

CONSERVATION
ISSUE #12 2018

Connections



A quarterly publication of the Dickinson County Conservation District

CONSERVATION *Connections*

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USDA Service Center
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Abilene, KS 67410

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(785) 263-2787 (Conservation District/NRCS)

2017 Board of Supervisors

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 Francis Anderson.....Vice Chairman
 Raymond Bielefeld.....Treasurer
 Dennis Chartier.....Member
 Sam Zook.....Member

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Cindy Dooley.....District Manager
 Brian Lang.....Drill Manager

NRCS Staff

Kenny Bowell.....Supervisory District Conservationist
 Danny Carroll.....Soil Conservation Technician

Farm Service (FSA)

Braden Stueve.....County Executive Director
 Ellen Alvarez.....Program Technician
 Tonya Askew.....Program Technician
 Sandy Johnson.....Program Technician
 Deb Marston.....Program Technician
 Michele Snowball.....Program Technician

CALENDAR OF EVENTS

April 1-30—Ruby-Throated Hummingbird Migration in KS
 April 6—Deadline to apply for scholarship
 April 1-May15—State Cost-Share Program Annual Sign Up
 April 9—Regular Board Meeting—USDA Service Center
 April 22—Earth Day
 May 10—Deadline to sign up for Kansas Range Youth Camp

Seeding Dates

Cool Season Grasses
(brome, fescue)
 August 1 to October 1
 December 1 to April 15

Warm Season Grasses
(native mix)
 December 1 to May 15

Prescribed Burn Dates

CRP: Feb. 1 - April 15
 Depending on soils, July 16
 - Aug. 31 (contact FSA/
 NRCS for more information)

Rangeland: April 1 - May 5



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Looking for a contractor?

Contact us for a list of contractors that will help achieve all your conservation goals: earthwork, brush cleaning, prescribed burning, well-drilling, fence building, and more!



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Dickinson County Updates



In February, the Dickinson County Conservation District hosted the 73rd Annual Meeting to elect two supervisors, update the community on our business in 2017, recognize winners for six Conservation awards and our poster contest, and celebrate the landowners of Dickinson County for their voluntary conservation efforts.

Dennis Marston, who has been a supervisor since 2000 and current Chairman, chose

not to seek an additional term. Francis Anderson, who has been a supervisor since 2012, was elected to an additional 3 year term. Sam Zook became the fifth Board of Supervisors member for 2018.



(L-R) Dennis Marston, outgoing Chairman; Raymond Bielefeld, Treasurer; Darren Haney, Chairman; Francis Anderson, Vice Chairman; Dennis Chartier, Member; not shown, Sam Zook, Member

At the March regular board meeting, the Board elected Darren Haney to serve as our new Chairman. Francis Anderson will serve as Vice President. Raymond Bielefeld was elected again to serve as our Treasurer. Dennis Chartier and Sam Zook round out the roster for the 2018 Dickinson County Conservation District Board of Supervisors.

The Board of Supervisors recognized a Dickinson County landowner for outstanding overall conservation efforts and five landowners for implementation of specific conservation practices.

Banker's Conservation Award – Awarded to a landowner who implements best management practices that will prevent erosion and maintain the fertility and productivity of the land. Awarded to Kevin & Lorine McKeeman

Buffer Award – Awarded to a landowner who establishes and

maintains buffers and filter strips that improve water quality by taking marginal land out of production and planting it to native grasses, forbs, and legumes, resulting in the improvement of wildlife habitat. Awarded to Larry and Karin Kellogg.

Grassland Award

Awarded to a landowner who has established, supported, and managed the grasslands, resulting in conservation of soil, water, and grassland resources. Awarded to Ray and Merelyn Stites.

No-Till Farming Award

– Awarded to a landowner who establishes, supports, and implements no-till farming practices, resulting in the reduction of soil erosion and fuel consumption, as well as an increase in soil health and wildlife habitat. Awarded to Cedar Hill—Schwarz Brothers.

