Other Voices . . .

Ag Practices Must Adapt to Declining Water

Water has been near the top of the headlines lately, and will continue to generate debate as the drought in California and much of the West reaches unprecedented proportions. And as water sources turn dry and municipalities claim a larger share of the resource, agriculture will need to adjust.

The recent National Institute for Animal Agriculture (NIAA) conference focused on the these of "Water and the Future of Animal Agriculture". The program kicked off with a presentation from hydrologist Jay Famiglietti, Ph D, a professor of earth-systems science and civil and environmental engineering at the University of California, Irvine and the senior water scientist at the NASA Jet Propulsion Laboratory at the California Institute of Technology.

Famiglietti and NASA scientist have spent 30 years developing satellites, monitoring systems and computer models for tracking and predicting water trends. In 2002, NASA launched a pair of satellites known as the Gravity Recovery and Climate Experiment or GRACE. The two GRACE satellites, orbiting 310 miles above the earth, act as a kind of scale, measuring changes in the volume of water in a region by measuring subtle changes in gravitational pull.

Through these studies and others, Famiglietti estimates total water storage in California has declined by eight trillion gallons per year over the past three years. High Plains aquifers have lost a volume of water nearly equal to that in Lake Tahoe over the past decade.

Overall U.S. water supplies have declined since 2002 in much of the West, Southern Plains and Southeast. In California, with the ongoing drought persisting and surface water mostly deplete, the state is shifting toward nearly 100 percent reliance on groundwater, Famiglietti says, which in some cases is not renewable or takes many years to recover.

Globally, groundwater accounts for about one-third of all water withdrawals.

Scientists have developed models for sorting out data from the GRACE satellites to subtract out surface water, allowing them to monitor changes in groundwater supplies, Famiglietti says. In California, they have noted a trend in which groundwater recovers somewhat in years when surface water is available and declines when surface water is deplete.

Over the long-term though, the declines are greater than the recovery in wet years.

Changes in climate patterns, and water cycles generally have resulted in wet regions around the world getting wetter and dry regions getting dryer, Famiglietti says. He believes that for agriculture to remain productive, "we need to change the dialog on water, and shift away from the 'us versus them' conflict between agriculture and other users that tends to emerge when water supplies become scarce. We need better-defined processes for deciding how to allocate water for various uses and need to learn to produce food with les water."

In some cases, he says, it will be necessary to shift some types of agricultural production away from areas experiencing long-term water shortages into areas with more sustainable supplies.

– John Maday, editor *Drovers CattleNetwork* and published in *The Scott County Record*

Rain Barrels Available in Ellis, KS

While many sections of Kansas have seen extraordinary amounts of rainfall, the city of Ellis, located west of Hays, has not as of June 1. Recently, in a water conservation effort, the city of Ellis recently made a “rain barrel pickup” available to area residents.

Rain barrel programs have helped save water across the constantly water-deficient western half of Kansas since spring of 2009.

According to Stacie Minson, KSU Watershed Specialist with Big Creek Middle Smoky Hill River Watersheds, the rain barrels were available at $26 each to be paid for at Ellis' city offices. Any address could purchase up to four barrels.

The Ellis Review recently promoted the pick up day, noting that landscaping on average uses nearly 40 percent of household watering during the summer. Rain barrels alleviate the load on a water bill by collecting rain water, typically collected from the downspout of a gutter, to be used for watering purposes.

La Cygne Increases Water Rates

The city of La Cygne, located in Linn County in eastern Kansas, recently increased water rates. On May 20, City Clerk Devona Herrin presented the rate options in response to the additional debt incurred for the water project that is in development and recover from revenue shortfall. (See related article).

The options were provided by the Midwest Assistance Program, Carl Brown from GettingGreatRates.com and a spreadsheet made available with help from BG Consultants.

The proposals included various options for the monthly base fee and price for each additional 1,000 gallons of water. The highest base rate was just over $30 a month with a lower price for each additional 1,000 gallons of water, and the lowest base rate was $24.75 with the highest price for each additional 1,000 gallons of water. The council approved a motion to amend water rates to a base rate of $27.25 and $11.70 for each additional 1,000 gallons of water. This is a 40 percent increase over present rates.

The council also approved amending water rates for one-inch water meters and one-and-a-half inch water meters and add an annual inflationary rate of three percent.

The base rate for one-inch water meters is $69.85 with each additional 1.000 gallons at $11.70 and for one-and-a-half and two-inch water meters it is $124.85 with each additional 1,000 gallons at $11.70.

