



Special points of interest:

- Cost-share grants for forest thinning
- Soil health
- Rangeland and riparian health grant

Inside this issue:

Soil Health Indicators	2
Tree Thinning Grant Awarded by the State	3
Speech Contest	3
Scholarship Opportunity	3
No-till Drills	4
Black Hills RAC Grant	4
Tree Sale	4
Arbor Day Contests	5
Landowner Workshops	5

Custer Conservation District Newsletter

Forest Thinning Cost-share Grant Awarded to the District

The Natural Resources Conservation Service (NRCS) awarded the Custer County Conservation District a cost-share grant to improve forest health on private land. The project titled "Resilient Forest Landscapes", was funded through the NRCS Conservation Implementation Strategy (CIS).

Over the next five years, \$162,000 in cost-share funding has been set aside for qualified landowners for forest thinning, brush management, and fuel/fire breaks to reduce fire hazard, increase forage and habi-

tat, and improve overall forest health.

To date, two contracts have been funded for the project's first year. The application deadline for year two funds will be February 1, 2022. Interested landowners should contact the Rapid City NRCS Field Office at 605-343-1643 Ext. 3.



Recently thinned forest partially funded through a similar cost-share grant.



Forest fire in the Black Hills. This grant will provide assistance to landowners to protect structures/property from wildfires. Photo by U.S. Forest Service.

District Awarded \$700,000 Grant for Rangeland Health

Custer Conservation District has been awarded a grant from the NRCS to improve rangeland and riparian health in the eastern grasslands of Custer County. Similar to our Resilient Forest Landscapes Project (see above), this project is funded through the NRCS Conservation Implementation Strategy (CIS).

Over the next three years, \$700,000 in cost share funds will be available to qualified land owners. Funding will be

targeted for rangeland within priority drainages in the project area.

The overarching goal is to improve plant and soil health, water quality, and wildlife habitat, while reducing soil erosion on rangeland and riparian areas. Core NRCS supported practices include fencing, prescribed grazing, livestock pipeline, watering facility, water well, herbaceous weed treatment, livestock shelter structure, stream crossing, and pumping plant.

The application deadline for first year funds will be April 1, 2022. Mailings will go out in the coming months to residents in the project area. Additional information is available from the Conservation District and the NRCS Rapid City field office at 605-343-1643 Ext. 3.



Contrasting range health on either side of the fence. Photo by Tim McCabe, NRCS.

unlock the SECRETS IN THE SOIL

Soil health is "...
the continued
capacity of soil to
function as a vital
living ecosystem
that sustains
plants, animals,
and humans".



An example of healthy soil.
Photo by NRCS

Soil Health Indicators by Valerie Riter, NRCS Agronomist

How do you know if your soil is healthy? Like humans, tests can be run to indicate how well your soil is functioning. The NRCS definition of soil health is "the continued capacity of soil to function as a vital living ecosystem that sustains plants, animals, and humans". Soils must provide the basic functions of nutrient cycling, water infiltration and availability, habitat for biodiversity, filtering and buffering, and physical stability and support to be "healthy". Health in humans is "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (World Health Organization). While soils don't have social or mental well-being, the absence of a problem doesn't mean the soil is healthy. The health of soils is assessed by measuring physical, chemical, and biological soil properties. The soil's physical indicators are primarily visual observations and easy to see in the field. Producers need to focus on the dynamic, or management dependent, soil properties. In this article, we will concentrate on the dynamic soil properties easily observed in the field.

Aggregate stability is the measure of how well aggregates, bonded soil particles, stay together to resist flowing water. When soil aggregates are destroyed, primarily through tillage, soil crusting will occur, which leads to more water runoff and soil erosion. Positive

effects of stable aggregates include protecting organic matter inside the aggregate, improving water and air movement through the soil, and enhancing the environment for root growth and soil organisms. An increase in soil organic matter can positively affect aggregate stability. The amount of soil organic matter is directly influenced by management. Crop rotation, including grasses (small grains, corn, sorghum, etc.) and little or no tillage are excellent ways to increase soil organic matter. The dense, fibrous roots of grasses add lots of biomass to the soil to be broken down by soil organisms into organic matter. Large aggregates form under these grass-based systems. Soil aggregates are just one test ran to help determine soil health.

