the Ogallala Aquifer, and the other two wells are completed in the Dockum Aquifer.

Geophysical logging provides great detail of the units within the aquifer, and includes measurements of Natural Gamma, Fluid Resistivity and temperature.

A comparison of Natural Gamma and water well drillers' logs may provide some validation to the sediments found in the aquifer.

Clay formations have higher Gamma readings, while sand and gravel formations tend to have lower Gamma readings.

The fluid resistivity and temperature measurements help us understand water quality, as well as potential areas of ambient flow.

The fluid resistivity data from the Ogallala well in Parmer County showed a consistent pattern throughout the formation.

In other words, the water quality remained stable from top to bottom.

The Dockum well in Deaf Smith County also exhibited the same findings. However, we did observe a noticeable change in water quality when logging the Dockum well in Randall County.

In fact, the bottom 65 feet of water contained substantially higher total dissolved solids (TDS) than the water above that point.

The HPWD greatly appreciates the well owners that cooperated in this study.

We hope to conduct additional surveys of the Dockum, and help identify areas where water quality may pose a challenge for its use.

CONSERVATION CONVERSATION

NEWS BRIEFS AND OTHER CONSERVATION RELATED INFORMATION

DEATH—Delaine Baucum, 62, of Seminole died April 23. Born in Seagraves, she graduated from Loop High School in 1969. Delaine was employed with Valley Irrigation and Pump in Seminole in 1974. She later purchased the business in 1994. Delaine and her husband, Denton, owned Baucum Insurance since 1986. She was appointed in March 1998 as an agriculture representative for the Llano Estacado Regional Water Planning Group ("Region O") and continued to serve in this capacity until her death. She was a member of the Valley Dealer Council, and the Seminole Chamber of Commerce. Her husband, Denton, died May 2. Survivors include three sons, two brothers, her father, and two granddaughters. Both the High Plains Underground Water Conservation District and the Llano Estacado Regional Water Planning Group send their heartfelt condolences to Delaine's family and friends.

BAUCUM