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**Committee on Natural Resources**  
**Water, Wildlife and Fisheries Subcommittee**

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***Benefits and Access: The Necessity for Multiple Uses of Water Resources***

Chairman Bentz, Ranking Member Huffman and Members of the Committee:

Thank you for this opportunity to share observations with you on the importance of managing water for multiple uses. The Family Farm Alliance (Alliance) is a grassroots organization of family farmers, ranchers, irrigation districts, and allied industries in 16 Western states. We are committed to the fundamental proposition that Western irrigated agriculture must be preserved and protected for a host of economic, sociological, environmental and national security reasons – many of which are often overlooked in the context of other national policy decisions. The American food consumer nationwide has access to affordable fruits, vegetables, nuts, grains and beef throughout the year largely because of Western irrigated agriculture and the projects that provide water to these farmers and ranchers.

## **OVERVIEW**

Managing water for multiple benefits has long been a top goal for water managers across the West. For many years, a primary purpose of Bureau of Reclamation projects was to capture mountain snowmelt, store it, and distribute it during the long, dry summer months of the West, primarily to irrigated lands that produced food and fiber. Then, starting in the late 1960's, for a variety of reasons, water stored for agricultural use had its importance diminished in many watersheds. In recent years, we've actually seen large Western water projects that were originally authorized and constructed to supply farms with irrigation water receive zero allocations for agriculture, with available supplies solely used for environmental uses. In those areas, the pendulum has unnecessarily swung too far with no effort toward compromise. The purpose of my testimony today is to explain why that is happening in certain areas, and underscore the importance of restoring irrigation as a top priority in multipurpose water management.

Water is of key importance to the American West. Food security is as vital to our homeland security as our nation's other strategic interests, and the domestic production of food and fiber, especially on Western irrigated lands is critical to our nation's ability to feed itself in an affordable and safe manner.

In the U.S., a set of forces appears to be aligned against keeping domestic agricultural lands in production, even as our country is now importing more agricultural products than it exports<sup>1</sup>. Arizona and California are paving over and losing productive farmland at the fastest rate in the U.S.

The U.S. last year faced yet another record-breaking drought year in the West. Undoubtedly, the drought reduced the amount of water for many users, including irrigated agriculture. However, in places like California and Oregon, much of the water that once flowed to farms and ranches was re-directed by the federal

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<sup>1</sup> The USDA forecasts the U.S. will again run a deficit in 2023 for the third time since 2019. (*Politico Pro DataPoint*).

government for environmental purposes, mainly for perceived fishery needs. In other words, federal water policy withheld water for hundreds of thousands of acres of productive farmland. In the Colorado River Basin, competing water user interests have mounted a sustained campaign against agricultural water use in the Basin, often pointing to alfalfa as an example of one crop that uses too much water and should no longer be produced. The same is true in the Rio Grande Basin, plagued for more than ten years with Supreme Court litigation among the states where the primary focus has remained on agriculture and “high water use” crops, fueled by misinformation put forward by other, more junior water uses.

At a time when the future of Ukraine and other countries’ ability to help feed the outside world is at risk, our ability to increase productivity is being further curtailed – due in part, to our own government and increased competition from other demands for the same water supply. The grim global hunger conditions we once expected to encounter in 2050 may very well hit us sooner<sup>2</sup>. This testimony seeks to explain this critical issue further, and provides recommendations intended to protect irrigated agriculture as a growing number of faraway critics minimize the importance of using water in the West to produce affordable and safe food and fiber.

## **PRIORITIZING ENVIRONMENTAL WATER USE OVER FOOD PRODUCTION**

Historically, the Bureau of Reclamation has been the federal agency partner to step up and assist with the construction and initial financing of water projects that continue to serve agricultural water users in the Western United States. The Reclamation Act of 1902 is the federal law that funded irrigation projects for the arid lands of 20 states in the American West. The language of the Reclamation Act of 1902, before subsequent amendments, provided wide discretion to the executive branch to withdraw land, and to study and construct projects. Many of these projects were constructed with the primary purpose of supplying water to agricultural water users, building communities in the West, and feeding the nation and the world.

However, the failure of Teton Dam in Idaho, the emergence of the environmental movement, and the announcement of President Jimmy Carter's "hit list" on water projects profoundly affected the direction of Reclamation's programs and activities in the United States. Reclamation projects provide agricultural, household, and industrial water to about one-third of the population of the American West<sup>3</sup>. Reclamation is a major American generator of electricity. Today, with more than 120 years of additional Congressional direction on top of the 1902 Act, the current mission of the Bureau of Reclamation is “to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public”. The word “irrigation” isn’t even mentioned in Reclamation’s mission these days.

For many reasons – political, economic, and social – the priority of serving reliable water supplies from federal water projects to Western agricultural irrigators has significantly diminished in recent decades. Certainly, enactment of well-intended federal laws like the Clean Water Act, Endangered Species Act (ESA), and National Environmental Policy Act along with the effective litigious action taken by critics of irrigated agriculture employing those laws in Western courts has slowly chipped away at the once-reliable stored water supply irrigators have depended on for decades. The federal government has effectively redirected that use, primarily for fisheries protection under the ESA, many times with little if any scientific justification or positive results. Perhaps the most dramatic legislative action taken to move towards multipurpose management of federal water was the Central Valley Project Improvement Act (CVPIA), signed into law in

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<sup>2</sup> To sustainably produce food and agricultural products for more than 9 billion people in 2050, agricultural productivity must increase an average of 1.73 percent annually. From 2011-2020, global agricultural productivity grew at an average of just 1.12 percent per year, a significant drop from the average growth rate of 1.99 percent from 2001-2010 (USDA ERS).

<sup>3</sup> <https://www.usbr.gov/history/borhist.html>

1992, which mandated balancing competing demands for a limited supply of water, a balance that included meeting the requirements of fish and wildlife; agriculture; and municipal, industrial and power contractors.

