

STATEMENT OF DR. ELLEN HERBERT, SENIOR SCIENTIST, DUCKS UNLIMITED, INC.
BEFORE THE UNITED STATES SENATE COMMITTEE ON AGRICULTURE, NUTRITION, & FORESTRY,
SUBCOMMITTEE ON CONSERVATION, CLIMATE, FORESTRY, AND NATURAL RESOURCES

CONCERNING:

**“THE WESTERN WATER CRISIS: CONFRONTING PERSISTENT DROUGHT AND BUILDING RESILIENCE ON
OUR FORESTS AND FARMLAND.”**

JUNE 7, 2022

Mr. Chairman, Ranking Member, and members of the subcommittee, thank you for having me today. I am Dr. Ellen Herbert, Senior Scientist for Ducks Unlimited. I appreciate the opportunity to testify today on behalf of Ducks Unlimited (DU) regarding the “Western Water Crisis: Confronting Persistent Drought and Building Resilience on our Forests and Farmland.” Water is at the center of what we do as an organization.

Ducks Unlimited conserves, restores, and manages wetlands and associated habitats for North America’s waterfowl. These habitats also benefit other wildlife and people. We work in Canada, Mexico, and every state of the United States. DU got its start in 1937 during the Dust Bowl when North America’s drought-plagued waterfowl populations had plunged to unprecedented lows. Since then, DU has conserved over 15 million acres of important wetland and waterfowl habitat.

With more than a million members and supporters, Ducks Unlimited represents a significant conservation voice for wildlife and the wetlands and habitat that support them. Our work is science-based. We use reliable data from multiple disciplines including wetland ecology, waterfowl biology, hydrology, civil engineering, and landscape ecology to develop, implement and adapt waterfowl conservation actions. We work in partnership with agencies, organizations, farmers, ranchers, and private landowners in the most important landscapes used throughout the lifecycle including breeding migration, and wintering habitats. These kinds of partnerships are essential for efficient and effective conservation, and we support legislation and policy that advances these efforts.

Wetlands can clean water by naturally filtering out sediments, excess nutrients, and other pollutants. Wetlands also capture and hold floodwater and play a vital role in groundwater recharge. Water from wetlands can help replenish underlying aquifers as it slowly seeps into the ground, contributing to deep aquifer storage and maintaining baseflow.

Wetlands are also a great resource for carbon sequestration. More carbon dioxide is removed from the atmosphere and incorporated into vegetation and soil than in either a forest or an upland prairie. A study by The Conservation Fund found that wetlands store 81 to 216 metric tons of carbon per acre, depending on their type and location.

The idea for Ducks Unlimited was born by the winds of the Dust Bowl, in 1937 during a time of unprecedented drought. Initially motivated by sportsmen recognizing a need to address dwindling waterfowl habitat, 85 years later our work continues to benefit wildlife, agriculture, communities, and people in critical landscapes across the continent. Water quality and quantity, agricultural resilience, drought and flood mitigation are among the societal benefits of Ducks Unlimited’s wetland efforts.

But the drought issues facing the western United States today are having similar effects on wetlands as in the 1930s. It's clear the current water crisis is contributing to a dramatic decline in wetlands and waterfowl habitat in the Pacific Flyway. The current trend is potentially catastrophic for ducks, but it's also bad news for everything that relies on the multitude of benefits wetlands provide to ecosystems and out communities.

Multi-tasking Wetlands in Colorado

DU's work in Colorado is an excellent example of how wetlands provide value to a wide range of constituencies and sectors of the economy, including wildlife, agriculture, and local communities. Colorado's robust recreation economy accounts for \$9.6 billion in value-added GDP annually and generated over 120,000 direct jobs in 2020. More specifically, Colorado has 919,000 hunters and anglers who spend \$1.3 billion annually and support 18,693 jobs.

Colorado is part of the Central and Pacific flyways and provides important migration habitat for waterfowl produced in the Prairie Pothole Region. The South Platte River corridor, the San Luis Valley and North Park are key stopover sites that provide foraging and resting areas for migrating waterfowl, sandhill cranes, water birds and shorebirds. In a growing state that is increasingly plagued by drought, these stressed landscapes are under immense pressure from agricultural, municipal and industrial water uses. Ducks Unlimited's wetland augmentation and groundwater recharge efforts along the South Platte have been critical for agriculture, wildlife and local communities. Wetland augmentation projects deliver water to wetlands that provide recharge credits, hunting opportunities and wildlife habitat. Water in the wetlands infiltrates the alluvial aquifer where it returns to the South Platte River over time. Credits are used to cover municipal, industrial and agricultural needs. These recharge credits are important for supporting local economies.

More recently, as water continues to be a precious resource in Colorado, DU is working with NRCS to assist ranchers and other private landowners to restore and improve aging infrastructure on older Wetland Reserve Easements to allow for more efficient uses of water. DU provides technical biological and engineering expertise to help landowners improve and upgrade the management of wetlands in anticipation of less water. It is increasingly important to identify project opportunities where water resources can be used efficiently to benefit many, including waterfowl. The Bijou Ranch project is a great example of DU's multi-tasking work

Located in the South Platte River Basin, the Bijou Ranch project restored more than 200 moist-soil wetland acres that will provide ideal habitat conditions for migrating birds. These wetlands are also used for groundwater recharge, administered through a local irrigation company. The resulting recharge water is then used by nearby farmers to offset pumping of their irrigation wells. The existing WRE site had become degraded over the years from a lack of water control and a major flood. Working with a wide range of partners including NRCS, DU engineered new embankments, water control structures, and rebalanced over 30,000 cubic yards of dirt to achieve the desired outcomes.

