**Senate Energy and Natural Resources Committee**
**Subcommittee on Water and Power**
**Oversight Hearing: To examine the status and management of drought in the western United States.**
**Wednesday, October 6, 2021**
**2:30 p.m. ET**
**Virtual – Room 366 Dirksen Senate Office Building**

**Testimony of Julie Ellingson**
**Executive Vice President, North Dakota Stockmen's Association**

*Introduction*

Good afternoon, Chairman Wyden, Ranking Member Hyde-Smith, and members of the subcommittee. I am Julie Ellingson, a fourth-generation beef producer from North Dakota. Together with my husband Chad and our five children, Stetson, Jameson, Sierra, Medora and Sheridan, who represent the fifth generation, we raise registered and commercial Angus cattle in Morton County, near St. Anthony. Morton County is the state's largest cattle county, which means that conversations about cattle, forage, water, and stewardship permeate every part of life in our community.

I am proud of my family's long history of stewardship of these lands, and I feel blessed to be able to raise my children in the same way. Like me, they have grown up with the understanding that, while we may not be able to control the weather or the markets, the decisions they make every day determine the health and viability of our land and livestock. We depend on these natural resources for our livelihood, but they also depend on us – without the decisions we make every day, these lands would be unmanaged and solely at the mercy of Mother Nature.

My family has seen many changes in these landscapes since my German ancestors immigrated to North Dakota by the way of Russia at the turn of the last century. We use the latest science and emerging technologies to make sure our management matches the needs of the landscape and our cattle – for mutual benefit and optimal resiliency.

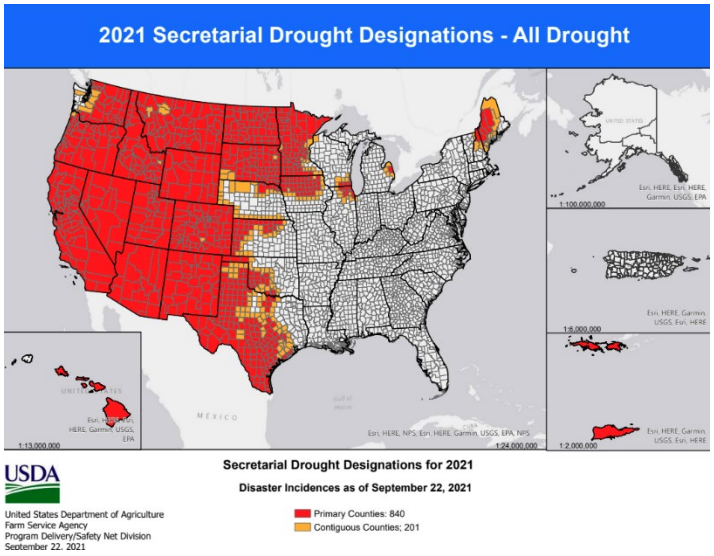
In addition to our ranch work, I serve as the executive vice president of the North Dakota Stockmen's Association (NDSA), a 92-year-old beef cattle trade organization that represents more than 3,100 cattle ranchers across the state. We are a unique organization. In addition to the membership functions of our association, we administer the state's brand inspection and recording programs, as well as an Environmental Services program. We are, in large part, a one-stop shop for cattle producers and land stewards who are working to make their operations the most efficient and sustainable with the resources available. At the local level, many NDSA members are also members of local grazing associations that manage tracts of federal land collectively to ensure the highest degree of efficiency. At the national level, NDSA is affiliated with the National Cattlemen's Beef Association (NCBA) and the Public Lands Council (PLC). The NDSA has managed an Environmental Protection Agency (EPA) Section 319 grant since 2002. The Clean Water Act's Section 319 designates funding for voluntary non-point source best

management practices to improve water quality. Under Section 319, states, territories, and tribes receive grant money that supports a wide variety of activities, including technical assistance, financial assistance, education, training, technology transfer, demonstration projects and monitoring to assess the success of specific non-point source implementation projects. We provide cost-share (up to $215,000 per project) and technical assistance to producers who want their operations to become permitted animal feeding operations. Our team has conducted more than 700 assessments – at least one in each county – on North Dakota operations since the program's inception.

We have also developed approximately 200 contracts in the Stockmen's Stewardship Support Program and the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service's (NRCS) Environmental Quality Incentives Program (EQIP) for cost-share assistance to help producers install animal waste handling systems and improve water quality. Our modeling shows that we have reduced pollutants, such as suspended solids, nitrogen, phosphorus, and fecal coli-form, from entering waters of the state and, specifically, reduced nitrogen and phosphorus runoff by more than 80 percent on those operations. While these programs are outside the jurisdiction of this committee, both are important to demonstrate the level of involvement and investment the NDSA and North Dakota producers make in any given year.

