



# Colorado Conservator

## Colorado Association of Conservation Districts

### Innovation in Action: Horizontal Wells

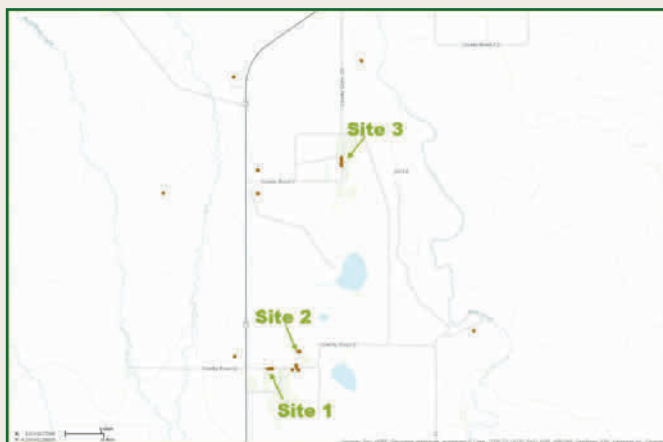
*Written by Rachel Theler, Information provided by Garrett Markus*

If you were to drive north on Highway 71, just a few miles past Ordway, you might look out at the open rangeland and stumble upon a farm in the midst of this open country and assume everything was business as usual, but you'd be wrong. Innovation and efficiency is the name of the game as far as the Markus Family is concerned. With the support of the Box Springs Canal and Reservoir Company (BSCRC), of which the Markus Family owns shares, a grant was secured through the Colorado Water Conservation Board's Water Supply Reserve Account in the amount of \$200,000 for the primary objective of installing three horizontal wells.

While vertical wells are customary in Colorado, they are limited when placed in certain geology. Horse Creek, the creek on which BSCRC holds water rights, is an ephemeral stream, so wells are necessary to sustain irrigation during the drier months. The water table in this area is shallow and the water-producing layer has low transmissivity which makes extracting water into a vertical well difficult and inefficient. Additionally, typical drilling diameters aren't conducive to this geology and the installation would take several months.

The existing vertical wells on the BSCRC area were decreed in batteries of multiple wells and are in ill-repair due to their nearly 100 year age. Something

had to be done, and simply repairing existing vertical wells or installing new ones didn't seem to be the most productive option. The Markuses decided to try something never before tried in Colorado. Thus they began to plan the installation of three horizontal wells to replace the three decreed batteries of existing wells. Horizontal wells would be much more capable in the BSCRC area's geology because (as the name implies) they are installed horizontally along the shale, allowing them to extract water from the alluvium with only one point of withdrawal for an entire bank of wells. Other states have tried this new technology with great success, and it is estimated that production from a horizontal well may be as high as 2-3 times that of the existing vertical wells. They also experience less drawdown during the fall months and have an installation time of only one week per site.



The grant was awarded September of 2015 and work began on the project in January of 2016 with the mobilization of a test rig and site mapping. The site's geotechnical properties, total depth to bedrock, and static water table were investigated by boring holes along the proposed alignments for each location. The second step was the mobilization of a trencher, supplies, and crew which began in September of 2016. DeWind

*Continued on page 2*

### *Continued from page 1*

One Pass Trenching was hired for the project and the crew consisted of three DeWind employees. Installation of the actual well sites commenced October 5th and were completed October 12, 2016.

Site one was the largest and consisted of a 650 foot long horizontal well with a maximum depth of 28 feet and replaced a battery of six wells. It took three days to complete the installation. Sites two and three were 510 feet and 560 feet respectively, and both had a maximum depth of 28 feet. Sites two and three replaced a combined number of two well batteries containing a total of nine wells.

While the actual installation period for the wells was brief, the outcome of this project was a long time coming for the Markus Family. The idea to try something new began to germinate in 2010, and took root following 2012's drought conditions. 2013 brought a long exploratory process to determine if this type of project would even be viable, ending with the installation of the wells this past fall. This next irrigation season will be the first test for these new horizontal wells, but the Markuses are optimistically looking forward to the impact of this endeavor.

If you would like more information about this project, please contact Garrett Markus at [garrett.markus@gmail.com](mailto:garrett.markus@gmail.com).



## Districts and Extension: a Working Partnership

*Written by CJ Mucklow, Western Region Director, Colorado State University Extension*

Colorado's Conservation Districts and CSU Extension have a long history of working together. As a matter of statute, the local Extension Agent is an ex-officio member of the District. Many Extension offices in Colorado are celebrating 100-year anniversary and Conservation Districts are starting 80 years of conservation work.

We have history together!

Have things changed over time? Sure. Today some of our clientele are not traditional farmers and ranchers. These folks are new to rural living and often need the most technical assistance to properly manage and conserve their property. To that end, we have two (soon to be three) agents jointly funded by CSU Extension and the Natural Resources Conservation Service to provide education to small acreage landowners. Often these educational services are provided in conjunction with local Conservation Districts who help in organizing and providing information.

Extension has also partnered with Districts on youth conservation education through Camp Rocky, another great partnership led by the Districts. I personally have worked with Conservation Districts for over 30 years as an agricultural Extension Agent. These projects have included weed management classes,

setting conservation priorities for a given District, enabling cost sharing for weed control, range/conservation tours of private land, small acreage management classes and publications, to name a few.

