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# THE CROSS SECTION

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A MONTHLY PUBLICATION OF THE HIGH PLAINS UNDERGROUND WATER CONSERVATION DISTRICT NO. 1, LUBBOCK TX

## 2009 tax rate unchanged

The ad valorem tax rate for the High Plains Underground Water Conservation District No. 1 will not increase for tax year 2009.

At their Aug. 17 meeting, High Plains Water District board members approved a resolution adopting a 2009 ad valorem tax rate of \$.00794 per \$100 property valuation for operation and maintenance of the district. This same tax rate has been in effect since 2007.

For example, persons with \$100,000 in property valuation pay \$7.94 in taxes to the underground water conservation district under the 2009 rate.

“The Water District’s board of directors believed it would be in their constituents’ best interest to keep the 2009 tax rate unchanged from last year,” said Manager Jim Conkwright. Even though the tax rate remains the same, Conkwright said some residents may see an increase in the amount of their water district tax because of higher property valuations in 2009.

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## Revised Water District management plan prepared for submission to TWDB in Austin

High Plains Underground Water Conservation District staff are putting the final touches on an amended district management plan expected to be submitted to the Texas Water Development Board in Austin in October.

At their Oct. 20 meeting, High Plains Water District Board of Directors are set to discuss and consider approval of the amended plan, which contains revised goals, management objectives, and performance standards for the district.

These proposed draft revisions are for administrative compliance only and do not relate to the setting and/or enforcement of desired future conditions within the district.

“Texas Water Code 36.1072 requires each groundwater conservation district in Texas to adopt its management plan no less than every five years and to submit the plan to the Texas Water Development Board (TWDB) for certification. In addition, Chapter 36.1071 was amended in 2005 and requires new goals and new data to be added to the groundwater conservation district management plans,” said Kelly Mills, P.G, who leads the Groundwater Planning and Assessment Team in the Water Supply Division of the Texas Commission on Environmental Quality (TCEQ).

The High Plains Water District Board of Directors adopted the original management plan on Aug. 11, 1998. It was amended and readopted on Jan. 29, 2004, and received TWDB certification on June 21, 2004.

“It doesn’t seem as if five years have passed since the High Plains



Water District amended and re-adopted its management plan. This current management plan revision deals primarily with the programs and activities designed to achieve the water district’s water conservation goals. No High Plains Water District rules will be amended during the current process or time line,” said Jim Conkwright, manager.

According to Chapter 36.1071, districts must develop comprehensive management plans that address the following management goals, as applicable:

- providing the most efficient use of groundwater;
- controlling and preventing waste of groundwater;
- controlling and preventing subsidence;
- addressing conjunctive surface water management issues;
- addressing natural resource issues;
- addressing drought conditions;
- addressing conservation, recharge enhancement, rainwater harvesting, or brush control, where appropriate and cost-effective; &

▪ addressing the desired future conditions of the groundwater resources in a quantitative manner.

Districts also shall:

▪ identify the performance standards and management objectives under which the district will operate to achieve the management goals identified in Chapter 36.1071(a);

▪ specify, in as much detail as possible, the actions, procedures, performance, and avoidance that are or may be necessary to effect the plan, including specifications and proposed rules;

▪ include estimates of managed available groundwater in the district based on the desired future condition established under Section 36.108; the amount of groundwater being used within the district on an annual basis; the annual amount of recharge from precipitation, if any, to the groundwater resources within the district; the annual volume of water that discharges from each aquifer to springs and any surface water bodies, including lakes, streams, and rivers; annual volume of flow into and out of the district within each aquifer and between aquifers in the district, if a groundwater availability model is available; the projected surface water supply in the district according to the most recently adopted state water plan; and the projected total demand for water in the district according to the most recently adopted state water plan.

Revised district management plans must also consider water supply needs; water management strategies included in the adopted

See **DISTRICT** Page Four

VISIT THE HIGH PLAINS WATER DISTRICT’S WEB SITE AT [WWW.HPWD.COM](http://WWW.HPWD.COM)

# Former Precinct Four District Director Andrew Kershen dies at 95

Andrew M. "Andy" Kershen, who served as Precinct Four District Director from 1965 to 1968, died Sept. 13 at his residence in Hereford. He was 95.



**KERSHEN**

A Mass of Christian Burial was celebrated Sept. 16 with burial following in St. Anthony's Catholic Cemetery in Hereford.

Kershen was born Jan. 15, 1914 in Cunningham, Kansas. He was a farmer and rancher.

In addition to his service on the

High Plains Water District Board of Directors, Kershen was involved in many other agriculture-related activities.

