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Hearing on the High Plains:
Combating Drought with Innovation

Hearing of Subcommittee on Conservation,
Climate, Forestry, and Natural Resources

United State Senate
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Chairman Bennet, Ranking Member Marshall, members of the subcommittee, and staff. Thank you for the opportunity to speak with you today concerning the issues surrounding the efforts minimizing the impact of drought on producing food and fiber on the high plains of Colorado and Kansas.

When reviewing the list of panelists who have been charged with addressing USDA drought programs. I believe my role is to represent the producers who live on the High Plains that have utilized and benefitted from the various programs provided through the Farm Service Agency (FSA) and the National Resource Conservation Service (NRCS).

It seems appropriate to share a bit of my background and my families' background in order to provide you with some insight as to how the viewpoints I will express here today were formed. These viewpoints are based on my accumulated experiences and the shared experiences of family members who came before me. My great grandfather Andrew Brown homesteaded near Woodston, KS, in 1874. A couple of hours drive straight east of here and my grandfather Albert Brown homesteaded near Yuma, CO. A town located approximately 80 miles northwest of Burlington, CO. Both homesteads are located on the true High Plains.

I am a third generation Yuma County Colorado farmer and rancher and I have lived on the High Plains my entire life. Our family still owns and operates the 1911 homestead of Albert and Thelma Brown. In order to remain economically viable my spouse and I have expanded the original 320-acre allotment to thousands of acres and we have been joined by our children on the farm and ranch. The irrigated portion of our operation, which relies on the Ogallala Aquifer, focuses on crops such as corn, wheat, pinto beans and rye for a cover crop. The farm and ranch also includes dryland crops such as wheat, corn, grain sorghum, and native grass pastures which provide summer grazing for several thousand head of cattle. My parents were very early adopters of Coloradan Frank Zybach's circular sprinkler technology and they had one of the very first circular sprinklers in Yuma County.

My remarks today will focus on the fact "the more things change, the more they stay the

same". This proverb appears very appropriate when one views the early recorded history of the High Plains Region and the topic of today's field hearing.

As the arid high plains were settled by homesteaders in the late 1800s and early 1900s the push westward from central Kansas into Colorado was forged by surges forward and retreat. Promotional brochures during the 1880s assured the settlers the plow would bring rain and early on the prophecy appeared to be true. Across large portions of the high plains the drought resistant native sod was plowed in order to plant dry land corn and wheat but then the higher-than-normal precipitation rates returned to normal or below normal and the region plunged into drought conditions, with crops failing the settlers were driven back east where rainfall was more abundant. Many farmers who remained succeeded only because they were located in the Platte and Arkansas River Valleys where they could irrigate their crops.¹

Kit Carson County, for example, lost 36 percent of its population between 1890 and 1900, while the population of Kiowa County dropped from 1,243 to 701 inhabitants.² Kit Carson County is the home of Burlington, Colorado the very town this hearing is being held in. You will note in the aforementioned paragraphs two fundamental and undeniable facts were presented. Dry land farming is completely dependent on rainfall and those farmers and communities who have some form of irrigation fare much better in times of drought.

Even in the 1880s it was quite apparent that some form of supplemental water supply for the crops was extremely important in order for a producer to survive long enough for the rainfall to return.

Then innovation and good luck crossed paths on the High Plains. The turbine pump was refined, the circular sprinkler was invented and much of the High Plains happened to be perched over the Ogallala Aquifer. Various states took varying approaches to permitting and allowing producers to access the aquifer but for today's discussion I will focus on what Colorado recognizes as the Northern High Plains Basin located primarily in the Republican River Basin which drains into Kansas and Nebraska.

Colorado Portion of the Republican River Basin:

The residents of the Republican River Basin (RRB) in Colorado, Kansas and Nebraska suffered from a devastating flood in 1935. In order to acquire federal funds to provide flood control in the basin the federal government required a three-state agreement spelling out the amount of acre feet of water each had to provide to the downriver states. The Republican River Compact (RRC) was negotiated, approved, signed by Colorado, Kansas and Nebraska on December 31, 1942, and approved by Congress, thereby making it federal law. Utilizing federal money seven flood-control reservoirs were built by the Army Corp of Engineers as a result of the RRC including Bonny Reservoir in Colorado.