Windbreak Award

– Awarded to a landowner who establishes and manages a windbreak for protection of farm resources. Awarded to Rex Sandow and Jan Robinson.

Young Farmer Award

– Awarded to a landowner who shows an understanding the importance of conservation, implements conservation practices both as a joint effort and individually, shows



Cameron Lang.

The Abilene High School Jazz Band provided entertainment after the meal.

A copy of the Annual Report is available on our website: www.dkcoconservation.com

Meal sponsored by Dickinson County Banks and provided by Ricky's Café and Marcon Pies.



excellence and dedication in operation management, makes great conservation efforts while overcoming challenges, and takes a leadership role in conserving natural resources. Awarded to



Dickinson County *Endangered Species*

Contact your Legislators

Senators:

Jerry Moran
(202) 224-6521
(785) 628-6401

Pat Roberts
(202) 224-4774
(785) 295-2745

Representatives:

Roger Marshall, 1st District
(202) 225-2715
(785) 829-9000

Lynn Jenkins, 2nd District
(202) 225-6601
(785) 231-5966

Kevin Yoder, 3rd District
(202) 225-2865
(913) 621-0832

Ron Estes, 4th District
(202) 225-6216
(316) 262-8992

Congress is moving quickly to gut the Endangered Species Act, America's strongest and most important law for protecting wildlife.

The Endangered Species Act has a proven track record of success in providing a safety net that protects our most vulnerable wildlife. It has prevented 99 percent of the species under its care from going extinct, including America's symbol, the Bald Eagle. We should allow this critical law to continue to protect wildlife for future generations, not undermine it.

Please ask your members of Congress to oppose efforts to weaken the Endangered Species Act.

State and federally listed species are protected in Kansas as designated by the *Kansas Nongame and Endangered Species Act* of

Dickinson County Threatened and Endangered Species (T&E)

TOPEKA SHINER *Notropis topeka*

STURGEON CHUB *Macrhybopsis gelida*

WHOOPIING CRANE *Grus americana*

LEAST TERN *Sterna antillarum*

PIPING PLOVER *Charadrius melodus*

SNOWY PLOVER *Charadrius alexandrinus*

EASTERN SPOTTED SKUNK *Spilogale putorius*

AMERICAN BURYING BEETLE *Nicrophorus americanus*



Dickinson County Species in Need of Conservation (SINC)

Western Hognose Snake *Heterodon nasicus*

Black Tern *Chlidonias niger*

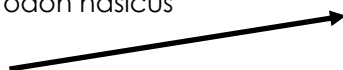
Short-eared Owl *Asio flammeus*

Golden Eagle *Aquila chrysaetos*

Wabash Pigtoe Mussel *Fusconaia flava*

Creeper Mussel *Strophitus undulatus*

Common Shiner *Luxilus cornutus*



2018 *Kansas Range Youth Camp*

The Kansas Section of the Society for Range Management will once again be sponsoring the Kansas Range Youth Camp this year from June 19th - 22nd. This camp has been held for 57 years, and the purpose of the camp is to educate youth about what rangelands are, why they are important, and how best to manage these lands sustainably.