As the local Extension Agents or Conservation District board members change, it's important that we keep our relationship strong. Not all new Extension Agents or Conservation District's board members know our long history of working together. Don't be afraid to reach out to these new agents or volunteers and let them know we are in this together. Are agents going to make every Conservation District board meeting? No, but we will be there to work cooperatively when we are needed. Let's keep our working history going for the betterment of private land conservation.





# Message from the President

Greetings to all for a new and prosperous year filled with optimism about the future and enhancing change of the organization. This issue of The Conservator is different from the past with a focus on the southeast region of the State. The next issue will do the same for the West Slope, followed by the Northeast, and the last issue of the year will highlight the annual meeting and celebrate statewide accomplishments. A regional approach has let CACD bring in advertisements that normally would not occur with a state publication. Therefore, in this and future issues, I would like readers to view advertisements, such as those placed by conservancy districts, as more of infomercials. This is a way for these organizations to introduce themselves to members and, in turn, The Conservator can function as a means for CACD to introduce itself to these organizations.

CACD and NRCS are currently in the process of negotiating an agreement that would supplement funding for current CACD projects, hosting speakers at watershed association and annual meetings, and obtaining supplemental materials for such meetings. This support would not only improve the quality of meetings but also improve attendance, as well as benefit CACD as a whole. After the agreement is signed, CACD will solicit input from the Watershed Associations on their natural resource issues or topics of concern in order for CACD and NRCS to better address each Watershed's needs. Regardless of this agreement, watershed association concerns are important information that the CACD Board needs to perform its job. So at these meetings please relay your district's wants and needs to your CACD representative.

CACD is currently in the process of hiring a new Executive Director. At this point in time the Executive Committee is narrowing the search, based on resumes, to about six applicants and will start to schedule interviews for later this month. CACD hopes to have an Executive Director in place by mid-April. I am confident that CACD will find a highly qualified, energetic, extremely motivated, innovative individual to fill the position. I would like to thank all of those who have stepped up to help CACD during this period without an executive director, and the patience of the membership regarding me personally trying to fill in.

The new Fund-raising Committee has begun to send out

letters for corporate donors and CACD is encouraged by the response. The goal, besides making up part of current funding shortfalls, is to shift CACD revenue demands away from its membership to sponsorship. We at CACD understand how difficult it is for districts to maintain their own revenue streams. The idea for a regional publication came out of this committee. The Committee is looking at optimizing revenue from projects CACD already undertakes from sources outside membership.

I would like to close by focusing on the areas recently affected by wildfires. CACD is currently monitoring the situation. So far, input from those who have been affected tells us that the response from many organizations has been more than expected. CACD will be following up on this situation, which might mean lobbying for assistance or providing districts information on programs that could help them.

*Sincerely,  
Don McBee, CACD President*

## CACD Donations Through AmazonSmile.com

**CACD has a link at AmazonSmile.com for a .05% donation of your eligible Amazon purchases to be sent to CACD as a charitable contribution. In order to browse or shop at AmazonSmile, customers must first select CACD as their organization to receive the .05% donation on your purchases to CACD by electronic funds transfer.**

*Anyone can support CACD by choosing us as your AmazonSmile.com non-profit organization of choice, at: <https://smile.amazon.com/ch/84-0470063>*



# CACD Legislative Update

By CACD Lobbyist Brett Moore

We are officially entering the Spring Season! The 2017 Colorado Legislative Session kicked off on January 10th, 2017, with the usual pomp and circumstance of a new session including the swearing in of new legislative members and Governor Hickenlooper's State of the State address. The newly elected legislature is made up of 20 new members, 4 returning members that have previously served, 6 House members moving to the Senate, and 70 re-elected to their same chamber.

The start of the session each year is quickly followed by the annual visit to the Stock Show Rodeo where we honor the 2016 CACD Ranchers of the Year (Pappas/Flaharty) and Farmers of the Year (Gardner). CACD board members spend the evening meeting with legislators and leadership from the CSCB, NRCS, and the Colorado Department of Agriculture. We had a dozen legislators join us this year, including Senate President Kevin Grantham (the first rural President of the Senate in over 3 decades!), as well as House and Senate Ag Committee Chairs, Representative Jeni Arndt and Senator Jerry Sonnenberg, respectively.

If past sessions are any indicator, we will see roughly 600 to 650 bills this year. As of March 21st, we have seen 523 bills introduced, 28 of which concern natural resources, water, or other topics that may be of interest to Colorado's conservation districts. We are on pace to track our annual average of 40 to 50 bills in these issue areas, so stay tuned for additional bills! The following link to your bill tracking sheet can be checked throughout 2017 for an updated look at the bills CACD is monitoring this session: <http://www.coloradocapitolwatch.com/bill-analysis/3749/2017/0/>

We also track the powerful Joint Budget Committee (JBC), made up of 6 members of the legislature (3 from House, 3 from Senate)

that builds the annual State Budget. The process begins with a briefing by the JBC staff in December, followed by hearings for the various departments including requests for the annual budget in January. The Conservation Services budget lines in the Department of Agriculture that fund the districts are in place for now, but we will continue to work with the department and the JBC to ensure the general funding is not cut. We will also continue to monitor the severance tax fund situation, which is projected to be non-existent this year due to shortfalls in oil and gas revenues due to low prices over the last 2 years.