After the advent of the circular sprinkler a dramatic expansion of irrigated acreage occurred in the RRB leading to altered flows into Harlan County Lake which is located near the Nebraska

¹ <http://coloradoencyclopedia.org/article/colorados-great-plains>

² <http://coloradoencyclopedia.org/article/colorados-great-plains>

and Kansas borders. Kansas felt as though they had no choice but to remedy the flow issue by pursuing legal action through the courts. Initially this action involved only Nebraska but subsequently in 1998 Nebraska brought Colorado, as the headwaters state, into the fray.

This legal action was filed in the United States Supreme Court and the court appointed Special Master Vincent L. McKusick to preside over the matter. The States negotiated and finally agreed to their obligations per a Final Settlement Stipulation. The States agreed that all claims against each other relating to the RRC occurring before December 15, 2002 would be waived, and dismissed with prejudice. Judge McKusick filed his decision, which stated that per a complex groundwater model agreed upon by the three states the individual states would be required to annually provide a minimum number of acre feet of water for each state's portion of the basin including sub basins. The Final Settlement Stipulation was signed on December 15, 2002.

Compact compliance immediately became a front and center issue for those located in Colorado's portion of the RRB and a multiple prong approach was taken in order to meet the requirements of the Final Settlement Stipulation. First the Republican River Water Conservation District was created by the Colorado General Assembly in 2004 to assure local involvement in the State's efforts to comply with the Republican River Compact between the three states. Early on the RRWCD recognized that in order to fund the measures necessary to achieve compliance the district would have to charge the basin users a fee. In the last twenty years the users have provided approximately one hundred and twenty million dollars of their own money via fees in an effort to comply with the compact.



In 2016 the three states met as the Republican River Compact Administration (RRCA) and agreed to allow Colorado 100% credit for Compact Compliance Pipeline (CCP) which pipes water directly from the Ogallala Aquifer located in the sand hills north of Wray, Co and releases it into the Republican River at the Nebraska state line. The RRCA also agreed that since the CCP did not provide any wet water from the South Fork sub-basin to Kansas, Kansas would require Colorado to remove 25,000 acres from irrigation in the South Fork sub-basin by December 31, 2027. Due to delayed passage of the farm bill the RRCA extended the deadline to December 31, 2029.

The Tools of Compliance:



Numerous projects have been undertaken including building a sixty-million-dollar Compact Compliance Pipeline which pumps water directly from the Ogallala Aquifer located in the sand hills north of Wray, Co and dumps it into the Republican River at the Nebraska state line. Other tools include purchasing groundwater rights and surface water rights from individuals as well as leasing surface water rights from the Yuma County Water Authority. The surface water is allowed to flow unimpeded down the river assisting in compliance.

However, probably the surest method of achieving compliance according to the structure of the complex groundwater model is the retirement of irrigated acres in the Colorado portion of the basin. In order to assist producers in withstanding the negative financial impact of retiring their irrigated acres the RRWCD has incorporated several programs, a smorgasbord of choices if you will, utilizing RRWCD dollars as well as USDA dollars. Typically these programs consist of a blend of RRWCD and USDA funds.

Early on the RRWCD pursued a Conservation Reserve Enhancement Program (CREP) agreement with the USDA-FSA. Once approved, the CREP program was very successful in retiring close to 30,000 acres of groundwater and surface irrigated land. This CREP agreement provides for complete relinquishment of the irrigation well permit or surface water right and planting the surface to native grass for a period of fifteen years.



A couple years later, the RRWCD was also successful in forming an agreement with the USDA-NRCS in offering the Environmental Quality Incentives Program (EQIP). This program was also beneficial to the RRWCD, but unreliable and inadequate funding has made this program difficult to utilize on a scale that maximizes its potential. Secondly, the EQIP requires a far larger amount of cost-share from the RRWCD and the RRWCD has had to spend millions of user's fees to supplement the per acre rate offered by NRCS to enhance participation by well owners in the District.

FSA CP100 – Dryland Farmable CREP Provisions

For the past several years I have been actively involved in asking USDA to create a Dryland Farmable Conservation Reserve Enhancement Program (DFCREP) in order to provide additional encouragement for farmers to retire acres from irrigation. In fact as the Colorado Commissioner of Agriculture³ I collaborated with the Kansas Secretary of Agriculture in drafting language for the 2018 Farm Bill⁴ which allows dryland farming on qualifying CREP acres. Thanks to Senator Bennet of Colorado's leadership in championing these provisions the 2018 Farm bill left the ultimate decision for implementation in the hands of the Secretary. Secretary Vilsack recognized the value of a DFCREP and FSA created CP100 under the auspices of the Colorado RRCREP. The intent of CP100 is to allow farmers who own productive high quality soils to permanently retire the irrigation wells but continue to dryland farm the properties as they had been prior to irrigation. Farmers who have younger family members wanting to return to production agriculture need farmable acres and the fifteen year non-farmable retirement period eliminates