## **1. Regulatory Focus of California's Bay-Delta Environmental Challenge**

Starting at around the time that CVPIA was signed into law, between 1990 and 2014, a number of regulatory and policy decisions have been enacted, the results of which reduced the average water supply for Central Valley Project (CVP) South of Delta agricultural water service and repayment contractors (farmers and ranchers in the San Joaquin Valley who receive water from the CVP) from 100% of their contracted deliveries, except in the worst drought in California's history in 1976-77, to an average of 35% of contracted supply. Last year, south-of-Delta ag service contractors located on the west side of the San Joaquin Valley received a 0% water allocation. That was the fourth time in a decade those water users received a 0% allocation, resulting in the fallowing of hundreds of thousands of acres of farmland in one of the most productive agricultural regions in the world.

In short, state and federal regulations have reduced water supply availability. With each subsequent policy decision, more water was allocated to in-stream use and away from other uses, such as municipal and agricultural uses. From the 1952-1990 time period, farmers had a sense of reliability and certainty regarding their CVP water contracts and annual water deliveries. But those water deliveries have decreased over time as policy and legal actions were taken to crush that certainty for farmers.

While reduced snowpack over the last several years is certainly contributing to the water crisis in California, the imbalanced application of environmental laws and policies has undermined one of the primary uses of the CVP, supplying water for agriculture, with little apparent benefit to the environment that can be demonstrated. A large portion of the water in the Sacramento and San Joaquin rivers is left in stream to flow to the ocean to provide specific conditions in the rivers for salmon, steelhead, and sturgeon, species protected by state and federal policies and laws. The San Joaquin Valley farms and communities, including major industries in Silicon Valley, use fresh water pumped from the San Francisco Bay-Delta to supplement their needs; however, over the past several decades, exports via those pumps have been reduced through a layering of state and federal policies in order to meet specific water quality standards in the Bay-Delta and to address the decline in the delta smelt population, another protected species. These pumped exports from the Delta are used as key indicators of policy decisions throughout the state regarding agricultural water allocations and fisheries management. Presently, agriculture in California does not have a reliable supply of water, which undermines the industry's ability to make long term decisions regarding adaptation and resilience.

The frustrating fact to agricultural producers is that the severe water cutbacks that have already occurred are not increasing the populations of salmon, steelhead, green sturgeon, or the delta smelt, species listed for protection under the federal ESA. The National Research Council (NRC) in 2012 suggested that reducing pumping for agricultural water does not significantly impact fish populations; whereas other stressors along the systems, such as wastewater contaminants, lack of productive habitat, and competing non-native aquatic species, do have a more significant impact on the health of the ecosystem and the biological functions it supports. Protected fish populations could be more effectively managed and recovered by focusing on other stressors to the Bay-Delta system while also providing a reliable water supply for agricultural use.

## **2. The Failure of Single Species Management in the Klamath River Watershed**

The Klamath Project in southern Oregon and northern California is a leading example of the imbalance in federal water policy. Farms, communities, and wildlife are being sacrificed in order to provide more water to ESA-listed fish species, but after 30 years of this policy, there has been no identifiable benefit for the listed

fish populations, which are two species of Upper Klamath Lake dwelling suckers in Oregon, and coho salmon in California downstream of that lake in the Klamath River.

In 1903, federal engineers investigated the feasibility of a reclamation project in the area we now know as the Klamath Project. They reported that, unlike other areas, in Klamath, the engineering challenge was not to transport water to arid land. Rather, there was a need to get rid of water. Well over 100,000 acres of open water and marsh was reclaimed. The water that once spilled from the Klamath River during spring snowmelt was instead held back in reservoirs for beneficial use during the irrigation season on world-class soils known for the quality of their food and habitat production. The agricultural lands and neighboring national wildlife refuges supported millions of waterfowl, amphibians, and terrestrial animals.

A water supply that was reliable for nearly a century has become a guessing game at best, and severe shortages rule the day. The water stored in reservoirs is not allowed to go to the land for which it was stored. Instead, it is held to provide increasing depths in Upper Klamath Lake for endangered suckers or released to the Klamath River to augment flows for coho salmon. In fact, during each of the past three irrigation seasons, the amount released to the Klamath River has been considerably greater than the inflow to Upper Klamath Lake during the same period.

Leaders in the Klamath agricultural community have observed that water management has become more of a competition among regulatory agencies over who can get the most water for one species or the other. For some regulators and others, “winning” has become the goal instead of actual success for species and communities. Food production suffers, communities and wildlife suffer, and the agricultural community feels targeted and devalued. Producers are struggling to explain to their children why raising food has become a thing to be ashamed of, and why the downsizing of the Klamath Project has become a trophy to be won by the opponents of irrigated agriculture in the Basin.

### **3. Proposed Flow Experiments at Glen Canyon Dam**

Decisions made by federal administrators regarding allocation of our water resources during this drought must rely on proven technologies, not experiments. Operations of Glen Canyon Dam on the Colorado River is one such example. Currently, Reclamation is evaluating experimental stored water releases at the expense of hydropower generation, in an attempt to stop the potential establishment of smallmouth bass populations below Glen Canyon Dam. Unfortunately, not only is the scientific underpinning of these additional releases unproven, Reclamation’s analysis to date has not evaluated any potential non-flow measures to address this concern. Instead, Reclamation is evaluating only flow-related measures, all of which to varying degrees, bypass hydropower generation. All this comes at a time when Reclamation, in fact, has been attempting to use extraordinary measures, like demand management and water purchases affecting farmers in the Basin, to protect hydropower production by keeping water storage levels behind Glen Canyon Dam as high as possible and avert predicted water levels crashing to dead pool as water continues to be withdrawn for deliveries to the Lower Colorado River Basin.

The end result of this will be the cost of purchasing expensive replacement power being passed on to power customers, many of which are small municipal, agricultural and tribal providers whose customers are unable to afford these price increases. But this is not just a financial issue alone. Reclamation has also failed to acknowledge there is not a readily available supply of replacement power available for purchase—even though Western Area Power Administration has identified this as an issue of concern in previous comments on this proposal. We understand there is an environmental need, but again, other uses are being impacted by this narrowly focused proposal. Decisions like these must be grounded in sound science and the financial and technical impacts of these decisions must be fully addressed.