CACD also engages on behalf of the districts as a member of the Ag Council, a group of producers who meet regularly throughout the legislative session to discuss topics affecting rural Colorado and the ag economy in our state. The year kicked off on January 19th with the Ag Council Meet and Greet, at which regular meetings were held bi-weekly, including the popular Ag Day at the Capitol on March 22nd.

As your lobbyist, I thank you for the privilege to represent the Colorado Association of Conservation Districts at the State Capitol in Denver, serving at the direction of the CACD Board on behalf of Colorado's 76 conservation districts.

*Brett Moore is the principle of **OnTheBallot Consulting**, and has represented CACD since 2011. He hails from a 5th generation family of farmers and ranchers in Northwest Kansas, but calls Denver home.*

An advertisement for Pawnee Buttes Seed Inc. featuring a scenic background of snow-capped mountains, a large orange sun, and several deer in a grassy field. The text reads: "Pawnee Buttes Seed Inc. More Than a Bag of Seed. More Colorado. Native grass, forb & shrub seed • CRP • Pasture mixes Reclamation consulting • Site-specific recommendations. Call us at 1-800-782-5947 info@pawneebutteseed.com www.pawneebutteseed.com".

**Pawnee Buttes Seed Inc.**

**More Than a Bag of Seed. More Colorado.**

Native grass, forb & shrub seed • CRP • Pasture mixes  
Reclamation consulting • Site-specific recommendations

Call us at 1-800-782-5947  
info@pawneebutteseed.com  
www.pawneebutteseed.com

# SAVE THE DATE

## 2017 CACD 73rd ANNUAL MEETING

November 26 – 29, 2017 | Loveland, CO | Embassy Suites Hotel and Conference Center

Registration will start September 1, 2017 for CACD's 73rd Annual Meeting, which will be held in Loveland at the Embassy Suites Hotel. The dates for this 2017 annual event will start on Monday, November 26th and conclude on Wednesday, November 29th.

We sincerely hope that you will join your fellow Conservation Districts, landowners, and CACD Partners, at the Embassy Hotel in Loveland, in November 2017!



### What We Do

- Protect and enhance water resources
- Conservation Easements
- Water Leasing
- Water Purchase
- Drip Irrigation Workshops
- Roundtable Discussions
- Conservation Easement Tax Credit Task Force
- Super Ditch Program
- Fountain Creek
- Minnequa Lake Project
- Arkansas Valley Conduit CSU-Pueblo Research • Tamarisk Control
- USGS Data Collection Study
- CSU-Monitoring & Modeling Optimal management in Lower Arkansas - River CSU-Corn Following Study
- Kansas v. Colorado Stateline depletion obligations



### Priorities For 2017

- Lease Following - Super Ditch
- Rule 10 Plan
- Fountain Creek
- Larkspur Ditch
- Legislation

### Staff

- Jay Winner - Executive Director
- Bill Hancock - Conservation Program Manager
- Jack Goble, P.E. - District Engineer
- Carla Aragon-Quezada - Office Manager
- Brenda Fillmore - Finance/Water
- Mike Weber - E.I.T.

### Directors

Director; Lynden Gill (Bent County) - Chairman;

Vice Chairman; Director Melissa Esquibel (Pueblo County)

Director; Reeves Brown (Pueblo County);

Director; Leroy Mauch (Prowers County)

Secretary; Director Anthony Nunez (Pueblo County)

Director; Jim Valliant (Crowley County)

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# The State of Agriculture

By Don Brown, Colorado Department of Agriculture



**COLORADO**  
Department of Agriculture

Most Coloradans did not grow up in a rural area and have never been on a farm or ranch, yet the people of Colorado support agriculture's positive contribution to the quality of life in our state.

In a recent survey conducted for the Colorado Department of Agriculture by Colorado State University, 90% of Coloradans feel agriculture is important to their quality of life. Nearly all Coloradans feel that maintaining and protecting agricultural land and water is important (95%).

It has been a tough year for agriculture in Colorado, with prices for beef cattle and milk and major crops like corn, wheat and hay in decline. It costs farmers more to plant and harvest their fields than they can make selling their crops at today's prices. Price levels for many farm products have returned to lows seen in the 1980s, but farmers' costs for tractors, feed and seed, and fuel have increased with inflation.

Yet our Colorado producers continue to provide food that feeds Coloradans and the world. Colorado's agricultural community brings your family more food and fiber choices than ever, from conventionally-produced to natural, organic, grass-fed, and cage-free. All of which are wholesome and necessary to feed a growing population. Whether you shop at a large grocery store or your local farmers market, Colorado's entrepreneurial farmers and ranchers provide a safe and secure food supply. It's this diversity that makes our food production systems the envy of the world.

Cutting into a prime Colorado steak, biting into a Palisade peach, eating a juicy Rocky Ford melon, and enjoying the fire of a Pueblo chile, all accompanied by a Colorado wine or beer - it's all part of the privilege of living in this state and enjoying our local foods.

Whether you know it or not, Colorado agriculture touches everyone in the state.

Agriculture is an important part of our economy, generating more than \$40 billion in economic activity annually and supporting more than 170,000 jobs. Jobs in transportation, retail sales, food sales and restaurants, and tourism are just a few supported by agriculture.