These included President of the Deaf Smith Wheat Growers Association in 1963, Director of the Deaf Smith County Chamber of Commerce from 1974-1977, member of the Chamber's Water Resources Committee, Director of Hereford Grain, past president of the Hereford Historical Society, Red Poll Cattlemen's Association, and other cattle-related organizations.

He was very active in the Knights of Columbus, having attained third degree Grand Knight and fourth degree Master.

Kershen received numerous awards, including Conservation

Farmer of the Year from Tierra Blanca Soil and Water Conservation District.

He was also nominated for Conservation Farmer of the Year in the "Save the Soil and Save Texas" awards program in 1967; selected by Gov. John Connally as a delegate to the National Rivers and Harbors Congress in 1968 and 1969; named Westway Community "Man of the Year" in 1988, and KPAN Radio's "Father of the Year" in 1995.

High Plains Water District Manager Jim Conkwright recalls Kershen's devotion to his family and his community.

"Mr. Kershen always found time for the important things. He was active in community endeavors—including serving

on several boards. He was a devoted father who always found time for family. I always enjoyed visiting with Andy as his range of knowledge and interests was broad and his devotion to the High Plains Water District and to conservation was sincere," Conkwright said.

Kershen was preceded in death by his wife, Anne; two brothers, and four sisters.

Survivors include four daughters, two sons, one brother, three sisters, 14 grandchildren, four step-grandchildren, nine great-grandchildren, and eight step-great-grandchildren.

The High Plains Underground Water Conservation District sends its sincere condolences to the Kershen family.

## Engineers: Smart irrigation controllers need a little more education

COLLEGE STATION – Tests of "smart" irrigation controllers found most of the devices currently on the market were not as smart as hoped, said Texas AgriLife Extension Service irrigation experts.

The six devices tested, all currently on the market, applied from about one-third to two-and-a-half times more water than was recommended, according to Charles Swanson, AgriLife Extension associate with the Texas A&M University department of biological and agricultural engineering.

"These devices have the potential to save water, but our data shows they're just not there yet," Swanson said.

Smart controllers use weather data to automatically adjust the amount of irrigation water applied. Some smart controllers use sensors at the irrigation sites to measure temperature and rainfall. They may also measure solar radiation, wind speed and relative humidity.

Other controllers, commonly called ET Controllers, use evapotranspiration data acquired either through the Internet, telephone or pager to estimate landscape water requirements, he said. Both ET and on-site sensor controllers use the data they receive to estimate evapotranspiration at the site and apply enough water to offset it.

Swanson and Dr. Guy Fipps, an AgriLife Extension engineer and director of the Irrigation Technology Center, tested both types of controllers over an eight-week period from early August through late September. ET controller bench



**SMART CONTROLLER LAB TEST**

tests were conducted in an indoor laboratory while an outdoor lab test was used for the controllers with on-site sensors.

Why the gross inaccuracy?

Part of the answer is that there are several methods to calculate evapotranspiration. Swanson and Fipps used the Standardized Penmen-Monteith method, a model generally recognized as the gold

standard. This method takes into account many factors, including solar radiation, Swanson said. Generally, methods that factor in solar radiation will be more accurate.

"From what I've been able to gather, some companies are tying into the (local) airport or weather stations that are posted online, because every city has an airport," Swanson said. "ET data calculated with such weather data tends to be inaccurate."

Swanson noted that the units with on-site sensors did better in the tests than the ET controllers. The on-site sensor controllers applied on average about 70 percent less water than the ET controllers, and saved water compared to most manual

applications. Typically, manually controlled irrigation units on timers apply about twice as much water as needed, he said.

There are several possible causes for the over-irrigation, including improper ET values, high plant coefficients and insufficient accounting for rainfall. The study is important because of the potential water savings by using smart irrigation controllers, Swanson said.

Several Texas cities are currently considering making smart controllers mandatory with the installation of new irrigation systems. For example, the city of Frisco now mandates smart controllers.

See **CONTROLLER** Page Four

## THE CROSS SECTION

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### Staff Resignations

Caleb Jenkins (left) and Steven Lopez resigned from the High Plains Underground Water Conservation District staff in August. We wish them the best in their future endeavors.

## 2006 Llano Estacado Regional Water Management Plan amended to include updated water management strategies for City of Lubbock

Llano Estacado Regional Water Planning Group ("Region O") members amended the 2006 regional water management plan to include updated water management strategies for the City of Lubbock at their Aug. 27 meeting.