## WESTERN WATER AND LANDSCAPES CAN BE MANAGED FOR THE BENEFIT OF AGRICULTURE AND THE ENVIRONMENT

Many of our members in the West – particularly in California and the Pacific Northwest - know that our water management system isn't helping anyone as fish continue to struggle, farmers fallow land, businesses and residents face continuing restrictions. That's because it's based on decade-old siloed scientific hypotheses embedded in a top-down regulatory system that lacks the ability to incorporate new science as it becomes available. Fortunately, there are examples in California, Oregon, Washington State, and other parts of the West that suggest other paths might be taken that lead to true multi-purpose management of water resources that yields benefits to agriculture and the environment.

### 1. Scientific Study + Proven Results = Smarter Water Management

Science has been telling us for some time that fish need more than water to survive – habitat restoration and improvement, predator control and food supply are also critically important. In California's Sacramento Valley, on-the-ground projects have generated results to prove this approach works.

**Partnerships to Implement New Science on Butte Creek Turned 100 Salmon into 10,000** - Working together, farmers, urban water users and conservationists made improvements to fish passage, fish food production and habitat for juvenile salmon as well as providing more water at the time when fish needed it the most. The result has been a dramatic increase in returning salmon from as low as 100 to an average of 10,000 annually. Other species have also benefited. <http://westerncanal.com/butte-creek-fish-passage-project>

**Operation FatFish - Scientists Teamed Up with Farms to Produce a New Food Supply for Fish** - If salmon are malnourished, they're not strong enough to make it through the Sacramento-San Joaquin River Delta to reach the Pacific Ocean and populations decline. Partnering with scientists at UC Davis and CalTrout, farms have been flooding fields in the winter in order to grow bugs (which growing fish depend on for food) and then re-connecting these floodplains to the river. Results from Operation FatFish have shown an increase in growth and health of juvenile salmon inside and outside seasonally flooded rice fields. In addition, these managed wetlands support millions of waterfowl, shorebirds and other waterbirds along the Pacific Flyway. <https://caltrout.org/wp-content/uploads/2018/01/Nigiri.pdf>

**Boulders & Branches - Experiments with Fish Habitat Have Produced Improving Salmon Populations** - River Garden Farms created 25 fish habitat shelters made of almond trunks and walnut tree root wads. These were bolted to 12,000-pound limestone boulders and dropped into the river. The roots and branches are designed to help juvenile winter-run chinook survive by serving as a shield against swift river flows and predators. A survey conducted by wildlife biologists revealed a large school of juvenile salmon had taken to the tree roots. Salmon were finding refuge and populations were improving. <https://www.rivergardenfarms.com/environment/salmon-shelter-project/>

**Painter's Riffle - Biologists Urged Restoration of Spawning Grounds, Leading to Successful Collaborative Projects** - Over time some traditional salmon spawning grounds have been filled in. One example is Painter's Riffle, a side-channel that successfully produced fish nests resulting in up to 750,000 young salmon since the 1980's. When a major storm filled in the channel, farms, water districts and government agencies partnered to open it again. Speaking of a similar project U.S. Bureau of Reclamation Biologist John Hannon said, "These projects are an important part of helping our local fish populations weather the drought conditions and recover in the future." <https://norcalwater.org/wp-content/uploads/PaintersRiffleFact-Sheet-FINAL.pdf>

**On-Demand Water - Focus on Providing Water for Fish in the Right Place at the Right Time** - Obviously, fish need water, but what science has discovered is that we should focus on providing it at key junctures in time and in combination with other non-flow measures such as those discussed here. These “functional flows” are more productive than simply flooding the system with water. A 2015 study by the Delta Independent Science Board recommended more study on the concept of functional flows, which may promote fish and wildlife health by closely considering time, space and parameter scales relevant to biological processes. <https://ceff.ucdavis.edu/articles>

Several new projects are being constructed this winter in the Redding area to promote recovery of Chinook salmon by providing additional spawning and rearing habitat. The projects are implemented through a collaboration of Sacramento River Settlement Contractors, conservation organizations and state and federal agencies. These efforts are part of the comprehensive [Sacramento Valley Salmon Recovery Program](#) and help to implement the National Marine Fisheries Service’s Recovery Plan for the Sacramento River, the California Natural Resources Agency’s Sacramento Valley Salmon Resiliency Strategy and Healthy Rivers California (Voluntary Agreements). By following the path that science has laid out, collaborative efforts can improve the environment while increasing water availability and reliability for all water users.

## **2. Certainty for Water Users and Water for Endangered Species on the Deschutes**

Farmers in the Deschutes Basin of Central Oregon have been dealing with risks and uncertainties to their water supplies for years. The U.S. Fish and Wildlife Service listed the bull trout and the Oregon spotted frog (OPS) as “threatened” under the ESA, while the National Marine Fisheries Service (NMFS) listed the Mid-Columbia steelhead as “threatened” under the ESA as well. All three species are present in the Deschutes Basin. These ESA listings ultimately culminated in a lawsuit, whereby environmental groups sought a court order to effectively end all irrigation storage in the Deschutes Basin. The water users fought back and defeated the environmental groups’ motion for injunctive relief that would have put at risk the water supplies for some 150,000 acres of irrigated farmland in the Basin. The water users and their irrigation districts took matters into their own hands, as they developed a long-term plan that would both provide certainty for agricultural water supplies, while at the same time, providing a plan that would provide water for and benefit the listed species.

The Deschutes Basin Habitat Conservation Plan (HCP) was the product of 12 years of scientific study, hard work, and collaboration between irrigators, federal and state agencies, the Confederated Tribes of the Warm Springs Reservation, cities, counties, multiple non-governmental organizations, and the general public in the Deschutes Basin. Finalized in 2020, the HCP sets the course for conservation efforts in the Deschutes Basin for the next 30 years. It provides the eight irrigation districts in the basin (organized as the Deschutes Basin Board of Control, “DBBC”) with both a pathway and time for modernizing their water delivery systems through canal piping and other projects.