As well as contributing to the economy, agriculture holds a tremendous duty to protect the environment, through stewardship of the land, water and air. Land in farms and ranches provides habitat for wildlife and open space, and, above all, creating wonderful food. Innovative and sustainable farming practices ensure that our state's resources will be wisely managed for generations to come. The majority of Coloradans surveyed felt that agriculture was always or usually environmentally responsible.

Colorado farmers and ranchers, along with the Colorado Department of Agriculture, are dedicated to preserving the heritage of agriculture in our state, as well as providing an abundant and safe food supply to Coloradans and beyond. We were glad to hear that our neighbors around the state support us in our endeavors. Give us a wave when you drive by.

***For more information and to read the complete survey visit [www.coloradoagriculture.com](http://www.coloradoagriculture.com).***



# Colorado NRCS Update

*Submitted by Randy Randall, Acting State Conservationist*



United States Department of Agriculture

**Natural Resources Conservation Service**

Hello Conservation Partners,

It is hard to believe that we are halfway through our Fiscal Year. I wanted to share with you a few updates that you may not always receive. For those of you not aware of it, Clinton Evans, our State Conservationist, has gone on detail to Utah as Acting State Conservationist. Clint reached out to me and asked if I would serve as acting and I gladly accepted. Clint is due to return around the middle of July. In addition to updating you on our acting situation I wanted to provide some bulleted updates:

**AGREEMENT WITH CACD** – We are in the process of developing a multi-year agreement that will address Envirothon, The Conservator, the Annual Meeting, and some Capacity Meetings; the details on the Capacity Meetings are still being developed but our goal is to have this agreement in place early May.

**STAFFING** – We continue to look at ways to enhance our staffing efforts by mimicking our highly successful District Technician Agreement. Our goal is to develop more of these match agreements as an effective means to leverage funds.

**BUDGET** – The State remains on target to be solvent. We are taking actions to prepare for Fiscal Year 18 and be positioned to continue to deliver conservation across the State.

**DROUGHT AND FIRE** – Rest assured that these items are on our radar and we remain poised to help provide conservation measures where opportunities allow.

**PROGRAMS** – Our efforts to get Financial Assistance to the field continue to follow an aggressive timeline. The field staff is working hard to ensure that contracts are developed in a timely fashion in order to allow our producers to move forward with the installation of their/your conservation efforts.

**CULTURAL RESOURCES** – At the direction of Clint

we have taken measures to help alleviate the backlog of Cultural Resource review efforts. Specifically, we now have our full complement of NRCS Cultural Resource staff and we have contracted with private sources to reduce and ultimately eliminate our backlog. As an example, at the beginning of 2016 we had over 400 projects pending review which we have now reduced to less than 80. Our intent going forward is that we continue to maintain our efforts to provide for faster review.

Lastly, I would like to **THANK ALL OF YOU** for your partnership and dedication to conservation. I firmly believe that we are on track to do great things in 2017. I had the chance to speak with some of the new District Managers in their CSCB training last week and I am happy to report that we have some very talented folks coming on board with us. I look forward to providing you with even better news in our next update. "Conservation First."

*Randy Randall, Acting State Conservationist*



**COLORADO  
ENVIROTHON**

**SAVE THE DATE  
2017CO ENVIROTHON**

**April 25-26, 2017  
Arapahoe County Fairgrounds**

# Targeted Forest Health Project

*Submitted by Carol Kuisle-Franta, Custer County CD*

The Custer County Conservation District has partnered with the Natural Resources Conservation Service (NRCS) to bring private landowners the knowledge, resources, and funding necessary to manage natural resource concerns on their private property. This partnership helps address multiple aspects of the forest, such as wildfire hazard reduction, water quality, erosion control, wildlife diversity, and many more.

Over the last two decades in Colorado, our forests have experienced an accelerated rate of change. Insect and disease outbreaks have increased exponentially, as well as the size and intensity of fires. These factors have created dramatic changes in our forest and play an important role in forest ecology. However, humans have disrupted or interfered with the natural processes of forests, often due to a lack of proper management. The cost of controlling wildfires, especially where people and infrastructures are at risk, is exceptionally high, which limits funds available for proactive efforts.

A single landowner may find it cost prohibitive and simply not as effective to try to implement a healthy forest management plan on his/her property, especially if neighboring property owners do nothing to increase their forest's health. Proper forest management can enhance forest resilience to fire, insects, and disease. Using the Environmental Quality Incentives Program (EQIP), provided by the Farm Bill, NRCS helps cover the costs of forest improvement efforts on private land.

Custer County Conservation District is contacting landowners in Custer County that would like to

participate in a Targeted Forest Health Project. The project will thin the number of trees by removing a majority of dead/dying trees, remove ladder fuels, and leave the species that are disease free and best adapted to the site. Excess forest floor debris and slash will also be removed and chipped. Opening up the forest floor allows for improved wildlife forage and creates a more diverse habitat. The thinning of trees and removal of excessive understory vegetation will also help decrease the competition for available water and thereby increase the amount of water available to remaining trees, and thus increase the vigor and resilience of the forest. Furthermore, all of these practices will serve the purpose of decreasing the risk of catastrophic loss due to wildfire.