*Drought Effects in North Dakota; Nationwide*

This year, the drought across the western United States has been described as historic. As of September 22, 2021, USDA identified 840 primary counties eligible for disaster designations due to drought, with an additional 201 counties designated as contiguous counties[1], as outlined in the figure below.



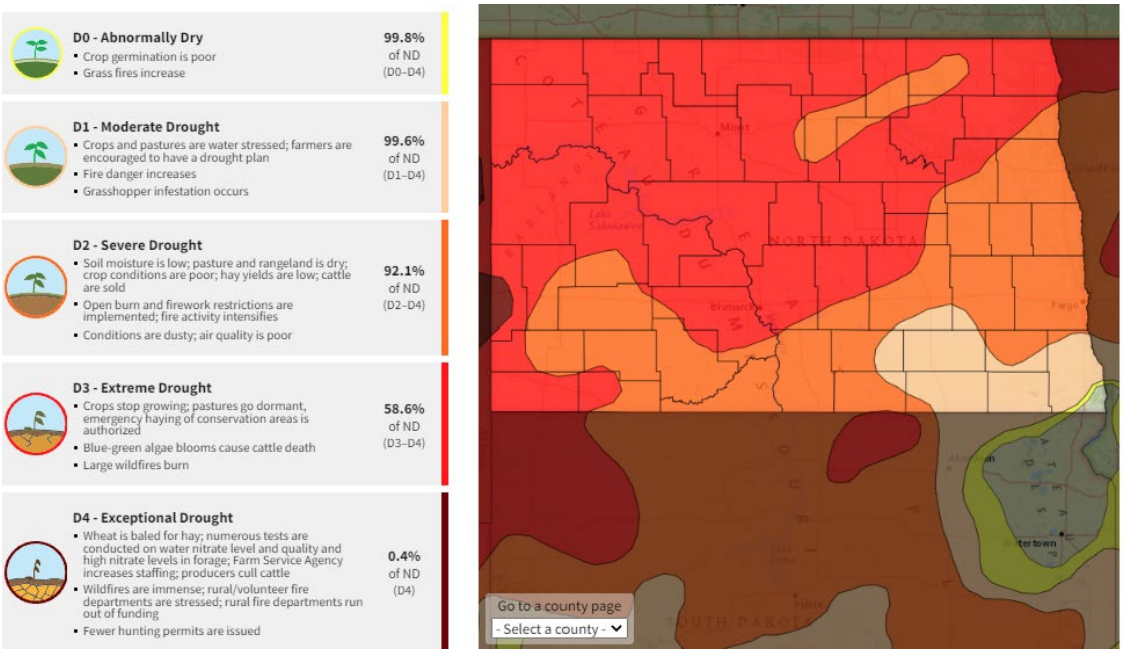

[1] U.S. Department of Agriculture Farm Service Agency. FSA. https://www.fsa.usda.gov/Assets/USDA-FSA-Public/usdafiles/Disaster-Assist/Secretarials/2021-Secretarial-Disasters/ALL_Drought_CY2021.pdf. Accessed 4 Oct. 2021.

While conditions have eased a bit across some of the states, as of September 28, 2021, 40.1 percent of the United States is in drought[2]. That figure rises to 47.8 percent when considering just the lower 48 states[3]. The National Drought Monitor ranks drought conditions from a D0-D4 scale: D0 – Abnormally Dry; D1 – Moderate Drought; D2 – Severe Drought; D3 – Extreme Drought; D4 – Exceptional Drought. While estimates continue to evolve, it is important to note that the landscapes on which a significant portion of the nation's cattle and sheep herd are in are in moderate to significant drought – with estimates ranging from 30 to 60 percent of the nation's cowherd being raised and grazed in drought conditions.

North Dakota is no exception. Unfortunately, we've set a number of records this year – records we didn't want:

- the earliest onset of D4 conditions, which are the most severe,
- the largest proportion of D1, D2, D3 and D4 designations in our history, and
- the highest drought severity and coverage index in our history.

The current Drought Monitor map shows that 99.8 percent of North Dakota is in D0-D4, with more than 58.6 percent of that in at least D3[4].




[2] National Oceanic and Atmospheric Administration National Integrated Drought Information System. NOAA NIDIS. https://www.drought.gov/current-conditions. Accessed 4 Oct. 2021.
[3] National Oceanic and Atmospheric Administration National Integrated Drought Information System. NOAA NIDIS. https://www.drought.gov/current-conditions. Accessed 4 Oct. 2021.
[4] National Oceanic and Atmospheric Administration National Integrated Drought Information System. NOAA NIDIS. https://www.drought.gov/states/north-dakota. Accessed 4 Oct. 2021.

