

## Livestock Water Systems

By Martin Gugelman, Engineering Technician (Civil)  
Natural Resources Conservation Service  
Scott City, Kansas

The past several years have proven to be very trying for livestock producers in most of Kansas. With adequate grass in short supply, many producers are looking for ways to stretch the grass they do have.



### INSIDE THIS ISSUE:

UWWRAPS Cost-Share Funds Available	2
Soil Test Incentive	2
Tractor Safety Training	3
Burn Advisory	3
Burn Equipment	3
EQIP Sign-up	4
Kansas Water Facts	5
Construction of Practice in Time of Drought	5

One obvious way to attain the best use of the grass is good grazing distribution. This can be done in several ways; a key component is water distribution. Water distribution is simply stated as getting water from where you have it now to where you need it and can be quite effective in times of drought as well as adequate moisture.

Several methods are available to distribute water including ponds, spring developments, wells, pipelines, and tanks.

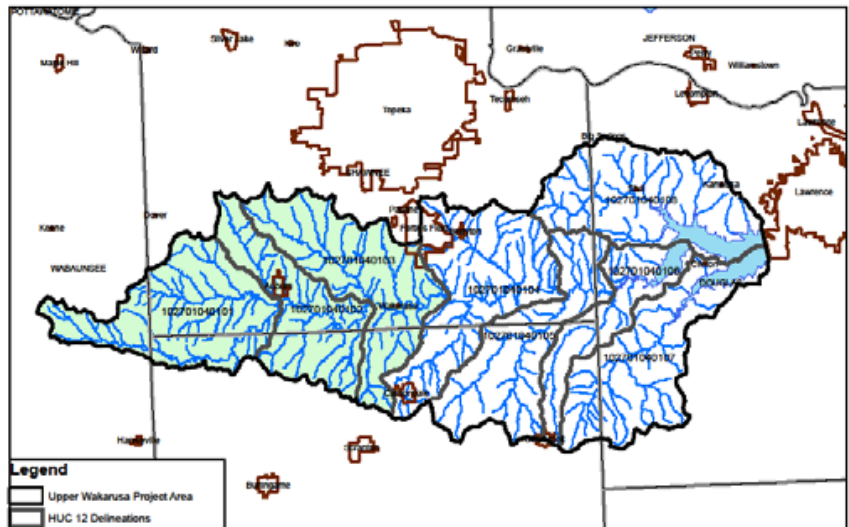
- Ponds will work well in wet years but have little or no water during dry years and can be hard to seal in some soil types.
- Spring developments are a good alternative provided you have a spring in your pasture, and it is located in the right place for the grazing system.
- Wells are another good alternative for a main source of water, but if multiple locations are needed, they may not be cost effective.
- Pipelines are generally used in combination with a well or spring development and can greatly increase the effectiveness and versatility of them.
- Tanks can come in many shapes and sizes or can be made from several different materials but are simply a container to store the water when you get it where you need it.

After figuring out the best system to get water where you need it to improve your distribution, you will want to answer a few questions.

- How reliable of a water source do I need?
- What is the best location for my water supply to fit the grazing system and physical location to minimize maintenance?
- How much water do I need at each location, how many animals will drink there?
- How fast does the water need to get there to keep a constant supply?
- How much water do I need in reserve storage to allow time to address any problems that arise?
- If using a pipeline, what is the best route to install it considering ease of installation and possible maintenance?
- What materials do I need?
- Are there any programs to help with this?
- WHAT WILL THIS COST ME?

This all sounds like a lot to figure out; however, your local Natural Resources Conservation Service office staff can assist you with the answers to all of these questions and more.

## Cost Share Funds Available in the Upper Wakarusa Watershed



More than \$100,000 is available to implement best management practices that reduce sediment and nutrients from washing off the land. The funds are part of the Watershed Restoration and Protection Strategy (WRAPS) that is committed to protecting priority water supplies from Clinton Lake. Best management practices must meet NRCS design requirements. Cost share to landowners is typically 70% and could be more if combined with other cost share programs. Farm and suburban lands must be in the priority areas of the Upper Wakarusa watershed that include Deer Creek, Rock Creek, Elk Creek, Camp Creek and Lynn Creek in western Douglas and eastern Shawnee Counties.