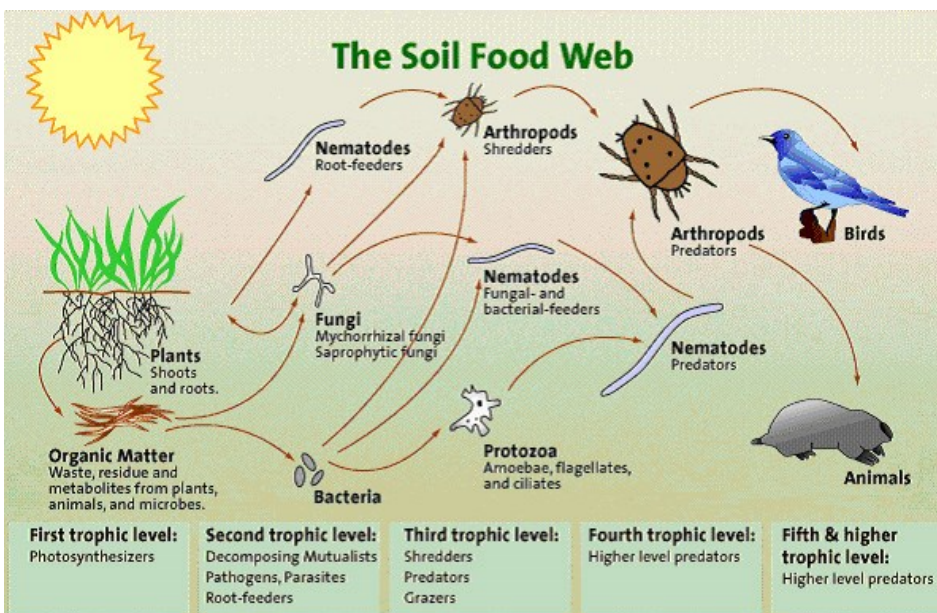
The camp is held at Camp Mennochah in Kingman County, and high school students that are currently freshmen, sophomores, or juniors are eligible to attend. Any student that is interested in livestock, wildlife management, soils, native plants, or natural resources is sure to learn something interesting and have a fun time doing it. There is a lot of time spent outdoors doing ‘hands

-on’ activities, and several field trips will allow students to see first hand some local operations.

Registration is going on right now and ends May 15th. The cost of camp is \$250, but many county conservation districts and other local organizations will sponsor a local student. Interested students are encourage to contact the conservation district to inquire about funding. More information as well as forms can be found on the Kansas SRM website: <http://rangelands.org/kansas/kansas-range-youth-camp/>. The camp coordinator, James Ungerer, can be contacted at james.ungerer@ks.usda.gov or 785-223-3705 with questions.

Sponsorship Opportunity

Interested in attending the Kansas Range Youth Camp? The Dickinson County Conservation District is pleased to sponsor students to attend the 2018 Kansas Range Youth Camp. Call Cindy at 785-263-2787 extension 332 for more information or download the forms on our website and return them to the USDA Service Center by May 10, 2018.



Unless **SOMEONE LIKE YOU CARES** a whole awful lot, nothing is going to get better, **ITS NOT.**

-Dr. Seuss-

Diversions versus *Terraces*

John E. Vavroch

One of the first things I learned as a Natural Resources Conservation Service (NRCS) field technician—diversions are not installed in fields in place of terraces.

When deciding to install structural practices, the question often asked is, should I terrace the field or install a diversion? Every field is different, but all fields need foreign drainage control and the work must begin at the top of the field.

A terrace is designed to reduce the slope length for erosion control

and/or to provide moisture conservation. A terrace handles the runoff water from the area below the next terrace up the hill, or from the top of the field when that area does not exceed the area associated with normal terrace spacing.



A diversion may also be used for erosion control and moisture conservation, but is designed to divert runoff water from a gully, a farmstead, a terrace system, or other improvement. A diversion handles the runoff water from a larger or more irregular area, often including substantial “foregin” drainage beyond field boundaries, and typically with a longer watershed slope than what a single terrace could treat.

Terraces are typically paid for by the linear foot. Diversions are typically paid for by the cubic yard. With large amounts of foreign drainage, diversions can get very large in height and expensive to construct compared to terraces. The required storage or flow area is based on drainage acres and the quality of cover that is on those drainage acres. To accommodate the required storage or flow area,

diversions can vary greatly in length, height, and channel width.

Land slope also plays a key role in the required height of a level diversion. Flat slopes of 0.5 to 1.0 percent can accommodate wide channels from 70 to 100 feet for level diversions that temporarily store water. Steeper slopes require a narrower channel to minimize the excavation at the upper edge of the channel. All these factors contribute to the design, height, channel width, and cost of a level diversion.

If the size and costs of a level (or storage type) diversion are excessive, the system design can include a safe outlet to drain the structure. Grassed waterways or underground outlets can be used in conjunction with gradient diversions to convey runoff to a suitable outlet. If such a diversion is graded to a safe outlet, it is a smaller structure with lower construction costs.