These figures are concerning to resource managers across the board, and they have real-world implications for a variety of industries. Even though tall- and short-grass prairies are some of the most resilient ecosystems in the world, native grasses are hit hard when precipitation levels are so low, like they've been this year.

North Dakota is comprised largely of grasslands and prairies. The federal government owns or manages more than 1.7 million acres in the state, with the U.S. Forest Service (USFS) managing the greatest portion at 1.1 million acres. These are mostly contained in three grasslands: Cedar River, Little Missouri, and the Dakota Prairie Grasslands (managed in coordination with South Dakota field offices)[5]. All three are part of the National Forest System, meaning they are managed by the USFS in partnership with permitted users, like livestock permittees. Across the West, federal agencies are responsible for managing more than 600 million acres of public lands[6] for a variety of purposes. Some are managed for multiple-use management (USFS and Bureau of Land Management), some are managed primarily for human visitation and preservation of a certain asset (National Park Service), and others are managed for wildlife habitat (U.S. Fish and Wildlife Service). Each of these management types, however, are accompanied by the responsibility to manage the resource for optimal health and best use for the American public through different lenses.

North Dakota looks a bit different than some of our Western neighbors, in this respect. The federal government manages just 1.7 million acres of North Dakota, which is less than 4 percent of our state's land. When compared to the states you represent, that percentage is quite small; across this committee, the federal government owns or manages 52.3 percent of Oregon, 80.1 percent of Nevada, 36.2 percent of Colorado, and 63.1 percent of Utah.[7]

Many cattle producers in North Dakota utilize federal grazing permits for livestock forage as part of their rotations, and while the number of federal acres is relatively small in our state compared to our western neighbors, that forage is still critical to many of the grazing operations in the state, so when agencies react to drought, enact management paradigms, or fail to manage landscapes, it can have a profound effect on our operations. At the beginning of the season, many producers received "drought letters" from their federal rangeland conservationist or line officer telling them that, due to dry conditions, changes to their grazing operations may need to be made for the 2021 grazing season. Even ahead of those letters, however, many permittees and lessees were meeting with the agencies, looking for solutions that would ensure that grazing management didn't cause undue stress or degradation to private or public lands.

Some of these changes include amendment to turnout dates, putting fewer animals on the allotment at a later date, pulling those animals off the allotments earlier, and supplemental feeding. Supplemental feeding, however, only works if you have hay to feed, and with the drought affecting irrigation and forage across the region, there's also a significant shortage of

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[5] U.S. Department of Agriculture U.S. Forest Service. USFS. https://www.fs.fed.us/sopa/state-level.php?nd. Accessed 4 Oct. 2021.
[6] Hoover, K., Comay, L., Crafton, R. E., Vincent C. (2021). *The Federal Land Management Agencies* (CRS Report No. IF10585). Retrieved from Congressional Research Service website: https://sgp.fas.org/crs/misc/R42346.pdf
[7] Vincent, C., Hanson, L., Bermejo, L. (2021). *Federal Land Ownership: Overview and Data* (CRS Report No. R42346). Retrieved from Congressional Research Service website: https://sgp.fas.org/crs/misc/R42346.pdf.

hay to buy. What is available is expensive and far away. In short, we're facing a significant forage shortage – the acres that fed our livestock last year won't be able to feed them this year.

The impacts of drought are complex. There are the immediate effects: lack of water for irrigation, lack of spring rainfall during crucial growing seasons for grasses and crops and lower water tables. Even in pastures where there may be available forage, some may not be able to be used this year because there may not be water (depending on order of water rights priority) to water the livestock. There are the medium-term effects: increased risk of fire, changes to the watersheds downstream, and compounded effects on business operations and natural resource planning. Then, there are the long-term effects: change in local economic stability due to inability to adjust to drought conditions, loss of natural resource elements due to direct and indirect impacts of drought, and more. Currently, we're grappling with the immediate and medium-term effects, but we know that longer-term impacts are on the horizon.

*Fire*

Drought, particularly when occurring earlier in the season when there is a lack of spring rainfall, increases the likelihood of fire. As of October 4, 2021, fires have burned nearly 6 million acres across the country in 46,508 fires[8]. These fires not only cause significant impacts on the local ecosystem by burning valuable livestock forage and wildlife habitat and charring multiple-use areas, but also cause a significant impact on national ecology, too. Fires in North Dakota have burned more than 125,000 acres this year, nearly double the acres that had burned this time last year. Most of those fires occurred earlier in the year. In June 2020, 921 fires had burned 11,956 acres and, in June 2021, 1,400 fires had burned more than 100,000 acres[9].