Practices that are eligible for funding include: pasture and rangeland seeding and management assistance, alternative feeding and watering systems away from streams, no till farming assistance, tile terrace and wetland retention systems, wetland retention at field and pasture outlet, waterway upgrades, stream buffer strips, and stream channel restoration and stabilization.

For more information contact Tom Huntzinger at 785-766-6717 or email [tomhuntinger@sunflower.com](mailto:tomhuntinger@sunflower.com)

*“The nation that destroys its soil destroys itself.”*

*- Franklin D. Roosevelt*

## Soil Testing Incentive

Nutrients in the soil make plants and grasses grow. Nutrient deficiency in soil causes stunted growth, which promotes weeds to choke out the desired species. The application of fertilizer masks the effect of low quality top soil and enhances the production of high quality soil. It is necessary to apply the correct amount to the land. Over fertilization causes problems in watersheds, affecting the groundwater and surface water. Excess nutrients are carried by rain into our lakes and rivers, which is the source of our drinking water.

The Dg. Co. Conservation District has Non-Point Source Pollution Control Funds to encourage soil testing on farm fields, pastures, gardens and lawns.

Working in cooperation with Douglas County Extension Service, we are making this program available to you. The funds will pay up to \$8.00 per test with a limit of ten (10) soil tests per landowner per year. Funding will continue on a first come first serve basis until the funds are depleted.

# Tractor Safety Training for Youth

Tractor Safety Training for youth will be held June 4 and 5 in Wamego, Kansas. This training is required by law for those 14 and 15 years of age who will be working on a farm owned by anyone other than their parent or legal guardian. Others, including inexperienced older youth and adults who plan to work for farmers are also welcome to attend.

Farmers who intend to hire 14 and 15 year-old youth should make sure they have taken the course before they begin working.

The cost for the training is \$30, which pays for the

class material and lunch both days. Training will be on June 4, 9:00 a.m. to 4:00 p.m., and June 5, 9:00 a.m. to 3:00 p.m. Registration and fee are due by May 31 to the Pottawatomie County Extension, PO Box 127, Westmoreland, Kansas, 66549. Please make checks payable to Pott. County 4-H Council. You may also register on-line at [www.pottawatomie.ksu.edu](http://www.pottawatomie.ksu.edu).

The Douglas County Extension Office is willing to provide transportation to the training for students from Douglas County. Please call 785-843 7058, or email [bdwood@ksu.edu](mailto:bdwood@ksu.edu), to check on transportation once you have registered for the class.

# FSA and NRCS Issue Burn Advisory

Adrian J. Polansky, State Executive Director of U.S. Department of Agriculture's (USDA) Farm Service Agency (FSA) and Eric B. Banks, State Conservationist for USDA's Natural Resources Conservation Service (NRCS) in Kansas have issued a joint burn advisory.

Kansas landowners and operators enrolled in Conservation Reserve Program contracts with prescribed burns planned or scheduled to be completed should be aware that persistent drought conditions across Kansas are creating conditions unsuitable for completing burns. Dry soil conditions, wind speeds, low relative humidity, continued drought, and current weather are all ongoing factors that are producing unsafe conditions for burns and will produce results outside the defined objectives for which the practice is planned.

Areas designated as D1 or higher on the U.S. Drought monitor map or where similar conditions exist should not be completing a prescribed burning practice. U.S.

Drought Monitor can be located on the internet at: <http://droughtmonitor.unl.edu/>. Completing a burn under these conditions may increase the potential for unfavorable results such as severe wind erosion or place personal property or safety at risk.

Prescribed burning is an important component in most plant communities across Kansas. Equally as important as the need for continued prescribed burning activities is the message of use only during safe and predictable climatic conditions.

Conservation Reserve Program participants should contact their local USDA Service Center and visit with employees at the FSA or the NRCS office to discuss modifying the time frame for completing the planned prescribed burn practice. Also, Environmental Quality Incentives Program and Wildlife Habitat Incentive Program Participants should contact their local NRCS office to discuss planned prescribed burns.