"The City of Lubbock requested an amendment to the 2006 regional water plan to update specific water management strategies. These include the North Fork Diversion Operation, the Lake Alan Henry Water Supply to Lubbock, and the Post Reservoir," said Chairman H.P. (Bo) Brown Jr.

"The regional water plan-

ning group members received two comments from the public at a June 18 hearing and two written comments during the 30-day comment period following the hearing.

"After due consideration of the comments, the regional water planning group voted unanimously to amend the 2006 plan to include the updated City of Lubbock strategies," Brown said.



BROWN

The regional water planning group continues its work to update the 2006 plan for 2011. This updated information from Region O and the 15 other regional water planning group areas will be included in the 2012 State Water Plan.

Currently, there are 20 voting members of the regional water planning group which were appointed to represent 11 water user groups in the regional water planning process.

These water user groups include agriculture, county government, electric generating utilities, the environment, industries, municipi-

palities, the public, river authorities, small business, and water districts.

Non-voting members include a technical consultant and representatives from four state agencies.

Their next meeting is set for 10 a.m., Thursday, Oct. 15 in the A. Wayne Wyatt Board Room at the High Plains Underground Water Conservation District office in Lubbock.

The public can learn more about the regional water planning process by visiting the Llano Estacado Regional Water Planning Group's web site at [www.llanoplan.org](http://www.llanoplan.org)

## Study examines roofing material impact on quality of harvested rainwater

*From the Texas Water Development Board*

Rainwater harvesting is fast becoming an attractive water supply option in many areas of Texas; some households are even using it as their sole source of water.

Although rainwater is generally clean, it can contain chemical and biological contaminants. Some of these contaminants are picked up in the atmosphere, but others are from the roof of a building when rain comes in contact with it.

Clearly, roofing material is a

key to the quality of harvested rainwater. Unfortunately, few studies have been conducted on this subject in Texas, but that is changing.

With the aid of Texas Water Development Board (TWDB) funding, researchers at the University of Texas at Austin are assessing the impact of the most commonly used roofing materials in Texas (composition shingle, Galvalume®, and concrete tiles) on the quality of harvested rainwater.

Using existing roofs on homes in Austin and test roofs installed at

the Lady Bird Johnson Wildflower Center—the researchers have been collecting rainwater samples since early 2009 and analyzing them for a variety of chemical and microbial constituents, including suspended solids, pH, nitrates, nitrites, heavy metals, turbidity, total and fecal coliform, and synthetic organic compounds.

A green roof installed at the Wildflower Center is also being tested.

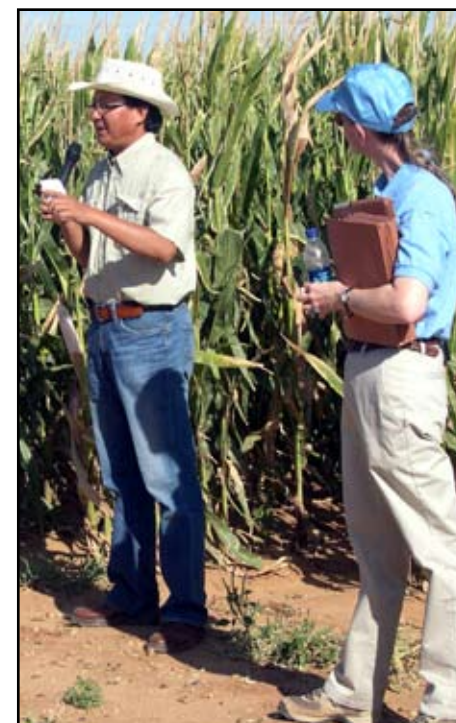
The ultimate goal of the study is to make scientifically based

recommendations to the rainwater harvesting community in Texas on the selection of roofing materials for rainwater harvesting.

A final report for the project is expected by the end of 2009.

More information about the project is available on TWDB's rainwater harvesting Web site at [www.twdb.state.tx.us/iwt/rainwater/rainquality.html](http://www.twdb.state.tx.us/iwt/rainwater/rainquality.html).

You may also contact the TWDB contract manager Sanjeev Kalaswad at [sanjeev.kalaswad@twdb.state.tx.us](mailto:sanjeev.kalaswad@twdb.state.tx.us).