It is the hope of the District that the project will serve as an impetus to get landowners involved in managing their own forests. The District anticipates that it will have a domino effect on other landowners once they see the aesthetic and ecological results of forest health management. It is imperative that forest health management be practiced by individual landowners, but to be truly effective these practices must be part of a community-wide initiative. The District's end goal is to help landowners become proactive in maintaining forest health rather than reactive to catastrophic events. Please contact the Custer County Conservation District/NRCS office at 719-783-2481 Ext. 100 to learn more about this project.

## Bureau of Land Management Seeks Public Comment on Recently Released Reports

The Bureau of Land Management (BLM) is currently seeking public input through May 5, 2017, on two recently released reports: The Preliminary Alternatives Report and Draft Bases for Analyses for the Eastern Colorado Resource Management Plan (ECRMP).

These reports provide a first look at the ECRMP draft alternatives for managing the Eastern Colorado planning area and describe how the BLM plans to analyze the effects of these alternatives.

The BLM is also seeking public input on the Preliminary Evaluation of Potential ACECs and Draft Wild & Scenic River Suitability Report.

*The project can be viewed here: <http://on.doi.gov/1HVULcA>.*



# Federal Lands are for Multiple-Use

By Les Owen, Conservation Services Division Director

Opinions about federal land management vary as widely and wildly as the weather in Colorado. Colorado is roughly 36% federal lands, but the footprint of impact and influence for federal land management is much larger. Use on many parcels of non-federal land is directly influenced and in some cases dictated by a federal land management agency. In today's society there are special interest groups that represent the entire gamut of opinions that all work to influence the way federal lands are managed.

It's a good thing that Congress provided specific direction on how federal lands were to be managed. The Multiple-Use and Sustained-Yield Act of 1960 directs that federal lands shall be administered for outdoor recreation, range, timber, watershed, and wildlife and fish purposes to achieve a high-level of output of the various renewable resources without impairment of the productivity of the land to meet the present and future needs of the American people.

To further codify this direction, the Federal Land Policy and Management Act of 1976 (FLPMA) defined the principal or major uses of federal lands to include, and be limited to, domestic livestock grazing, fish and wildlife development and utilization, mineral exploration and production, rights-of-way, outdoor recreation, and timber production. FLPMA established and defined the Bureau of Land Management's multiple-use mandate

to serve present and future generations.

The National Forest Management Act of 1976 (NFMA) directs the Forest Service to provide for multiple-use and sustained-yield of the products and services obtained from national forests in accordance with the Multiple-Use Sustained-Yield Act, and in particular, to include coordination of outdoor recreation, range, timber, watershed, wildlife and fish, and wilderness. Coordinate is defined as equal in rank, quality, or significance. Through NFMA it is clear Congress intended that the Forest Service consider each of the listed multiple uses equally.

In a state such as Colorado, it is important to keep the mandates of these laws at the forefront as we work with our partners in the federal land management agencies to manage our natural resources.



## Branson-Trinchera Conservation District Assistance Program

By Harold Unwin, Branson-Trinchera CD

The Branson-Trinchera Conservation District is located in the eastern half of Las Animas County, which has a total of 1,334,533 acres, consisting of 1,119,904 of rangeland, 2,700 of dryland farming, 134,466 of federal land (Comanche National Grassland), and 105,163 of state land. There are 120 cooperators within the district, as well as some absentee owners who lease their land to the local cooperators.

The District has strived to help its landowners and cooperators to assist with and improve conservation practices. In order to achieve its goals, the District has applied for and received matching grant funds over the past seven years. The District has seen much interest in its grant-funded cost-share program. Since the program began 238 applicants have applied for funding and 125 have been approved. Funds have contributed to the installation of 56 miles of boundary fences, 25 miles of water pipelines, 40 new or refurbished water tanks, and ten solar pump systems. These practices have improved grazing for livestock and wildlife on 390,000 acres.



District landowners and cooperators like this program because it requires less paperwork and "red tape" than similar federal programs. For example, a landowner fills out a cost-share program application which is then scored and ranked by the District. Landowners pay half of their project costs, excluding labor, and the grant pays the other half. The District ensures that it funds multiple landowners by not allowing applicants to receive funding for two consecutive years.

The Branson-Trinchera Conservation District knows that the matching grant program through the Colorado State Conservation Board may not be available for a few years, but the

District plans on re-applying when the program becomes available again. The District's main goal is to help landowners and cooperators with their agricultural efforts, as well as encourage younger generations with future farming and ranching endeavors.

# Colorado Envirothon *By Brenda Anderson, Center and Rio Grande CDs*

Colorado Envirothon is in its 5th year! Envirothon was hosted initially by West Greeley Conservation District in partnership with CACD and at that time the competition was limited to FFA students. In 2014 CACD took on the fiscal and organizational responsibility for the Envirothon competition because the steering committee felt it was vital to make it all inclusive and available to as many students as possible. Envirothon provides students with the opportunity to develop various skills, including leadership, problem solving and STEM (Science, Technology, Engineering and Math) aspects, all while exposing students to issues that could provide scholarship opportunities and impact their career choices.

Envirothon is a national and international competition open to all high school students. The competitions are held on a state level, with winning teams advancing to the national competition. Teams are tested in five topic areas: soil and land use, aquatic ecology, forestry, wildlife and a current environmental issue that changes every year. Competitions are organized around stations that include testing, hands-on identification, and problem solving relevant to each topic. For example, and specific to the current environmental topic, each team is provided materials to prepare visual aids for an oral presentation critiqued by a panel of judges. Teams are composed of five students and sponsored by a school, home school group, agricultural organization, scouts or another community service group. Colorado Envirothon is held in the spring so teams have most of a school year to prepare.