Playas Provide Water for Kansas Communities

As the Ranking Member knows too well, the Ogallala Aquifer is being depleted at alarming rates, and drought conditions in western Kansas will only exacerbate this already concerning situation. The communities that rely on the Ogallala are experiencing a decline in groundwater availability to the point

that their future water supply may be limited. Playas are small, round seasonal wetlands found in western Kansas and across the Southern High plains. They are a primary source of groundwater recharge and provide important, year-round habitat for birds and other wildlife. In Kansas, playas contribute 95% of the water flowing to the Ogallala aquifer, the largest aquifer and the United States and the single most important source of water in the High Plains region.

Because the playas of western Kansas are primarily located on private lands, USDA voluntary conservation programs are critical to maintaining this important resource. For the past several years, DU has partnered with NRCS and other public and private partners to provide a series of free workshops to educate and inform agricultural producers of USDA programs available for playa conservation.

The most recent and significant of these programs is the Groundwater Recharge and Sustainability Project (GRASP). NRCS has invested \$1.4 million in this project through its Regional Conservation Partnership Program, with an additional \$1.5 million in contributions from a diverse group of partners all concerned about the aquifer, including Ducks Unlimited, Greeley and Wichita County Conservation Districts, Kansas Water Office, and local county and municipal governments. GRASP will help producers with voluntary irrigation conservation and efficiency efforts and playa restoration to increase groundwater recharge. Financial and technical assistance will be available for managing irrigation water, implementing alternative crop rotations, converting to dryland systems, and restoring playa wetlands. Short term annual rental payments will also be available for lands devoted to playa restoration activities. Healthy, functioning playas improve the quantity and quality of water flow into aquifers. In dry landscapes such as these, playas are also the main source of water for migrating waterfowl and shorebirds as well as resident prairie birds. These playas support 185 bird species as well as other wildlife. Based on available data, there are approximately 2,690 acres of playas in Wichita County and 2,360 acres of playas in Greeley County. GRASP will focus on playa conservation and restoration efforts near municipal and domestic water wells, supporting recharge where it is needed most. As a result, high quality water will reach the aquifer that can be used by Kansans for generations to come.

Another win-win program for wildlife and producers in Kansas is the Conservation Reserve Program (CRP) Migratory Birds, Butterflies and Pollinators State Acres for Wildlife Enhancement (SAFE) practice. The Migratory Birds SAFE program uses a competitive bid process where landowners submit an offer to enroll their playa acres into the program for an amount, they are willing to accept. Offers compete within one of the three designated areas of Western Kansas, and no more than half of the offers from one area will be accepted during each ranking period.

The purpose of CRP SAFE is to restore playas to their proper function, providing benefits that include improved water quality, water recharge for the Ogallala Aquifer and habitat for migrating waterfowl, cranes, and shorebirds. Playa restoration is reversing past modifications to playas by removing accumulated sediment, filling drainage features, redirecting water back into the playa, and protecting the playa with a buffer composed of native vegetation. The response from private landowners has been positive – in less than two years, over 11,000 acres of playas and buffers have been restored with Migratory Bird SAFE. DU has cost-shared on over 2000 acres of playa restoration to date, with more to come.

Importance of Working Agriculture to the Pacific Flyway

With the continuing drought in California, there is expected to be a drastic decrease in planted rice acres in the Central Valley of California. Nearly 250,000 acres are expected to go fallow this growing season, cutting rice acres in half. Outside of the obvious devastation this will cause for producers, this drop in planted rice acres and subsequent lack of flooding fields post-harvest will greatly reduce the habitat options for migratory birds that have come to rely on water made available through these practices. These flooded rice fields provide nearly 50% of the food resources for waterfowl. As the saying goes, what's good for rice is good for ducks, and in this instance what's bad for rice is certainly going to be bad news for ducks as well.

As water problems increase in California and elsewhere producers are having to come up with innovative ideas to help solve this problem. One such project is California Rice Commission's salmon habitat pilot project where techniques are being developed to use winter-flooded rice fields to help grow stronger salmon. Great results from 2020 field work showed a four-fold increase of rice-field reared salmon making it safely to the ocean over control (river/no rice field rearing) salmon. Working collaboratively will be paramount as water quantity and quality issues persist.

Llano Seco Ranch, the last intact Mexican land grant in California, is in Butte County and consists of 18,434 acres of public lands and privately owned ranchlands, crop lands, wetlands, oak woodlands, grasslands and riparian habitats that provide multi-benefit habitat to waterfowl, shorebirds, and at least 38 special-status fish and wildlife species, such as greater sandhill crane and the state and federally threatened giant garter snake. The project will replace a dysfunctional water conveyance system (including two 60-inch redwood siphons and 11.2 miles of canals) to restore water delivery to 2700 acres of ag lands and 4500 acres of wetlands. The system is currently wasting over 40% of the water funneled through it.

Thank you for giving us the opportunity to provide information on Ducks Unlimited's work in drought-stressed landscapes. We look forward to continued collaboration with diverse partners as we all seek innovative solutions to the impacts of drought on agriculture, wildlife, recreation, and communities across the country.