³ Colorado Commissioner of Agriculture – 2015/2019 - Governor John Hickenlooper

⁴ Public Law 115-334-12/20/2018-132Stat. 4534 Sec. 2022. Conservation Reserve Enhancement Program

a generation of young people. Per the requirements of the conventional CREP provisions within the rules and regulations of CP100 highly erodible soils must be planted to native grass. On May 8, 2023 the USDA formally announced that producers could enroll eligible land in “CP100, Annual Crop Production, Non-Irrigated.”⁵ As to this date June 26, 2024, over one year later, the local Colorado FSA offices have received zero applications. In the spring of 2023 during CP100 negotiations with FSA staff we pointed out the barriers we believed existed in their rules and regulations. These very concerns were expressed as early as May 6, 2022 by Mike Sullivan, Deputy State Engineer, Deputy Director of the Colorado Division of Water Resources, in a comment period email⁶ to FSA.

Complete lack of interest by the producers has confirmed our suspicions and in order to remove some of these barriers it is quite apparent the introduction of S. 1224 in the 118th Congress – 1st Session on April 20, 2023 – Titled “Conservation Reserve Enhancement Program Improvement Act of 2023” by Senator Bennet and for Senators Marshall, Moran and Hickenlooper is necessary. In particular, S.1224 will remedy the compensation hurdles which exist in the current CP100. CP100 is an essential component of RRWCD’s compliance toolbox in particular as it pertains to the South Fork sub-basin deadline of December 31, 2029. Here we are one year closer to the deadline with no prospective participants for CP100 whose requirements are viewed as being too rigorous.

When discussing the requirements of CP 100 with producers it quickly becomes clear not only do they harbor concerns about the lack of appropriate financial compensation but they struggle with the stiff programmatic requirements.

- They feel requiring a non-income producing cover crop in the first year rather than proceeding with dryland operations is unreasonable. Their experience tells them the residue provided by the prior year's irrigated crop normally would provide ample amounts of soil protecting residue and any residual moisture from the prior year’s irrigation would assist in growing an income producing crop.
- According to the CP100 Conservation Planning Requirements “Participants may be permitted, as determined by NRCS, to apply up to ½ acre foot of water the first year of the CRP-1 to ensure establishment of acres enrolled in CP 33.”⁷ Producers feel as though this is an expensive and wasteful means of attempting to establish a cover crop for native grass seeding on 6.5 acres in a 130 acre circle, effectively wasting almost 95.5% of the 65 acre-feet of the water applied when in fact they believe the objective of the CP100 is to conserve the Ogallala Aquifer.

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<https://www.fsa.usda.gov/news-room/news-releases/2023/usda-colorado-introduce-additional-conservation-practice-to-address-regional-drought-concerns>

⁶ May 6,, 2022 email from Mike Sullivan Deputy State Engineer, CDWR to SM.FSA.CREP@usda.gov

⁷ Agriculture Resource Conservation Program 2-CRP (Revision 6) 5-08-23 2-CRP (Rev. 6) CO Amend. 9 CO Page 276.5

- Producers view it as an additional financial disincentive requiring non-income producing cover crops in a rigid forced rotation in as many as 30% of the 14-15 contract years. Many feel using proven cropping practices to meet the objectives of reducing soil erosion and improving soil health by allowing the producer to determine when a cover crop should be incorporated would be more appropriate.
- Updating the Conservation Reserve Payment limitation which was established in 1985 at fifty thousand dollars is necessary as some producers located in the South Fork Sub Basin are willing to offer several hundred additional irrigated acres but they reach the payment cap at 125 to 130 CREP acres due to this forty year old non-inflationary adjusted requirement. The cap was initially designed for dryland acres which have a significantly lower per acre rental value when compared to the per acre rental value of irrigated acres.

Conservation Reserve Program

Intermittent drought has been a fixture of the High Plains since written recorded history and thanks to innovation and modern farming methods, coupled with technology; the region remains a viable source of food and fiber for our nation and the world. It seems to me that USDA's role is to smooth out the bumps when the region is experiencing one of its recurring dry periods. Secondly, USDA has and can continue to assist producers removing highly erodible soils from production with programs such as the Conservation Reserve Program (CRP). It is a little known fact the original CRP occurred during the mid-1950s when farm commodity surpluses were increasing and net farm income was declining. Congress and the administration agreed on a voluntary land retirement through acreage rental payments to farmers. The Soil Bank (Title I of the Agricultural Act of 1956) had two components, the Acreage Reserve Program (ARP) which was designed for the immediate reduction of crop production and the CRP which sought an enduring reduction in cropland acreage. The 1950s version of CRP fulfilled its conservation objectives through retiring erodible land--particularly where erodibility coincided with low yielding cropland.