Sometimes producers are tempted to install two or three big diversions on a field instead of a multiple terrace system. This is not a good idea. This may work for a few years in today's high residue environment, but sooner or later, a large, high intensity rainfall event will occur. Those events cause maintenance nightmares. Channels will fill with silt due to excessive horizontal spacing. Water breaks over the ridges causing even more substantial ephemeral gullies and the longevity of the structure can be severely diminished.

For more information, or to discuss other resource concerns, please contact your local Natural Resources Conservation Service (NRCS) office or conservation district office located at your local county U.S. Department of Agriculture (USDA) Service Center (listed in the telephone book under United States Government or on the internet at offices.usda.gov) for assistance.

Soil Health

Steven Graber
620-227-3731

Soil health, also called soil quality, is a concept that has really gained steam in the United States, and locally, over the past several years. Soil health is complex, but the soil performs functions that are essential to crop growth and to the betterment of society and the environment. This is not solely limited to agriculture, but most work and evaluation has occurred on agricultural lands.

In order to evaluate soil health, a set of numerous indicators are used. These indicators may be qualitative or quantitative. These indicators should integrate physical, chemical, and biological properties, and be accessible to all users. They must be responsive to different management operations, and must adapt to differing climates.

Most producers are comfortable and knowledgeable of the chemical aspects of this equation, as many of them use soil tests for fertility. The physical and biological aspects are much more elusive and not as easily understood. Examples of the physical indicators could be available water capacity, bulk density, or infiltration.

These three indicators can be grouped together into one example problem. When intensive tillage has occurred in the past, nearly every acre of cropland has developed a hardpan or tillage pan. These indicators are influenced by the following, through prolonged use of sweep plows operating at a depth of 4- to 5-inches, intense pressure has been exerted on the soil at and below this depth. A severe degree of compaction has occurred in generally a 4- to 6-inch layer, increasing the bulk density of the soil in this zone. The higher the bulk density in grams per cubic centimeter, the greater the density of the soil. When soil has an increase in bulk density in the hardpan layer, water infiltration is severely limited. If rainfall is unable to penetrate into the soil, it runs off. The more rainfall that runs off, the less available water there is for plant use. Although this is a simplistic example, it is a basic representation of the problem

that exists on most farm ground. Another problem caused by high bulk density is the inability of plant roots to penetrate the compacted zone. This is evident in many failing crop fields where moisture is available below the hardpan, but the crops are unable to penetrate through the roots.

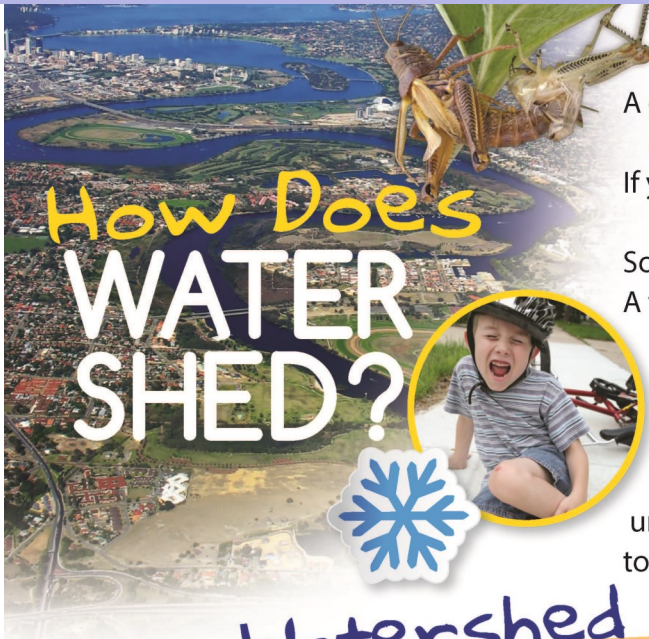
Another important indicator of soil health is the biological indicator. Soil organisms are responsible for the decomposition of organic matter, and cycling of nutrients. An easily recognizable biological indicator is the root worm activity in the soil. If soil is healthy, there are many earthworms. Earthworms play a key role in modifying the physical structure of soils by producing new aggregates and pores, which improves soil tilth, aeration, infiltration, and drainage. They improve soil porosity by burrowing and mixing soil, and roots often follow earthworm burrows and use available nutrients associated with the worm casts.