This committee deals regularly with the challenges of catastrophic fire. As we see in North Dakota, prevention of these catastrophic fires is key to prevent them from being cataclysmic events that change the course of local ecology. The challenge with fire is that, by itself, it can be significant. When fire presents with another ecological condition, like the drought that has limited livestock forage this year, the impacts can be catastrophic.

Fire exacerbates drought impacts on watersheds, too. The U.S. Geological Survey notes that:

> *Approximately 80 percent of the U.S.'s freshwater resource originates on forested land, and more than 3,400 communities rely on public drinking-water systems located in watersheds on forest lands. Thus, the potential impacts from wildfire occurrence on the quantity and quality of runoff used for source water and to support fisheries and aquatic habitats are considerable. For example, water providers spent more than $26 million on water-quality treatment, sediment and debris removal, and related issues after two recent wildfires in Colorado.*[10]

[8] National Interagency Fire Center. NIFC. https://www.nifc.gov/fire-information/nfn. Accessed 4 Oct. 2021.
[9] North Dakota State Government Emergency Services. https://www.des.nd.gov/news/wildfires-burn-more-100000-acres-across-north-dakota-so-far-2021. Accessed 4 Oct. 2021.
[10] U.S. Geological Survey. USGS. https://www.usgs.gov/mission-areas/water-resources/science/water-quality-after-wildfire?qt-science_center_objects=0#qt-science_center_objects. Accessed 4 Oct. 2021.

While most of the lands in North Dakota are grasslands, the impact of fire is felt here too as soil loses its ability to retain water in a healthy, productive way.

*Livestock Forage & Business Changes*

As I mentioned above, in addition to representing beef cattle producers in political and regulatory matters, the NDSA also is responsible for the administration of our state's brand inspection program. As such, we tally the inspections of cattle, horses, and mules throughout our state and at the border markets, where we maintain North Dakota inspectors. As of July 31, 2021, we have seen an 18 percent increase in inspections year over year. Auction market inspections have seen a 24 percent increase, and those increased numbers come from cattle – many heifers and cows. In the first seven months of the year, we've inspected more than 148,000 cows; our five-year average for an entire year runs at about 200,000. That means we are already at about the ¾ mark of our average at only a little over half of the year. We have seen increased marketing at all but two auction barns this year, with the largest percentage per-head market increases at a north central market in Rugby, N.D., at more than 62 percent.

Drought, fire, and a persistent decrease in forage availability have resulted in some producers making the difficult decision to cull their herds, reducing numbers so there is enough to forage to keep them healthy while preventing overgrazing. Nationwide, we're seeing rancher after rancher making these tough decisions because the resources demand an adjustment. While the adjustments to herd size are significant at a national level, these changes are significant at a local level, too. When there are sizeable shifts in the number of animals grazing in a given ecosystem, that ecosystem has to respond. While the primary goal is to ensure the level of grazing matches the level of available forage, careful management is needed to ensure producers can respond in future years to apply the appropriate level of grazing – including grazing increases – to ensure the ecosystem can continue to be managed most effectively.

*Cattle Producers Invest in Water-Smart, Climate-Smart Practices*

By nature, cattle producers do what needs to be done, making the decisions that need to be made for the good of the land and the livestock. I told you how proud I am of the long history of stewardship on my ranch, and I know countless other ranchers and their families would tell you the same. Our private lands have been in the same hands for five generations. We carefully monitor our pastures, ensuring we move our livestock at just the right time to ensure optimal regrowth of grasses so our pastures stay healthy year after year. On my ranch this year, for example, we laid five new miles of pipeline, added 13 new water tanks, and renovated an abandoned well to make sure our cattle and the wildlife have enough to drink. We looked at our operation, identified ways we could use water more efficiently, and made those investments that will benefit us in conditions as dire as these and in the future. Our goal is to make sure our management ensures a good year this year, but good years in the future as well. We focus on sustainable, "big-picture" management so that we can continue building on the healthy ecosystems and productive livestock year over year.