**The Conservation District board recently awarded Jeffery Kirk, senior at Perry Lecompton High School a \$1000.00 scholarship. He plans to major in Agronomy at Kansas State University.**

**Burn Equipment Rental** - the following equipment is available through the Conservation District when it is safe to burn.

- ◆ Rental is for 3 days/2 nights.
- ◆ The drip torch must be returned with NO FUEL in the container.
- ◆ Only one drip torch, one flapper, & one backpack sprayer per person.
- ◆ Drip torch mixture is 4 parts diesel and 1 part gasoline.

# Kansas Range Youth Camp



Range Youth Camp is the most accepted and enduring activity of the Kansas Section of the Society for Range Management. The camp was first held in 1960 and is continuing to educate youth about the importance of Kansas rangelands to this day. The camp is designed to give students a basic understanding of the principles of rangeland ecology, including plant physiology, plant identification, ecological sites, range condition, and trend. Additional topics discussed at camp are animal behavior, animal nutrition, wildlife use of rangelands, and calculating stocking rates. Students who are wanting to attend should have a serious interest in range-

land management, rangeland ecology, or grazing animals.

There are also opportunities for field trips, swimming, canoeing, fishing and hiking.

Students entering their sophomore, junior or senior year are eligible to attend. For more information, call our office at 785-843-4260 ext. 1129 or [sande.fishburn@ks.nrcs.usda.gov](mailto:sande.fishburn@ks.nrcs.usda.gov) by April 12, 2013. The Conservation District will sponsor two students to attend the camp.

This is an excellent opportunity for students to learn about plants, livestock, and wildlife in an educational event like no other in Kansas.

## Applications for National Initiatives through the

### Environmental Quality Incentives Program Due April 19

U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) State Conservationist Eric B. Banks has announced a second application cutoff date, **April 19, 2013**, for the On-Farm Energy Initiative, Organic Initiative, and the Seasonal High Tunnel Initiative.

These initiatives are funded through the Environmental Quality Incentives Program and offer technical and financial assistance to eligible participants to install or implement structural and management practices on eligible agricultural land. Conservation practices must be implemented to NRCS standards and specifications.

Through the **On-Farm Energy Initiative**, NRCS helps producers work with an NRCS-approved Technical Service Provider (TSP) to develop Agricultural Energy Management Plans or farm energy audits that assess energy consumption on an operation. NRCS may also provide assistance to implement various recommended measures identified in the energy audit through the use of conservation practice standards offered through this initiative.

Through the **Organic Initiative**, NRCS assists producers with installation of conservation practices

on agricultural operations related to organic production. Producers currently certified as organic, transitioning to organic, or National Organic Program exempt will have access to a broad set of conservation practices to assist in treating their resource concerns while fulfilling many of the requirements in an Organic System Plan.

Through the **Seasonal High Tunnel Initiative**, NRCS helps producers implement high tunnels that extend growing seasons for high value crops in an environmentally safe manner. High tunnel benefits include better plant and soil quality and fewer nutrients and pesticides in the environment.

In Kansas, socially disadvantaged, limited resource, and beginning farmers and ranchers will receive a higher payment rate for eligible conservation practices applied.

Interested producers should contact their local NRCS office soon to see if they are eligible for these programs.

If you need more information, visit the Kansas NRCS web page at <http://www.ks.nrcs.usda.gov/programs/> or contact Amy Williams at 785-843-4260 ext. 3.

#### Kansas Summer Recipe

[www.kansassoybeans.com](http://www.kansassoybeans.com)

#### Hot & Spicy Soynuts

1 clove garlic, minced

1 tsp. veg. oil

2 C. soynuts

2 tsp. chili powder

1/4 tsp. red pepper

Saute garlic in oil. Stir in soynuts, chili powder, and red pepper. Cook about 2 minutes to blend flavors and nuts are warm.

Remove from pan, serve warm or cool.

# Kansas Water Facts

To most Kansans, fresh, clean water “goes with the territory.” They turn on the tap and there it is, good water. We assume water for drinking, cooking, personal hygiene, lawns, gardens, livestock, industry, etc. will last forever. Not true. Good, clean water is fast becoming a scarce commodity.