### Subsurface Drip Irrigation Technology Field Day

**LEFT:** Extension Cotton Agronomist Dr. Randy Boman discusses cotton varieties, irrigation levels, and plant populations for use with subsurface drip irrigation at one of the tour stops at the Aug. 25 Subsurface Drip Irrigation (SDI) technology field day at the Helms Farm at Halfway, TX. **MIDDLE:** More than 100 persons attended the field day which included discussion of SDI management for corn and cotton production, comparison of SDI with Low Pressure Center Pivot irrigation, and irrigation scheduling for drip irrigation. **RIGHT:** Dr. Wenwei Xu discusses research to breed multiple stress tolerant corn as Dr. Dana Porter listens on. The field day is part of a year-long SDI technology transfer conducted as part of the Ogallala Aquifer Initiative Program with assistance from Texas AgriLife Extension Service, Kansas State University, and the USDA-Agricultural Research Service Conservation and Production Laboratory at Bushland.

## District submitting first of two management plans to TWDB

Continued From Page One

state water plan; and desired future conditions set by groundwater management area representatives.

"GMA # 1 representatives adopted a desired future condition of 50 percent of the volume in storage remaining in 50 years for the portions of Armstrong, Potter, and Randall Counties within the High Plains Water District. We are awaiting the managed available groundwater volume (MAG) for this DFC from the TWDB.

"The bulk of the High Plains Water District service area is in GMA # 2, which has until September 2010 to set a DFC. In the meantime, we will submit a management plan that does not contain the DFC information for GMA # 2. Once GMA # 2 sets the DFC and the MAG volume is determined,

then we will resubmit the plan for review/certification. This version of the plan may include needed changes as a result of these new data as well as any changes that the TWDB may require," Conkwright said.

Senate Bill 2296 by Senator Robert Duncan of Lubbock and Rep. Allan Ritter of Nederland was filed during the 81<sup>st</sup> regular legislative session to allow several water conservation districts to file their management plans after their GMA set a DFC.

Unfortunately, the legislation was set on the House calendar, where it remained when the Legislature adjourned sine die.

"It is regrettable that this legislation did not pass. As a result, we and other affected districts have to submit two management plans for TWDB review/comment," he said.

## Controller technology shows promise

Continued From Page Two

"If these controllers are to become requirements across the state, then it is important that they be evaluated formally under Texas conditions," Swanson said.

Swanson and Fipps noted in their formal report that although the smart irrigation controllers did over-water, they were potentially superior to manually controlled systems.

A copy of the report can be

viewed on the Irrigation Technology Centers Web site at <http://ITC.tamu.edu>.

"The technology shows good promise but it definitely needs upgrading," Swanson said, adding that manufacturers are constantly updating their products.

"Two (manufacturers) have contacted us on what they can do to make their controller better," he said. "The others -- we're still waiting on a response."

## Conservation Conversation

News briefs and other conservation-related information

**DEATH:** Award-winning Western novelist **Elmer Kelton**, 83, died Aug. 22 in San Angelo. Kelton began his career in agricultural journalism at the *San Angelo Standard-Times* in 1949, then became editor of the *Sheep and Goat Raiser* magazine in 1963, and associate editor of *Livestock Weekly* from 1968 to 1990. A freelance writer, Kelton wrote more than 40 books—including "The Good Old Boys," and "The Time It Never Rained." He was named the #1 Western Writer of all time by the Western Writers of America. Kelton visited the High Plains Water District office in 2002 to gather information for an article about the Ogallala aquifer for the Texas Parks and Wildlife Department magazine. Survivors include his wife, two sons, a daughter, three brothers, and several grandchildren, great-grandchildren, and a great-great-grandchild.



KELTON

**ELECTED:** High Plains Underground Water Conservation District Manager **Jim Conkwright** was recently elected to a two-year term as President of the Texas Alliance of Groundwater Districts (TAGD).

**HONORS:** **David Gibson**, executive director of the Texas Corn Producers Board recently received the District 2 "Man of the Year in Agriculture" award at the annual Texas County Agricultural Agents Association conference in San Antonio. Gibson is a former Swisher County extension agent.

**TRANSITION:** **Carlos Rubinstein** of Austin was appointed to a six-year term on the Texas Commission on Environmental Quality (TCEQ) by Gov. Rick Perry on August 31, 2009. He succeeds Larry Soward, whose term expired. Rubinstein served as the TCEQ deputy executive director since June 2008. A former city manager of Brownsville, Rubinstein is a graduate of the University of Texas-Pan American in Edinburg, TX. He joins other TCEQ Commissioners Bryan W. Shaw, Ph.D. of Bryan and Buddy Garcia of Austin.



RUBINSTEIN

### MEETINGS OF INTEREST:

**OCT. 15:** Llano Estacado Regional Water Planning Group, 10 a.m., High Plains Water District office, 2930 Avenue Q, Lubbock.

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