In exchange for the commitments made by the DBBC districts under the HCP to conserve water over time, the DBBC districts are authorized to continue to access their water supplies without running afoul of the ESA, even when those water supplies are limited during times of drought. In this way, the HCP provides a level of certainty with respect to the DBBC district’s obligations under the ESA, as well as some level of certainty with respect to their water supplies. At the same time, the ongoing effort to implement the HCP is not without challenges. Districts and irrigators face endless court battles from potential lawsuits brought by national groups who will never be satisfied with the irrigators’ commitments to conservation, and routinely argue that irrigated agriculture should take an even harsher hit in the basin than it already has.

Meanwhile, as required under the HCP, the DBBC districts and irrigators are making significant financial investments to implement conservation measures, such as canal piping. Individuals and third-party citizen

groups are threatening to prevent open irrigation canals from being replaced with buried pipe, arguing among other things that open ditches flowing with irrigation water amount to water feature “amenities” for their subdivision homes. These challenges are intended to create roadblocks and prevent the districts from implementing solutions for both stabilizing irrigation water supplies and meeting fish and wildlife habitat needs. Despite these ongoing challenges, the Deschutes Basin irrigation districts and their partners remain committed to implementing the HCP, as it is the only real option for trying to keep the agricultural community in the basin intact and in control of its own destiny while providing and protecting habitat for listed and other wildlife species in the Basin.

### **3. Water 4: Conservation that Provides Multiple Benefits to People and Wildlife**

Irrigated lands comprise over 60 percent of wetland habitat in the snowpack-driven systems of the Intermountain West. These lands provide vital habitat for migratory birds, sustain floodplain function, and recharge aquifers, but are at risk of fragmentation from rural subdivision, competing water demands, and the ongoing impacts of climate change. We work closely with the Intermountain West Joint Venture (IWJV), a leader in utilizing science and technology advancements to link agriculture, hydrology, and wildlife habitat conservation. The IWJV’s Water 4 Initiative is focused on the importance of maintaining agricultural land for habitat conservation and landscape resiliency within western states. The rapid fragmentation of agricultural wildlife habitat, as well as crop conversions and changing irrigation practices, have implications that reverberate beyond agriculture and begin to impact local water availability for people and wildlife. Integrating agriculture, science, technology, and ecology can lead to improved understanding of key linkages related to the importance of agricultural irrigation and the need to invest in modernizing irrigation infrastructure. Such investments also have collateral benefits for landscape resiliency including groundwater recharge, habitat enhancement, and conservation of fish and wildlife.

Spatial analysis combined with detailed water bird population information has allowed IWJV to begin to quantify the exact number of agricultural acres that need to be enhanced/protected in the Klamath Basin in California and Oregon (among other locations) to provide habitat to sustain water bird and waterfowl populations. This has critical implications for the broader agricultural community in the Pacific Flyway. If habitat is not maintained in the Klamath Basin, migrating birds will likely move south, to California’s Central Valley, earlier in the season. This earlier migration means birds may arrive before rice is harvested, resulting in potentially devastating impacts to rice production.

Conserving irrigated wet meadows contributes to system-wide resiliency by providing key habitat for migratory birds, sustaining floodplain function, recharging aquifers and supporting agricultural communities.

There are proven examples of where food producers, water managers and conservationists can work together in a way that benefits agriculture and the environment. We must continue to do more of this type of work, where environmental objectives can be reached without taking water away from farmers and ranchers. As will be described in the next section of this testimony, it has never been more important to provide affordable and safe food for our country and the world.

### **4. Yakima River Basin Integrated Plan**

The Yakima River Basin (WASHINGTON) supports a \$4.5 billion-dollar agricultural economy and historically produced significant salmon and steelhead runs. The Yakima Basin Integrated Plan (YBIP) is a collaboratively developed 30-year plan developed and implemented by YBIP partners such as the Yakama Nation, irrigation districts, cities and counties, conservation groups, the federal government and the State of Washington, among others. The YBIP has provided opportunities in the Yakima River Basin for local, state,

and federal partnerships to allow our member irrigation districts, including the Sunnyside Valley Irrigation District, the Roza Irrigation District, the Yakima Tieton Irrigation District, the Kittitas Reclamation District and others to work aggressively on a drought resiliency strategy to modernize their water delivery systems to conserve water to the benefit of both fish and farmers. Modernization of these important irrigation water delivery systems is providing the means to ensure reliable and consistent irrigation water delivery to basin farmers. And, the YBIP has embraced a new drought emergency water storage project at Kachess Reservoir, as well as new fish passage, habitat, water and groundwater supply, and headwaters restoration projects in the Yakima River Basin that benefits and promotes healthy fish, farms and communities.

One YBIP partnership between the Kittitas Reclamation District, Reclamation, the State of Washington and NGOs has been able to establish a more normative summer flow regime in the Yakima River tributaries that typically dried up in the summer months. The Kittitas Reclamation District is also working to increase their canal capacity to carry cool storage water to streams for fish while at the same time making more consistent irrigation water deliveries to agricultural lands in their service area. This resiliency strategy is an integral part of the YBIP collaboration that is working toward increasing salmon and steelhead population abundance and productivity and at the same time provide for a consistent supply to the farmers growing our nation's food.

## **5. Forest Management Impacts on Upper Watershed Water Supplies**

It is hard to overstate the importance of snowmelt as a source of fresh water in parts of the Rocky Mountain West, and great attention is paid to ecosystem water cycles in this region. Some of the snow that falls in the mountains goes directly from crystalline snow to water vapor, bypassing the liquid water phase. This phenomenon – sublimation – accounts for the loss of a large portion of the snowfall during the winter months in the Rocky Mountains. Snow intercepted by tree branches sublimates the fastest, often disappearing within a few days of a snowfall. Recently published work by the Rocky Mountain Research Station<sup>4</sup> (RMRS) teases apart how the loss of spruce canopy affects the sublimation rates for snow both in the canopy and on the ground in these ecosystems. These findings have some important implications to snow interception and retention.