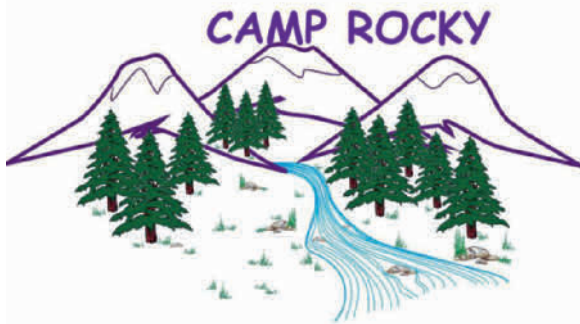
Eleven conservation districts currently support the Colorado Envirothon: Bookcliff, Center, Douglas County, La Plata, Mosca-



## COLORADO ENVIROTHON

Hooper, Mount Sopris, Rio Grande, South Side, West Arapahoe, West Greeley and Yuma County, and. These districts have assisted at the competitions, created the brochure, contributed as committee members, secured the venue for the 2017 competition and made cash donations. The newest supporter is La Plata CD which plans on organizing the first regional competition in the fall. Since Envirothon was started by conservation districts the ultimate goal is to increase the number of districts and their schools that participate in Envirothon. Other sponsors include the Colorado Association of Conservation Districts, Natural Resources Conservation Service, Warner Ranch/Robert L. Warner, Colorado State Conservation Board, National Conservation Foundation, Smithfield Foods – Kim Norris and Julie McCalab, and Colorado Association of Conservation Districts Employee Association.

*If you are interested in sponsoring or volunteering at the 2017 Envirothon competition, please contact Anthony Lobato, Chair, at 719.754.3235 or [datalob@gmail.com](mailto:datalob@gmail.com) or Brenda Anderson, Co-Chair, at 719.754.3400 x104 or [ColoradoEnvirothon@gmail.com](mailto:ColoradoEnvirothon@gmail.com). For more information about Envirothon, including its history, visit: <http://www.coloenvirothon.com/>.*



Camp Rocky is an educational, week-long residential camp for 14 through 19 year olds who enjoy the outdoors and are interested in natural resources!

Camp Rocky is located outside of Divide, Colorado, and its professional staff helps participants learn about their environment through hands-on experiences. Students work in teams, making new friends from across Colorado. Each year, new and returning students choose one of the following resource fields for their area of focus:

- Rangeland Science
- Forestry Management
- Soil and Water Science
- Fish and Wildlife Management

## SAVE THE DATE

### 2017 CAMP ROCKY July 9 – 15, 2017 | Divide, CO

At the end of the week, students will use their group learning plan to complete a management project. Additional camper activities include volleyball games, hiking, campfires, group challenges, nightly natural resource presentations, and a talent show!

Contact your local conservation district for scholarship opportunities.

Camp Rocky is sponsored by the Colorado Association of Conservation Districts with the help of other natural resource conservation partners. **To learn more visit:** <http://www.coloradoacd.org/camp-rocky.html>

# ACT NOW

TO IRRIGATE NEXT YEAR



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## Lower-Ark Takes on Water Quality

Lower Arkansas Valley Water Conservancy District (Lower-Ark) is taking on a water quality project in the Arkansas River Basin, in an effort to get in front of a future Environmental Protective Agency (EPA) regulation. The driving force behind the project is Regulation #85, enforced by the EPA, which states “after May 31, 2022, the Commission may consider adopting, in consultation with the commissioner of agriculture, control regulations specific to agriculture and sylvicultural practices” (Regulation #85 page 8). Lower-Ark wants to be proactive and show improvements to water quality through best management practices (BMP’s) that can be used in the field.

The basis for the project is to use virgin ground (ground that currently uses traditional flood irrigation methods dating back to the early 1940’s) to determine a baseline for what the water quality looks like currently. The Fort Lyon Canal currently occupies 2,000 acres of such virgin ground that will be ideal for this pilot project. In order to develop a baseline, measurements of pollutants in the water will be taken prior to field application, on- field location, post- field application in the form of runoff and deep percolation (water underground), and prior to Arkansas River return through a drainage ditch. These measurements will be taken directly from the laterals, in groundwater monitoring wells, and at the drainage ditch.

After determining the baseline of what pollutants are currently in the water, then BMP’s will be implemented by the farmers

and Lower-Ark to show a change in water quality at the river. BMP’s include adding sprinklers, lining head-stabilization ponds, lining laterals, or some other form not yet discovered. Throughout each BMP methodology, measurements will continually be taken to signify any changes. Using the most effective BMP, Lower-Ark will be able to set a standard for what helps in the improvement of water quality.

Upon finding the most effective BMP, Colorado farmers will have a means to help improve water quality and stay in front of Regulation #85. Throughout this whole process, the farmers will be in direct contact with Lower-Ark for progress updates on the results to keep a healthy, working relationship. The organizations also involved on the project include the Colorado Department of Agriculture and Colorado Department of Public Health and Environment (CDPHE).