The new rates were to go into effect July 1, 2015.

Technical Assistance Provided by KRWA in 2014

Recently, KRWA was requested by agencies to summarize the various technical assistance that is provided by the Kansas Rural Water Association. This report is for work in calendar year 2014 and shows the number of systems assisted:

- **Rural Water Circuit Rider Program**, funded by USDA Rural Development and administered by the National Rural Water Association: 162 systems
- **On-Site Technical Assistance**, contract funded thru the Clean Drinking Water Fee and administered by the Kansas Water Office: 411 systems (includes 126 water loss surveys)
- **Tech Assistance to Public Water Systems**, contract funded through a set-aside of the EPA grant to the state of Kansas for the public water supply program, administered by the Kansas Department of Health and Environment: 300 systems
- **Training and Technical Assistance**, contract funded by EPA and administered by the National Rural Water Association: 32 systems assisted; limited training sessions presented using approximately $20,000 of this funding
- **GIS Mapping**, internally funded by KRWA: 86 systems
- **Source Water Protection / Water Rights**, funded through USDA NCRS, administered by the National Rural Water Association: 37 systems
- **Water Rate Reviews** conducted by KRWA: 21 reviews. (An important issue is that nine of the systems implemented the recommendations by KRWA).
- **Environmental Reviews** and other assistance with financing: 10 projects
- **KAN STEP Program**: Water System Projects at Jamestown, Culver, Turon, Enterprise; community facilities at Pleasanton, Corning and Navarre.
- **Wastewater Compliance**: funded through the Kansas Department of Health and Environement: 45 systems
- **Wastewater Tech Assistance**: funded through USDA Rural Development and administered by the National Rural Water Association: 117 systems
- **Training Sessions:** Total of 105 days of training; KRWA invested more than $230,000 of internal funds towards training in 2014.

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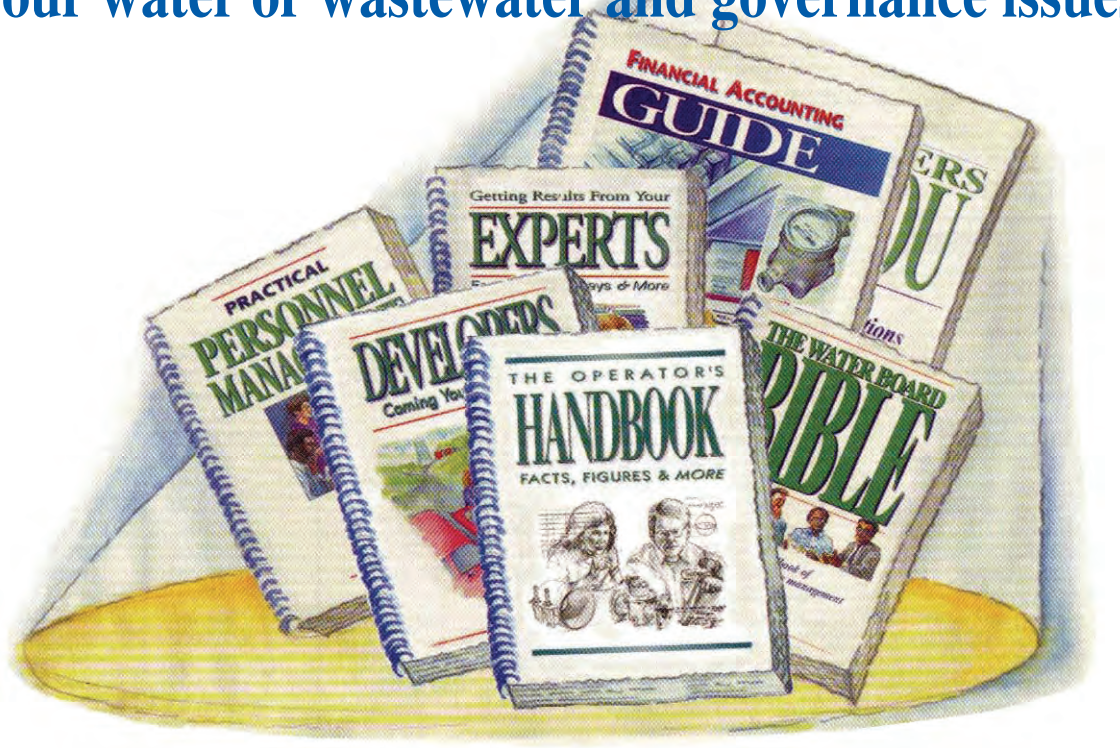

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