The reintroduction of the CRP occurred in 1985 under very similar circumstances as the 1950s. The 1985 version of CRP provided for adequate rental payments and was designed to enroll highly erodible land. As 40 years have gone by any measure it has morphed into a wildlife program where quite often grass species which were approved in the inception of the program are required to be destroyed and replaced with what is perceived to be a more desirable species for wildlife. In the arid High Plains region this approach is inherently quite risky because if one happens to attempt to reestablish the NRCS desired grass cover during a drought cycle failure of the new seeding is assured. Leading to eroding soil, intense weed pressure, and wasted cost share funds which would have served better to have been spent elsewhere. On a particular 320 acre parcel that we enrolled in 1989, every ten years we have been required to replace the original approved grasses with very limited success. The USDA Conservation Reserve Program must recognize the tenuous nature of establishing grass cover in the semi-arid High Plains and should accept a well established grass of any species that met their original specifications.

Unlike the original CRP rental rates which were primarily based on erodibility indexes, current CRP rental rates are largely based on soil productivity. This financial compensation structure leads to enrollment of the more productive soils and provides little or no incentive for those who

have poorer soils to enroll. In particular instances in Prowers County, Colorado the rental rates have declined from nearly fifty dollars per acre in the 1990s to as low as thirteen dollars per acre for certain soil types in 2022. This situation should be remedied by shifting one's philosophy back to the original 1950's purpose of retiring erodible land, particularly where erodibility coincides with low yielding cropland.

Additional Comments

When participating in NRCS's EQIP and Conservation Stewardship Program the agency is allowed to conduct the cultural resources portion of the environmental evaluation. This regulation which is located in Section 106 at 36 CFR 800 is an extensive process which involves the following four steps: 1) initiating consultation, 2) identifying historic properties, 3) assessing adverse effects, and 4) resolving adverse effects. However, FSA staff have not attended the training sessions which allow them to earn the certificate granting the authority to conduct the cultural resources evaluation. This evaluation is a critical part of a producer being accepted into various FSA programs and when applying to participate in certain FSA programs the producer is required to hire an individual who possesses the proper certificate. This is a difficult process at best, particularly in isolated rural areas, and a process which the applicant is completely unfamiliar with. It seems it would be much simpler for the FSA to contract with NRCS to conduct the cultural evaluations thereby greatly expediting the process and removing the financial burden from the producer.

No two years are ever alike on the High Plains and I would encourage the subcommittee to continue to focus on drought related research, in particular as it relates to developing increased drought tolerance in existing and new crops. This is an expensive endeavor which large crop protection companies have little interest in as the total volume of production on the High Plains, in their eyes, may not warrant the vast amount of expenditures and the long term time commitment it requires.

The families who are risk takers tend to remain constant throughout generations on the same farm. Our family has always been early adopters and when things go well on enough acres, the work of early adopters typically sparks a revolution of positive change in the agricultural community. We have experienced for decades that those who wait for others to blaze the trail quite often become eligible to collect NRCS and FSA financial incentives, but the farmer taking all the initial risk is left holding the bag. The traditional agency restriction of no retroactive payments disproportionately impacts the same farmers repeatedly and certainly discourages one from taking the financial risk necessary to try any new Climate-Smart practices of significant scale. I would encourage the subcommittee to review this policy and to develop a means of compensating the early adopters.

Conclusion

During the last fifty years I have worked with many different aspects of the USDA and I have found their people, whether they are located at the local, state or federal level, to be helpful and genuinely caring. By no means should any of my comments or viewpoints be construed as my having a negative view of the USDA or its employees. An agency that has nearly one hundred thousand employees and more than four thousand five hundred agencies scattered all across the United States has an enormous task. USDA does a great job considering the scope of their responsibilities.

In closing I believe it is quite appropriate for the United States Senate Committee on Agriculture, Nutrition and Forestry's Subcommittee on Conservation, Climate, Forestry and Natural Resources to encourage USDA to stay the course when it comes to the High Plains.