Ultimately, the goal of Lower-Ark is to prepare for the #85 regulation before it hits our valley and to do this, Lower-Ark will determine a baseline of where the water quality is right now. After finding that baseline, an effective best management practice will be established to put better farming techniques in place to help agriculture in the Arkansas Valley thrive.



SOUTHEASTERN COLORADO

## Water Conservancy District

"Your investment in water"

## Proudly serving generations



South Marina at Lake Pueblo, a feature of the Fryingpan-Arkansas Project



### Water for farms

Each year, the Fryingpan-Arkansas Project allocates thousands of acre-feet of water to farms in the Arkansas Valley.



### Water for cities

The Southeastern District is working hard to make the Arkansas Valley Conduit a reality for rural communities.



### Hydropower

The District plans to open a hydroelectric power plant at Pueblo Dam in 2018. Revenue will help pay for water projects

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## El Paso County & the Double El CD Living Snow Fence Program Celebrates 20 Years of Partnership

By Cheryl Churchwell, Double El CD

Double El Conservation District and El Paso County have jointly been installing living snow fences on El Paso county roads for 20 years. The Colorado Living Snow Fence Program was begun in 1982 under the leadership of Dr. Dale Shaw, retired forester of the Colorado State Forest Service. The ultimate goals of the program are improved traffic safety, benefits to taxpayers with decreased cost of snow removal on public roads, and decreased long term cost associated with slatted snow fence maintenance. The longevity of tree planting is one of the most valuable attributes of a living snow fence. Trees will live for decades, while a four-foot wood-slatted snow fence lasts only five to seven years. Additional benefits are the creation of wildlife habitat and improved aesthetics.

The El Paso County Department of Transportation has actively supported the Living Snow Fence Program since 1997. Thirty-nine planting projects have been installed. We estimate a savings of three to four hours of snow removal and clean up per snow event in areas that have living snow fences. It is estimated that over \$1,200 per storm event is saved on traffic control, safety precautions and all snow removal efforts.

The first project was installed on Judge Orr Road in cooperation with landowner Robert Wilson. In the past 20 years, approximately 44,800 feet of county roads have been protected by living snow fence projects that included 11,300 rocky mountain junipers, 91,000 feet of weed barrier fabric and 98,500 feet of four-strand barbed wire fence.



# San Luis Valley Soil Health Regeneration Project

By Kelley Baily, Mosca-Hooper CD

In June of 2016, Mosca-Hooper Conservation District and partner San Luis Valley (SLV) Local Foods Coalition were awarded a \$40K grant to use over the following year.

The purpose of the SLV Soil Health Regeneration Project is to bolster conservation and restoration efforts in the San Luis Valley through local land-owner soil-health education, technical assistance, and soil lab analysis. The Project represents a new partnership of the Mosca-Hooper Conservation District (MHCD) and the San Luis Valley Local Foods Coalition (LFC). The partners are educating both producers and consumers about the importance of soil health and are marketing the sustainable soil-health food production methods all the way through to the end consumer.

MHCD identifies farmers within the conservation district who are actively practicing soil health principles and interested in utilizing soil health branding in their marketing efforts. Farmers have the lab costs for soil health testing covered (up to \$150 per field), and MHCD staff does the analysis of test results and works with soil health specialists to propose mitigating activities to improve soil health. The various data is made available to the farmer, the Valley Roots Food Hub, and the end consumer of the food produced with these practices using a branding system.

The LFC identifies farmers who use or would like to use soil health methods and refers them to the MHCD. They also

market the farmers' sustainably-produced foods as a superior product and an opportunity for consumers to vote for the environment with their food dollars. Other outreach methods are also employed by MHCD and LFC to promote these products.

During the grant cycle, MHCD performed a total of 49 soil samples and garnered interest from many different stakeholder groups throughout the district. The Valley Roots Food Hub was able to brand 14 vendors in its system as participating in soil health practices, three of which participated in the soil testing with MHCD.

The soil test cost-share through Mosca-Hooper Conservation District has provided valuable soil information for 12 producers covering 10,491 acres. They can use this information to make plans to effectively manage the health of their soils for improved conservation efforts, crop quality, and bottom lines. MHCD's primary objective of cost-sharing soil samples is complete. The objective of educating producers about the importance of soil health and how it affects their bottom lines, conservation efforts, and crop quality are on-going. MHCD is following up with participants to see what actions the tests motivated them to take. Once per year over three years after that, we will follow up to discover and document the impacts of those actions.

Due to the popularity and success of this program, Mosca-Hooper Conservation District and the San Luis Valley Local Foods Coalition have reapplied for these same grant funds for the May 2016-May 2018 grant cycle. ***If you would like more information about this project or MHCD, please contact Patrick O'Neill, MHCD President, at 719-588-0836.***



# NACD Update

By Gary Moyer

The Colorado Association of Conservation Districts (CACD) hosted the National Association of Conservation Districts (NACD) Annual Meeting January 29th through February 1st, 2017. Over 800 people were in Denver for its 71st Annual Meeting. This year's meeting featured a long list of VIP speakers. In Monday's general session alone, attendees heard from Colorado Governor John Hickenlooper, Agriculture Commissioner Don Brown, and Olympian Jenny Simpson. Colorado's own Brian Almar, with the Barn Network, provided live broadcast of the national meeting.