Earthworms are also a good indicator of soil health. Litter, or dead plant residue, on the soil surface is the main food source for earthworms. Tillage reduces litter on the soil surface so generally reduces earthworm populations by destroying a food source. Tillage also directly kills about 25% of the earthworm population. Additional negative effects of a lack of surface residue include increased surface soil temperature in summer (about 20 degrees above ambient air temperature), decreased soil moisture, soil erosion, and rapid decomposition of crop residues. Earthworms improve soil health by increasing availability

of nutrients (earthworm casts are about 25 times higher in nitrogen, phosphorus, and potassium than surrounding soil), aiding in incorporation of litter into the soil, and improving water infiltration and movement as they create large pores as they move through the soil. Hand digging a hole is the test performed to determine earthworm populations.

Soil structure is the arrangement of particles in the soil. It is strongly affected by climate, root and biological activity, water movement, and tillage practices. Ideal soil structure is loose and porous organization of aggregates permitting free movement of water and air along with unrestricted root growth. Hoof impact of animals, use of tillage equipment, and heavy vehicular traffic when the soil is too wet can cause a dense soil layer or soil compaction. Compaction restricts root growth and limits water infiltration and availability in the soil. Soil structure can also be determined when digging a hole.

Healthy soils will have loose, granular soil aggregates free of a compaction layer and abundance of earthworms. If you don't see these features in your soil, give NRCS a call and we would be happy to work with you. We can look at techniques to improve your soil health. So, do you know if your soil is healthy?

Additional Tree Thinning Grant Opportunity

Custer Conservation District has received a \$26,175 grant from the South Dakota Department of Agriculture and Natural Resources Division of Resource Conservation & Forestry to provide cost-share to private landowners for forest improvements. The project's goals are to improve forest conditions, grazing lands, and wildlife habitat while also reducing wildfire hazards.

The District will pay up to \$225/acre for thinning and up to \$100/acre for fuels treatment (e.g., slash disposal) to qualified applicants. Forests must meet certain criteria to be eligible for

the grant. Payments will be made after work is completed and certified by a State forester.

Contact the office for an application or for additional information.



Recently thinned forest stand. Property owner received cost-share assistance from the Conservation District.

Resource Conservation Speech Contest

Local student, Remington Miklos, competed in the 60th annual Resource Conservation Speech Contest State Finals, which was held at the State Capitol in Pierre on April 24, 2021. Remington finished in third place and received a \$450 scholarship for his speech on "What have you done for

conservation lately?"

Scholarships were provided by Touchstone Energy Cooperatives of South Dakota. The contest is co-sponsored by the South Dakota Department of Agriculture and Natural Resources (DANR), the U.S. Fish & Wildlife Service, and the South Dakota Association of Conservation Districts.

Next year's contest theme is "Rivers and Streams Benefit South Dakota." Scholarships totaling \$2,300 will be awarded for 1st, 2nd, and 3rd place. For more information, contact the Custer Conservation District office or DANR at 605-773-3623. All high school students can participate.



Remington Miklos, third place winner in State Resource Conservation Speech Contest

Scholarship Opportunity

Attention high school seniors! 2022 high school graduates within Custer County are eligible for two **\$500** scholarships from the Custer Conservation District. Applications are available online at custercountysd.com/conservation-district/ and at our office. Applications are due by January 31. Any questions can be directed to our office at 605-673-5680 or email us at custercd@sdconservation.net.



Scholarship available! Apply today!



No-till field in Iowa with corn growing in a hay field. Photo by NRCS.

“The best time to plant a tree was 20 years ago. The second best time is now.” —

Chinese Proverb



No-till Drills for Rent

Are you looking for a no-till drill to rent? Both Fall River and Pennington Conservation Districts have drills available to Custer County residents.

For more information about renting from the Pennington Conservation District, call 605-441-5046; for the Fall River Conservation District, call 605-745-5716 Ext. 121.



15 ft. no-till drill available to rent from Pennington CD.