Three years ago, Alliance President Pat O'Toole, whose family owns and operates a cattle and sheep ranch on the Colorado-Wyoming border, testified before the Senate Energy and Natural Resources Committee. A study he referenced in his testimony relates to research<sup>5</sup> conducted by the Forest Service on the Upper North Platte River in 2000 and 2003. It shows that management restricting timber harvest had already severely impacted the watershed and water yield to the tune of a minimum of 160,000 AF<sup>6</sup> per year. His testimony included other examples of models for ways of quantifying the amount of water removed from Wyoming's water supply by dying forests and invasive species like the bark beetle, and also references other anecdotal reports from around the West of water yield increases resulting from clearing pinon and juniper stands.<sup>7</sup>

Last June, Mr. O'Toole testified again before the Senate ENR Committee, where he referenced the North Yuba Forest Partnership (CALIFORNIA), which developed a strategy to treat 20 million acres on national forest

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<sup>4</sup> Beetle Outbreaks in Subalpine Forests and What They Mean for Snowmelt, May 2021. Rocky Mountain Research Station, U.S. Forest Service.

<sup>5</sup> Estimating Additional Water Yield From Changes in Management of National Forests in the North Platte Basin, May 12, 2000, C.A. Troendle & J.M. Nankervis (Note: This is an independent report prepared for the Platte River EIS Office)

<sup>6</sup> 160,000 AF of water would cover all of Chicago, Illinois with over one foot water.

<sup>7</sup> Vegetative response to water availability on the San Carlos Apache Reservation, Roy Petrakis, Zhuoting Wu, Jason McVay, Barry Middleton, Dennis Dyem, John Vogel. July 2016. U.S. Geological Survey, Western Geographic Science Center, Flagstaff, AZ 86001.



lands and up to an additional 30 million acres of other federal, state, Tribal, private and family lands over the next decade. The partnership is using the latest science to integrate multiple stakeholder priorities into projects with the objective of accomplishing forest restoration and wildfire risk reduction at a landscape scale. Partnership activities include meadow restoration, ecological thinning of forest density and prescribed fire.

Mr. O’Toole’s own family is helping to lead an effort to design a comprehensive, multistakeholder, large landscape initiative to restore two severely degraded (non-functioning) 50,000-acre watersheds; one in the Medicine Bow National Forest in Wyoming and a second in the Routt National Forest in Colorado. Their vision is to restore two forested rangelands to a resilient state that filters and stores water, produces protein, sustains wildlife and fisheries, sinks carbon, produces renewable energy feedstocks and enables economically viable rural communities to thrive.

## **A PERFECT STORM: WESTERN DROUGHT, INFLATION, WAR IN UKRAINE AND GLOBAL FOOD INSECURITY**

Western irrigated agriculture is criticized by some because of the amount of water that is required to grow food and fiber. It is not the farmers that are “consuming” the water. It’s the customers who consume the products that farmers and ranchers provide. Farmers and ranchers only grow crops and raise livestock that other people buy as their food source. Current vegetable and value-added farm and ranch products are subject to the same supply and demand rules of American manufacturers. With the current backdrop of severe drought conditions in the West, significantly inflated food costs, global food supply challenges, and a looming global famine, the importance of Western agricultural production has never been greater and should be carefully and thoughtfully valued. Now is the time to focus on the critical importance of maintaining our country’s food security and locally sourced foods. Reliable water for Western irrigated agriculture is a critical component in that equation.

The multiple-year drought we have recently faced in many parts of the Western U.S. – coupled with other domestic and global developments– is already affecting the availability and price of food for many Americans. Rising food prices and global hunger are linked to the war in Ukraine, extreme climate events like the Western U.S. drought, and other global stressors. All of these factors have combined to cause significant inflation and global food shortages that loom on the horizon.

### **1. Rising Cost of Growing Food = Rising Food Prices**

Those Western producers who do have water have seen production costs increase by as much as 25%, because of rising fuel prices and transportation costs. Rising input costs (fuel, pesticides, fertilizers, equipment repairs), combined with the ongoing energy and supply chain crises, continue to impact food supply and demand<sup>8</sup>. Since January 2021, many fertilizer types have tripled or quadrupled in price and remain high (U.S. Bureau of Labor Statistics).

Inflation was higher in 2021 and 2022 than in any other years of the previous four decades, as measured by the price index for personal consumption expenditures. In 2005, Americans paid about 6.2% of disposable income on food and non-alcoholic beverages. That means that, for every \$1,000 of disposable income, only \$62 is being spent on food. That frees up tremendous additional capital for other needs, like buying a new car, investing in your children’s education, or going on vacation. Globally, people paid roughly 10.2% on the same

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<sup>8</sup> Steve Benson, Family Farm Alliance Director, Testimony Before the United States House of Representatives Republican Forum - “*Skyrocketing Energy Costs are Hurting Americans*” -June 24, 2022

products. Now, due in part to factors discussed previously in this testimony, the U.S. average has increased to 10.3% with other countries following suit. This is concerning for our national economy since less domestic food production means more global competition and higher prices for American consumers.

Our economy depends on an affordable high-quality food supply for which we spend less of our disposable income than any country in the world. This leaves much more disposable income available for other needs and wants which also fuel our economy. This small investment in food for our families is made possible because farmers and ranchers have made significant changes in water use practices and investments in technological water efficiency tools. While some say growing crops in the arid West is not "sustainable," available land, growing conditions, work force and access to transportation have proven this region to be a prosperous agricultural and economic engine.

## 2. Global Hunger Crisis

At the global level, hunger is on the rise, and the world community is not prepared to address this looming crisis. The 2022 *State of Food Security and Nutrition in the World* report<sup>9</sup> prepared by the United Nations Food and Agriculture Organization found that an unprecedented count of up to 828 million people went hungry in 2021, an increase of 46 million from the previous year, and a leap of 150 million people since the start of the COVID-19 pandemic. Even before the latest inflationary woes hit us and after years of seeing global hunger numbers drop, global hunger is back at record levels and rising.