CACD's executive director, Sharon Pattee, board member Gary Moyer, and Colorado's NACD board member, Bob Warner, were actively engaged in the planning and implementation of the meeting. These three individuals were intimately involved in organizing the water panel discussion that focused on western water laws. The panel included: Colorado State Senator Jerry Sonnenberg; Chris Treese, the Manager of External Affairs for the Colorado River Water Conservation District; Jim Ogsbury, the Executive Director of the Western Governors Association; and Sam Walker, the global Chief Legal and Corporate Affairs Officer for Molson Coors. The discussion was moderated by Tracee Bentley, Executive Director of the Colorado Petroleum Council.

They also played a key role in organizing the tour for the NACD Annual Meeting that focused on Colorado's role as a headwater state. Two tour buses transported a geographically diverse group of nearly 100 people to the top of Berthoud Pass. This showed the crowd that the 12 foot deep snow pack would melt and provide Colorado and several downstream compact states water for the year. The tour also featured speakers highlighting the basics of Colorado water law, the compact requirements with downstream states, the trans-mountain diversions in Colorado, and the effects of forest health on water quality.

CACD conducted the "Draw Down" raffle, on behalf of NACD, with Gary Moyer obtaining a gaming manager license. With much effort by executive director Sharon Pattee, CACD was able to obtain a Colorado raffle license to be able to hold this event. This effort resulted in a very successful raffle, with ticket sales of approximately \$5,000 during the live auction fundraising event.

White River and Douglas Creek Conservation District staff helped to facilitate events focused on the excess "wild" horse issues in the west. The movie Unbranded was presented including a moderated discussion with movie producer and



*From left to right: Gary Moyer, Sharon Pattee and Bob Warner greet Lee McDaniel at the NACD Annual Conference in Denver*

BLM Wild Horse and Burro Advisory Board Member, Ben Masters, Acting National BLM Director, Kristin Bail, and Nevada Association of Conservation Districts' President, Jake Tibbitts. District staff fielded many questions of the attendees while manning the National Horse and Burro Rangeland Management Coalition's booth in the exhibit hall.

Colorado's own Bob Warner made all of Colorado's conservation districts proud when it was announced that he was the recipient of the National Distinguished Service Award at the appreciation banquet on the final night of the 2017 NACD Annual Meeting. A big congratulations to Bob Warner! Additional CACD board members in attendance were Gary Thrash, Anthony Lobato, Charlie Carnahan and Scott Jones, as well as many Colorado conservation district employees and supervisors.

## CACD Seeking Board Supervisors

Are you passionate about conservation? Do you currently serve or have you served previously on the board of your local conservation district? Do you live within the Upper Arkansas or Lower South Platte Watersheds?

CACD is currently looking to fill the Upper Arkansas and Lower South Platte vacancies on its board of directors. If you are interested in representing your watershed regarding statewide issues, or would like to learn more, please contact Don McBee at 719-688-2122.

# Horizon of Change

*Submitted by Cindy Lair, Program Manager, Colorado State Conservation Board*

Heraclitus, a Greek philosopher, had a lot to say about change. If you recall, he's the guy who taught us, "The only thing that is constant is change." Sometimes we talk about wishing things would get back to normal...but what really is normal? As we bid a warm farewell to the Colorado Association of Conservation District's (CACD's) immediate past Executive Director, Sharon Pattee, it causes me to reflect on the last few years of opportunities and accomplishments in our conservation partnership. During Sharon's tenure as Executive Director we saw a lot of leadership changes take place: a new Commissioner of Agriculture, a new State Conservationist, a new Conservation Services Division Director, lots of new faces for the different conservation districts, and now there will be a new CACD Executive Director.

Times like these should make us pause and appreciate how far we've come. It should also encourage us to reimagine what and where we want to be in the future. As people come and go in any organization it plows new ground for a different crop. CACD is YOUR organization. What do you want it to be doing for your conservation district, differently or the same? How long has it been since you communicated with your CACD Watershed Director to tell him/her your needs or to commend him/her for what CACD is doing well?

Whether it is our personal or professional worlds, we often become complacent and take people and things for granted. Did your conservation district support its association this year? What if CACD went away? Who would be there to

speak on behalf of locally-led conservation in Colorado and nationally? As I look down the road and consider a new Farm Bill on the horizon and observe the likelihood for state budget shortages, as services paid with federal funds potentially become each state's responsibility, there is a lot of conservation funding hanging in the balance.

CACD needs every conservation district at the table as a voting member. Yes, times are changing. We don't know what changes lie ahead of us for funding or policy. A strong, visionary, service-oriented association will be needed to chart the course of that future. I hope your board of supervisors will come forward and help CACD to be the positive agent for change through your constructive input and SUPPORT. I do not wish this simply for the sake of sustaining CACD. I wish this for your conservation district and the 75 others that CACD serves.

CACD is not the same association that it was 10 or 20 years ago and neither are we the same people we once were. CACD changes every year and will continue to change. As Heraclitus further opined, "No man ever steps in the same river twice, for it's not the same river and he's not the same man."



## CACD Thanks the Sponsors of our 2016 Annual Meeting

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*CACD would like to thank those districts that have sent in 100% of the annual dues for 2016! (In order of receipt)*

Center CD  
Yuma County CD  
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Anthony Lobato, Vice President  
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Gary Moyer, Director  
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