Innovation is paramount but programs which are tried and true should not be abandoned or edited in such a fashion that they become unrecognizable. One should not discard the original purpose of the Conservation Reserve Program, forget that providing adequate water to livestock through pipelines and watering facilities is essential or fail to recognize the need for supporting wise use of the Ogallala Aquifer as it applies to irrigation water. We must not forget the High Plains region is of value to the nation and its food supply, that rural communities are an important part of our nation's very fabric and most importantly of all acknowledging that if our region is going to survive our youth must have a reason to stay here.

1880 to 2024

“The more things change the more they remain the same”

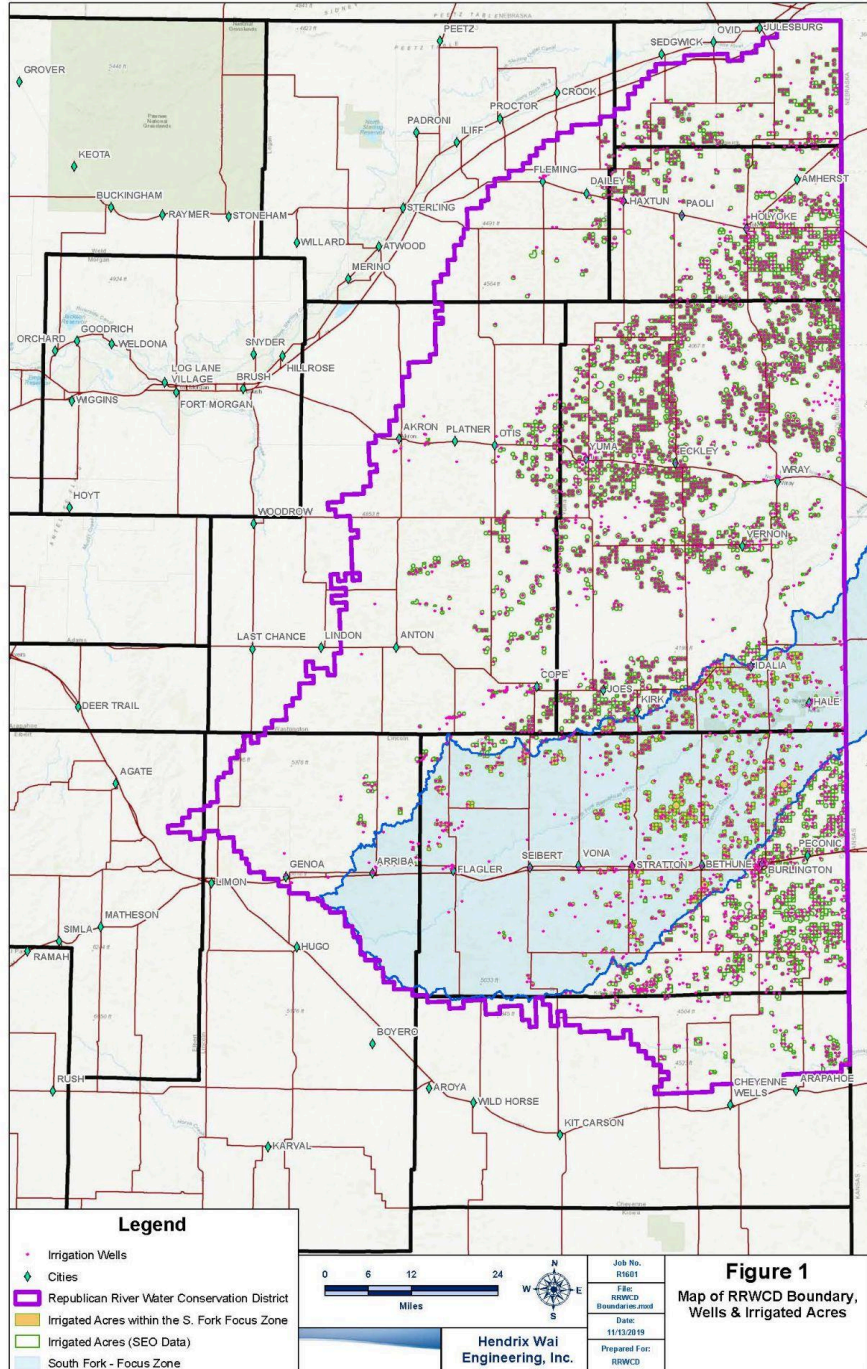
The problem is still a lack of rainfall

**Thelma V. Brown Diary
Yuma County, Colorado
Thursday July 17, 1924**

“Cool today – Is raining in the PM”

Appendix

Map of the Republican River Basin in Colorado



Funds from RRWCD Water Use Fees: Supporting Irrigated Land Retirement