Black Hills Resource Advisory Committee Grant Awarded

The Black Hills Resource Advisory Committee (RAC) awarded the Custer Conservation District a \$30,000 grant for forest thinning and fuel reduction. The project goal is to reduce the threat of wildfire to private homes, structures, and resources and to restore forest resiliency on National Forest lands. Funding will treat ap-

proximately 60 acres of forest land in the vicinity of the Custer Highlands area adjacent to private property that has or will be treated.

The purpose of the RAC, as defined by the US Forest Service, is to "... represent the individual and collective interests of Custer, Lawrence, and Pennington Counties, functioning under the

Secure Rural Schools and Community Self-Determination Act of 2000 (Public Law 110-343).

The Secure Rural Schools Act authorizes the use of RACs as a mechanism for local community collaboration with federal land managers in reviewing and recommending Title II projects that will benefit resources on federal lands."

Tree Sale

Interested in buying trees for next year? The Fall River and Pennington Conservation Districts have trees for sale. The Fall River order form can be found at <https://www.sdconservation.org/fallrivercd>. Their orders are due by December 31. For Pennington, their order form can be found at <http://penningtonconservation.org/wp-content/uploads/2021/09/Tree-Order-Form.pdf>. They will accept orders until April 1, but supplies may be limited so get your order in as soon as possible.



Left: Conservation District Board members preparing tree seedlings for Arbor Day celebration. Seedlings were given to first grade students at Custer, Hermosa, and Elk Mountain schools. Pictured are (left to right) Tamarah Caster, Paul Nettinga, Oonagh Wood, and Dave Thom. Above: Dave Thom and others planting trees.

Upcoming Arbor Day Poster and Essay Contests

To all 5th and 6th grade students — the annual Arbor Day writing and poster contests will be open again next spring.

The writing contest is open to fifth and sixth grade students from South Dakota. First place award will be \$125 cash plus \$150 to the winner's school. Second place award is \$100 cash and third place is \$75 cash. Deadline for submission is March 25. Entries are limited to 250 words or less. The central theme is "Why we celebrate

Arbor Day in South Dakota, and why it is important to plant and care for trees across the state."

The poster contest is open to South Dakota fifth grade students. Each school can only submit one poster. The top 12 posters from across the state will be featured in the annual South Dakota Arbor Day Poster Contest Calendar. Deadline for submission is March 25. This year's theme is "Trees are Terrific...and Energy Wise!".

First, second, and third place will receive \$125, \$100, \$75 cash, respectfully. Additionally, 1st place entry will also receive \$175 for their teacher to purchase educational supplies.

More information about these contests and additional rules are available at <https://danr.sd.gov/Conservation/Forestry/Education/> or by contacting the Conservation District office at 605-673-5680.



*It is the mission of
the Custer County
Conservation
District to promote
conservation of soil,
water, and natural
resources for residents
and visitors now and
in the future.*

Recent Landowner Workshops

Last April the Custer Conservation District and the South Dakota Family Forests Association partnered to host a landowner workshop at the Elk Mountain School. The workshop was held to offer technical assistance and inform landowners about cost-share funding available to help protect their home and property from fires. Federal, state, and local agency representatives provided information to participants, and a mechanized thinning demonstration was presented.

In March, the Custer Conservation District hosted a meeting at the Fairburn Civic Center for area producers. Participants were provided information about an upcoming grant opportunity (see awarded grant on page 1) and were asked for input on issues/needs that could be addressed if cost-share funds became available.



Dr. John Ball, SDSU Extension Forestry Specialist & South Dakota Department of Agriculture Forest Health Specialist, speaking to workshop participants near Elk Mountain about the Ips pine engraver beetle.

Newsletter — Prefer Email Copy? Address Incorrect??

Did you receive a hard copy of this newsletter in the mail? Would you like to receive it electronically in the future? If so, please share your email address with us. Just send an email to custercd@sdconservation.net with your information.

Also, we are always interested in expanding our audience. Please contact us if we missed you and would like to be included on future newsletter mailings.





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Newsletter of the Custer County Conservation District

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Matthew Walsh - SD DANR-RCF
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The mission of the Custer County Conservation District is to promote conservation of soil, water, and natural resources for residents and visitors now and in the future.