Our organization has been tracking the Global Agricultural Productivity (GAP) Report since 2010, when it first quantified the difference between the current rate of agricultural productivity growth and the pace required to meet future world food needs. That report predicted that total global agricultural output would need to be doubled by the year 2050 to meet the food needs of a growing global population. The 2022 *Global Agricultural Productivity (GAP) Report* was released last October by the Virginia Tech College of Agriculture and Life Sciences. The 2022 GAP Index found that total factor productivity (TFP), which increases when producers increase their output while using the same or less inputs, is at its lowest level of growth to date. The overall message of the GAP report is that vulnerable agricultural systems rest on fragile foundations. Reversing the downward trajectory of global agricultural productivity growth, the report says, demands urgent action from policymakers, leaders, donors, scientists, farmers, and others in the agri-food system. In short, the 2022 GAP report found that current efforts to accelerate global agricultural productivity growth are inadequate.

Just in the past month, we've seen "under the radar" media coverage of [vegetable rationing in Great Britain](#), [famine in the Horn of Africa](#), [prolonged drought in France, Italy](#), and [other parts of Europe](#), and [farmers pushed to brink due to Argentina's drought](#). But, sadly – and as is likely to be expected – the story most people are clicking on is ["Will climate change upend tequila production?"](#) This issue is no laughing matter. According to the February 21, 2023 edition of *POLITICO's Weekly Agriculture* ("Russia's war pushes food crisis to its most dangerous stage"), this year, 2023 will be the biggest test. Russia is continuing to weaponize food, holding back some of its fertilizer exports while cutting off Ukraine, a major grain and food exporter, from its normal global trading routes — most notably to Africa and the Middle East.

We've also seen increased reports of world leaders sharing fears that global price spikes in food, fuel and fertilizers will lead to widespread famine, prompting global destabilization, starvation and mass migration on an unprecedented scale. Sri Lankan President Gotabaya Rajapaksa fled the country last summer, just days after thousands of protesters stormed his residence over the nation's crippling economic crisis. Sri Lanka for months had grappled with severe food and fuel shortages and skyrocketing inflation. Domestic food production also

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<sup>9</sup> <https://data.unicef.org/resources/sofi-2022/>

took a hit by the government’s April 2021 decision to ban the importation of fertilizers and agrichemicals, in an apparent shift to organic agriculture. By the time the ban was partially reversed in November, farmers reported a 40 to 50 % loss in rice production.

### 3. War in Ukraine

When war first broke out in Ukraine in early 2022, world leaders feared that sanctions and destroyed ports could take nearly 30% of the world’s grain supply out of production or off the market this year. Ukraine is a breadbasket for Europe, Africa and the Middle East. Now, global grain stocks are pushing towards a decadal low. Shipments out of the Black Sea ports were too few, and harvests from other major crop producers (U.S., France, and China) were smaller than initially expected due to poor weather in key agricultural regions. These factors are shrinking grain harvests and cutting inventories, heightening the risk of famine in some of the world's poorest nations. The bleak global economic outlook, coupled with higher fertilizer and other production costs, “pose serious strains for global food security,” Maximo Torero, the Chief Economist for the U.N. Food and Agriculture Organization said last August<sup>10</sup>.

In December 2022, the U.N. sought a record \$51.5 billion for world hunger aid needs, as more than 4% of the world’s population needs hunger assistance. The U.N. aid system is being “tested to its limits”, according to the U.N. aid chief. This represents a 25% increase in aid over the previous year; over five times the amount sought a decade ago<sup>11</sup>. Hunger-stricken African countries are struggling with reduced wheat imports due to Russia's war in Ukraine. However, one country - Zimbabwe - is looking to build a small strategic reserve for the first time in its history. Zimbabwean President Emmerson Mnangagwa in April described Russia's war in Ukraine as a "wake-up call" for countries to grow their own food (*Associated Press*).

### 4. Vanishing American Farmland

Closer to home, the American Farmland Trust (AFT) reported in “Farms Under Threat 2040: Choosing an Abundant Future” earlier this year that Americans are paving over agricultural land at a rapid pace. From 2001-2016, our nation lost or compromised 2,000 acres of farmland and ranchland every day. “Farms Under Threat 2040” shows we are on track to convert over 18 million acres of farmland and ranchland from 2016-2040—an area the size of South Carolina. If recent trends continue, 797,400 acres of California's farmland and ranchland in 2040 will be converted to uses that jeopardize agriculture. The latest study from AFT shows that Arizona and California are paving over and compromising productive farmland at the fastest rate in the U.S. According to the AFT report, Maricopa County, Arizona is losing farmland at a faster rate than any other county in the nation. Fresno County in California’s Central Valley, the nation’s leading agricultural county by gross value, is the 17<sup>th</sup> fastest in the nation in terms of farmland lost to other uses.

According to recent and alarming USDA data, foreign ownership and investment in U.S. agricultural land has nearly doubled over the past decade, 2010 through 2020. As of December 31, 2020, this represents 2.9 percent of all privately held agricultural land in the United States is held in foreign ownership. One of the largest groups of foreign investors is renewable energy companies, causing some to raise concerns that farmland will be further removed from production to meet renewable energy goals.

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<sup>10</sup> U.N. News, August 5, 2022. “Major fall in global food prices for July, but future supply worries remain”.

<sup>11</sup> Reuters, December 1, 2022. “From Ukraine to Yemen, UN seeks record \$51.5 bln for ‘shockingly high’ aid needs”.

## **5. The U.S. Agricultural Trade Deficit**

The Western U.S. is a critical part of what has long been a proud national agricultural powerhouse, where our country consistently has run an agricultural trade surplus. But in 2019, for the first time in more than 50 years, the U.S. agriculture system ran an agricultural trade deficit, importing more than it exported. The USDA forecasts the U.S. will again run a deficit in 2023 for the third time since 2019. This growing deficit is driven primarily by our dependence on imported Mexican fruits and vegetables (*Politico Pro DataPoint*). Increased reliance on foreign food has never been, and should never be a policy our Nation has intentionally embraced.