For ranchers who hold federal grazing permits, that same stable, predictable, responsible management applies to their federal allotments. The USFS manages approximately 90 million

acres for the potential of livestock grazing, including both rangeland and forested lands[11]; the Bureau of Land Management (BLM) manages approximately 155 million acres for the potential of livestock grazing[12]. These are lands that have been evaluated and determined that grazing would be both compatible and beneficial to the biodiversity of these landscapes. Grazing permittees make investments in these allotments, constructing watering mechanisms, fences, and other range improvements that add value. These investments make these landscapes more desirable for livestock production, certainly, but add value for wildlife, recreation, and sustainability of the land resource. These allotments are managed with the same care as private grazing pastures, and grazing permittees are the front line of defense against threats like fire, invasive species, and over- or under-utilization. Permittees regularly monitor forage and soil conditions and are on grazing allotments at regular intervals, which is certainly a closer eye than the respective federal agencies are able to do. Our federal agencies and the American public are well-served by federal grazing permittees and the care they provide.

Beyond their biodiversity and water quality value, grasslands provide unmatched carbon storage value. Grassland root systems pull carbon from the atmosphere as part of the natural carbon cycle.[13] Ruminant grazing intensifies grassland carbon sequestration potential by reducing overgrowth and invasive species takeover.[14] By developing and maintaining strong grassland root systems, landowners and managers can increase their soil health, forage health, and drought resilience. For this reason, grassland conservation should remain a top priority for the United States as it works toward reducing our nation's environmental impact. Ruminant grazing is a necessary tool to maximize the environmental and economic sustainability of our grasslands.

*Federal Drought Relief*

Mister Chairman, Ranking Member, and members of this subcommittee, you called this hearing today not only to examine the impacts of drought, but also the response to drought. I've told you how cattle ranchers, grazing permittees, and others in the agriculture industry have not only worked to make landscapes more drought resilient in the first place, but also have made the hard decisions that need to be made when facing a threat so severe. I would be remiss, however, if I didn't thank Congress and USDA for recognizing that this drought is an extraordinary event requiring an extraordinary response.

Resources have been available in monetary relief for livestock lost to extreme heat, fire, and drought and for forage losses due to the drought. Senator Hoeven, I'd like to especially thank you for your work to allow for additional allowances in the Emergency Livestock Assistance Program (ELAP) to support the transportation of feed, understanding that what little hay we are able to find is often far away and expensive to transport. While it has been an incredibly challenging year, there have been many examples of federal agencies, Congress, state government and ranchers working together for the betterment of the land, water, and livestock.

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[11] Vincent, C. (2019). *Grazing Fees: Overviews and Issues* (CRS Report No. RS21232). Retrieved from the Congressional Research Service Website: https://sgp.fas.org/crs/misc/RS21232.pdf.
[12] Bureau of Land Management. BLM. https://www.blm.gov/programs/natural-resources/rangelands-and-grazing/livestock-grazing. Accessed 4 Oct. 2021.
[13] Lal, R. 2011. Sequestering carbon in soils of agro-ecosystems. Food Policy. 36(Suppl. 1):S33-S39.
[14] Council for Agricultural Science and Technology (CAST). 2011. Carbon sequestration and greenhouse gas fluxes in agriculture: challenges and opportunities. Task Force Report No.142.

*Call to Action*

That doesn't mean there isn't room for improvement, however. Like my fellow producers, I am thankful for the federal and local assistance we have received this year. We hope that years like this one will be few and far between. Still, ranchers continue to plan for the worst, while hoping for the best. Mister Chairman, ranchers make the hard decisions that need to be made for our lands – whether we hold the title to them or sign our names for them on a federal grazing permit. We take responsibility for those landscapes and treat them as our own, managing them for a long-term benefit.

We want the federal government to do the same. A significant portion of the 6 million acres burned this year are on federal land – lands that could have been better managed through the thinning of fine fuels. Federal agencies must take a lesson from livestock producers to make these landscapes resilient for long-term challenges like drought and wildfire, but also resilient for changing uses.

This administration has made a goal to conserve America's lands and waters and has outlined "resilience" as a key part of that conservation goal. To make landscapes more resilient to drought, grazing is a key part of that solution. To make these landscapes more resilient to fire, grazing again can be a tool to achieve that goal.

This committee should urge the administration to take these goals and enact real, tangible management changes on the ground. Forest canopies need to be thinned and fine fuels need to be reduced to better guard against wildfire risk. Threats to landscape resilience, like overstocked wild horse and burro Herd Management Areas (HMAs), must be addressed promptly. While we appreciate the Bureau of Land Management's gathers to address drought-stricken herds and HMAs, this is the kind of urgency we'd like to see across the board. Conditions should not be allowed to become dire before action is taken.

Mister Chairman, Ranking Member, and members of the committee, we appreciate your attention to the drought conditions this year that have impacted cattle ranchers across North Dakota and across the country, and we hope today's hearing will encourage better partnerships to make the land more sustainable and resilient for the future.