- Seas and oceans contain 97 percent of the water on earth. Snow, glaciers, and polar ice account for 2.25 percent. Rivers, lakes, and groundwater represent only .6 percent of the total water that produces the world’s food supply.
- Household water use has jumped 500 percent in the past 50 years. The wash cycle on the family’s automatic clothes washer uses more water in 30 minutes than a pioneer family used in one whole day.
- Just one inch of water over one acre of land equals 27,152 gallons.
- One acre of irrigated corn in western Kansas uses over 400,000 gallons (16.3 acres/inch) of

water per season during a dry year.

- With dryland farming, contour level benches for moisture conservation can increase sorghum yields by 18 bushels per acre.
- Each additional inch of water made available to a growing wheat crop on dryland will increase yields by 4 bushels per acre or 640 bushels for a quarter section of land.
- Level basin terraces on cropland in western Kansas will hold 1 inch of runoff. This would be over 4 million gallons of water per quarter section of land.
- Oil and gas are important natural resources; however, we cannot drink them. Water is truly our most important natural resource.
- A steadily dripping faucet can waste 2000 gallons of water a year.
- It takes 150 gallons of water to grow enough wheat for one loaf of bread.

***If you want to know the condition of your soil, ask the earthworms.***

## Construction of Conservation Practices in Times of Drought



In 2012, raising crops proved to be tough. After a good wheat harvest, the faucet dried up, and it has proven difficult to grow even a crop of weeds. Many producers have gone ahead and “dusted” in the

wheat crop while praying for rain. Others waited, hoping for a little help from Mother Nature. Just as crops need moisture to grow strong roots and a sturdy base, terraces and other conservation practices also need adequate moisture during construction to stand the test of time.

Terrace ridges need a good solid base to ensure their longevity. This base cannot be achieved without adequate soil moisture to provide the soil compaction necessary to withstand heavy equipment. Imagine shoveling a 1 to 1-1/2 ft high pile of flour. Stomp on it

hard. Poof! It is almost gone! This is similar to what a tractor and heavy implement will do to a powdery terrace ridge. It will be squashed down to nothing in a short time.

The soil moisture content at the time of construction should be such that, when kneaded in the hand, a ball will form which does not separate readily. A typical flat channel terrace requires a cut depth of only 0.4 to 0.6 ft to provide the earth fill necessary to construct the terrace ridge. During these extremely dry periods it is almost guaranteed that adequate soil moisture will not be available to build a good, solid-based terrace. While these drought conditions persist, the Natural Resources Conservation Service (NRCS) recommends delaying the construction or rebuilding of terraces and similar practices until moisture conditions become more favorable.

.....John E. Vavroch, Engineering Technician (Civil)  
Natural Resources Conservation Service  
Colby, Kansas

Douglas County Conservation District  
1217 Biltmore Drive, Suite 100  
Lawrence, KS 66049-1996

Prsrt Std  
U.S. Postage  
PAID  
Lawrence, KS 66049-1996  
Permit #132

# Soil & Water News

## Calendar of Event

### April :

3—District Board Meeting

28—Women in Ag,

### May:

1—District Board Meeting

8—Kansas Envirothon, Salina

27— Office Closed, Memorial Day

### June:

5—District Board Meeting



*Funding provided by the State Conservation Commission through appropriation from the Kansas Water Plan Fund.*

---

*All programs and services of the Conservation District are available to anyone without regard to race, color, religion, sex, national origin, age, or handicap.*

Douglas County Conservation District  
785.843.4260 ext. 3

### Board of Supervisors:

Mike Flory, Chairman  
Ron Reed, Vice-Chair  
Steve Wilson, Treasurer  
Lee Whaley, Secretary  
Luke Ulrich, Member

### District Personnel:

SanDe Fishburn, District Manager  
Jim Weaver, Program Coordinator

### Natural Resources Conservation Service:

Amy Williams, District Conservationist  
Coleen Davison, Soil Conservationist  
Tim Miller, Resource Conservationist