Determining the basic soil health of one's field does not involve a great investment in equipment or tests. The simplest tools to evaluate soil health in a farming operation is a sharpshooter and your own eyes. Dig a shallow hole, 12 inches deep will usually do, and observe what the soil looks like. Can you recognize surface crusting and the hardpan? Are the crop roots affected by the hardpan? Are there earthworms? If you do this, a whole new subterranean world may be opened up to you.

For assistance, please contact your local Natural Resources Conservation Service (NRCS) office or conservation district office located at your local county U.S. Department of Agriculture (USDA) Service Center (listed in the telephone book under U. S. Government or on the internet at offices.usda.gov). More information is also available on the Kansas NRCS Web site at www.ks.nrcs.usda.gov. Follow us on Twitter @NRCS_Kansas. USDA is an equal opportunity provider, employer, and lender.



Watershed Activity



How Does WATER SHED?

A grasshopper or snake sheds its skin as it grows.
 If you fall and skin your knee, you might shed a tear.
 Some dogs and cats shed their fur.
 A tree can shed its leaves.



A watershed is land that sheds water.
 Water from rain or snow can flow over the land it falls on. The land sheds the water.
 Water can also soak into the soil and flow under the land. The water can flow to a river, lake, stream or ocean.



Your Watershed

A watershed can be big or small. We all live in a watershed. Animals and plants also live in our watershed. What kinds of animals and plants live in your watershed?

Draw a around the animals that live in your watershed.



Draw a picture of an animal or plant that lives in your watershed.



Conservation *Word Search*

- ADAPTATION
- AIRQUALITY
- AGRICULTURE
- BENEFIT
- CHECKOUT
- CONSERVATION
- COSTSHARE
- DECAY
- DECOMPOSITION
- DEGRADE
- EASEMENT
- ECOFRIENDLY
- ENVIRONMENT
- ENVIRONMENTAL
- FARMER
- FLOODING
- GRADE
- GRADIENT
- GRAIN
- GRANT
- GRASSED WATERWAY
- GULLY
- HABITAT
- HARVEST
- HIGHLY ERODIBLE
- INDIGENOUS
- LAND
- LEASE
- LIVESTOCK
- MANAGEMENT
- NON POINT SOURCE
- ORGANIC
- PESTICIDE
- POLLUTION
- PRIORITY
- RANCHER
- RECOVERY
- RECYCLE
- REDUCE
- SOIL
- STAKE
- TERRACE
- URBAN
- UTILIZE
- VARIATION
- WATER
- WASTE
- WELL

P D M P E A L F U U I A I U X Y X J M I M K D J U R C N G P
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Equipment Rental and Sales

The Dickinson County Conservation District provides conservation equipment rental service to area land-owners. Contact Cindy Dooley at 785-263-2787 extension 332 to schedule your rental.

Great Plains No Till Drill

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First 1/2 Acre Free
Customer Pickup: \$15/Acre
\$80 Minimum

Truax Grass Seed Drill

Delivered: \$40 Delivery Fee + \$11/Acre
First 1 Acre Free
Customer Pickup: \$11/Acre
\$40 Minimum

Drip Torch

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CoCoRaHS Rain Gauge—\$32

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100 for \$10.00 or 1000 for \$100.00 (\$10 minimum)

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Funding to produce this newsletter is provided in part by the Division of Conservation through appropriation from the Kansas Water Plan.

The Dickinson County Conservation District prohibits discrimination in all its programs and activities on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, sexual orientation, or marital or family status.

Dickinson County Conservation District
328 NE 14th Street
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