## **6. Farmland Fallowing Due to Drought**

The U.S. last year faced yet another record-breaking drought year in the West. Farmers and ranchers in some of these areas received little to no water from federal water projects this past summer. Major reservoirs in California and along the Colorado River and Rio Grande reached or approached historic lows. As discussed earlier in this testimony, the government has also regulatorily withheld water from producers in places like the Central Valley of California, Central Oregon and the Klamath Basin. Our farmers and ranchers that are largely responsible for keeping the nation's grocery store aisles stocked were forced to leave fields fallow or reduce livestock herds. Nationwide, the U.S. red winter wheat crop was the worst since 1963. Ranchers didn't have enough grass, hay and corn to feed cattle and other livestock, and were forced to sell off herds early or purchase extremely expensive feedstocks. Oregon and Texas herds were down 30-50%, which will spike beef prices over the next 2-5 years.

Of course, California last year faced another year of punishing drought. A research team from the University of California (U.C.) Merced, studying the California drought, found that the 2022 water shortage in the Central Valley was 2.6 million acre-feet, which resulted in 695,000 idled acres of farmland, with additional acreage impacted. The ravaging drought left hundreds of thousands of acres of Sacramento Valley farmland unplanted this year, causing dramatic harm to people, fish, waterfowl, shorebirds, and other wildlife. Researchers at U.C. Davis published a report entitled "Continued Drought in 2022 Ravages California's Sacramento Valley Economy", which projected that the 2022 drought impacts on farm production are likely to cause a loss of about 14,300 jobs and about \$1.315 billion in economic value lost in the Sacramento Valley. California rice production was down 50% in 2022.

Most of the tomatoes consumed in the U.S., fresh, canned, and otherwise, come from California. Factors like the ongoing drought and rising fuel prices made the fruit harder and more expensive to grow, which will materialize in terms of scarce availability and higher prices on grocery shelves in the coming months. While critics of California agriculture suggest that increasing agricultural production in other states is a solution, the reality is that other states simply cannot replace California's lost fruit and vegetable production.

Irrigated land in California is disappearing for a variety of other reasons. The Sustainable Groundwater Management Act (SGMA) requires groundwater users to bring their basins into balance over the next two decades. In the San Joaquin Valley, this will likely mean taking more than 500,000 acres of agricultural land out of intensive irrigated agricultural production<sup>12</sup>. SB 100 (2018) requires 100 percent of the electricity sold to California customers to be derived from renewable or zero-carbon resources by 2044, which will put more pressure on finding room for new solar farms.

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<sup>12</sup> Public Policy Institute of California Report, September 2022. "Solar Energy and Groundwater in the San Joaquin Valley"

Central Arizona Project (CAP) irrigators - due to operating guidelines on the Colorado River - expect about 100,000 acres of farmland will be fallowed in 2023. Most of these lands (approximately 40,000 acres) currently produce cotton, but roughly 20,000 acre - according to CAP producers - will be alfalfa fields.

Undoubtedly, the Western drought has reduced the amount of water for many users, including irrigated agriculture. However, in places like California and Oregon, much of the water that once flowed to farms and ranches is currently being redirected by the federal government for environmental purposes. In other words, federal water policy is shutting down water availability for hundreds of thousands of acres of productive farmland. At a time when the future of Ukraine and other countries' ability to help feed the outside world is at risk, our ability to increase productivity is being further curtailed – due in part, to our own government.

## **HOW THE FEDERAL GOVERNMENT CAN HELP**

Americans are facing rising food costs and the potential for global famine looms on the horizon. The recent national infant formula shortage has further underscored the importance of a strong national domestic food supply system. Meanwhile, our own government has regulatorily withheld water from producers in places like the Central Valley of California, Central Oregon and the Klamath Basin. Many producers in the Southwestern U.S. are bracing for yet another year of severe drought and unprecedented water shortages.

There are things that the federal government can do to alleviate this disaster and better prepare and manage for future droughts. Federal investments in improving and building new water supply infrastructure – partnering with the Western states and non-federal water users – can help prevent or reduce the impacts of future droughts. Moving away from flow-based single species management to collaborative watershed-based approaches that respect and protect all uses will help prepare Western water stakeholders for a more predictable and secure future. We need to act, and act now, to accomplish these tasks.

Western irrigated agriculture has been dealing with changes in climate and hydrology for over a century. But the prognosis for water supplies in the future is not positive and will continue to negatively impact this important source of our Nation's food supply, the economic engine for most of our rural Western communities. Coupled with the growing demand for existing water supplies from burgeoning cities and the environment, irrigated agriculture is fast becoming a target for one thing – water. We must look to several solutions in order to maintain food security for the nation and economic wellbeing of the Western landscape.

### **1. Improve Regulatory Processes at the Federal Level**

The economic, environmental, and national security implications of Western irrigated agriculture must be assessed and incorporated into federal water management decisions. These critically important issues must be treated with the same priority that federal agencies currently place on climate change and environmental values. For example, food security impacts must be properly assessed. Policy makers need to understand the direct and indirect linkages to the economy derived from a low-cost food supply, making available large blocks of disposable income to the consumer spending economy, as well as the availability of high-quality food sources provided by Western irrigated agriculture. Federal decision making must consider more than single species management of water resources, which has shown it can destroy anything and everything else in its path with little to no benefit to a listed species nor accountability by federal agency officials making those choices.

In January, I spent four days in Reno, Nevada at the 55th Annual Mid-Pacific Water Users Conference. This event is organized through a unique partnership between the Bureau of Reclamation and its water user customers in California, Western Nevada, and the Klamath Basin. Much of the discussion at the conference

dealt with the juxtaposition of the recent multi-year drought with the series of “atmospheric rivers” that swamped much of California in late December and early January. The conference attendees also had plenty of stories to tell about the recent drought, which showed that water management in the West is becoming too inflexible. Even during times of flooding, state and federal regulations can prevent that water from being held over time to support human uses.

In Reno, I moderated a panel of five CVP water authority and district managers who all emphatically stated that we need a new way of looking at how we manage environmental demands for our limited water resources. One of those speakers, Jason Phillips, the CEO for Friant Water Authority, explained that, even in times when water is plentiful, California’s magnificent dams and canals still cannot meet the state’s water needs. As discussed earlier in this testimony, starting in the early 1990’s, as a result of state and federal laws, regulations, lawsuits, and decisions, (both by elected and unelected officials), reservoirs are not allowed to convey the water stored for the intended purposes, and instead a large percentage of water must now be sent to the ocean.

“This is because decades after they were built, the government will no longer allow our water infrastructure to operate the way it was intended,” Phillips said. “Each year this problem is getting worse, and unelected government officials are allowed to divert more water away from homes, communities, and farms.”

We need a broader view of how water is used to meet environmental needs, one that considers state water laws, science, population growth, food production and habitat needs.

For those of who live in rural communities that have been impacted by these government decisions, it’s almost unfathomable to understand. Many of the farmers and ranchers I work with feel like our government is about to throw away the best food production system in the world, as a time when our country and the world will need them more than ever...for what? So agency fishery biologists can sleep better at night?

My friend Ben DuVal, a Klamath Project farmer, shared his frustration last year, after NMFS told Reclamation to release over 400,000 acre-feet of water down the Klamath River, 190,000 acre-feet more than the projected inflow into the storage system.

“If we farmers failed as badly as the federal agency biologists who are controlling water policy, our bankers would have foreclosed on us 20 years ago,” he said. “NMFS’s regulatory demands are neither fair nor effective.”

The “zero” allocation announced in May 2021 for the Klamath Project was unprecedented. The reason for the absolute curtailment of irrigation water was to provide increased water for competing threatened and endangered fish species in Upper Klamath Lake and the Klamath River and a species of whale that eats salmon in the Pacific Ocean, hundreds of miles away. But there is no evidence that any species benefitted from this management. Not in 2021. Not in other recent years where irrigation has been shorted in the name of the ESA.

“It’s the world’s worst-kept secret that NMFS is using Klamath Project water to try to mitigate problems not caused by the Klamath Project,” added Paul Simmons, executive director of the Klamath Water Users Association. “And when that doesn’t work, they just do it again, and then again.”

Lots of pain. No gain.

Adding insult to injury, the Klamath Project was targeted and attacked in traditional and social media. Legions of reporters, documentarians, and bloggers chose and perpetuated narratives that demonize farmers and ranchers who make a living in irrigated agriculture growing food for the Nation.

Our farmers and ranchers need protection, and the government needs to be held accountable. Biological opinions are being written by unelected agency staff that have grave implications for farmers and ranchers living hundreds of miles away. We don't even know who is authoring these recipes for disaster. There is no accountability or transparency, and it sometimes seems as if they are crafting a grand experiment - consequences, reality and costs be damned. Just last week, the FWS [announced the availability](#) of the draft recovery plan for the Oregon spotted frog and the opening of a 60-day public comment period. The estimated cost for recovery of the OSF (on page 12 of the draft plan) is \$2.78 BILLION over 40 years.

We need to manage our Western fisheries in a more coordinated manner. The Alliance since 2017 has supported various versions of H.R. 3916, the “*Federally Integrated Species Health (FISH) Act.*” This legislation would amend the ESA to vest in the Secretary of the Interior functions under that Act with respect to species of fish that spawn in fresh or estuarine waters and migrate to ocean waters (anadromous fish), and species of fish that spawn in ocean waters and migrate to fresh waters (catadromous fish). We believe that by combining the ESA implementation responsibilities of both NMFS and FWS under one federal Department, we would promote more efficient, effective, and coordinated management of all ESA responsibilities for anadromous and freshwater fish in Western watersheds, from the highest reaches of our headwaters to the Pacific Ocean. Merging the NMFS ESA duties with those of FWS and tapping into the "constructive center" will lead to practical solutions that fit for ranchers, farmers, and other landowners, as well as fish and wildlife and tribal and local communities.

Finally, given the \$12 billion+ that the Bureau of Reclamation will be spending over the next four to five years on Western water infrastructure (*see below*), we need to expedite permitting and get these new water projects to construction within a reasonable period of time at a reasonable cost, as well as create collaborative partnerships between federal, state, tribal, and local entities interested in finding solutions to our water-climate problems through adaptive strategies that can work on the ground.

## **2. Actively Manage and Restore our Federal Forests**

Drought brings less snowfall in many areas. The snow that falls in some upland areas melts off up to 45 days earlier and runs off downstream on frozen ground. The snowpack no longer functions as a reservoir delaying the release of water in a timely manner. However, the forest floor can be restored through thoughtful management. A responsible level of continuous fuels reduction includes a combination of robust mechanical thinning and prescribed fire. This can be employed to significantly reduce evapotranspiration, tree stress, disease, and pest infestation, preserve healthy forest conditions, and protect species and habitats.

This is not only good stewardship – it is good economics. Failure to employ this approach will continue the downward, accelerating spiral of fuel accumulation, drought, disease, and invasive insects. This will lead, inevitably, to additional high-intensity and costly fire events in the future.

We believe active forest management can increase water yield, improve water quality, provide for jobs, and reduce the cost of firefighting, while increasing forest resiliency. This can be done, in part, by increasing the productivity of national forests and grasslands; employing grazing as an effective, affordable forest and grassland management tool; increasing access to national forest system lands; expediting environmental reviews to support active management; and designing West-wide studies to quantify water yield.

### **3. Invest in Technology**

We must manage our water supplies better through more efficient and effective use of technology to improve the modeling and predicting of weather patterns, snowpack, and runoff forecasting, as well as using technology to manage our water storage and distribution to improve efficiencies in utilizing our precious water resources.

### **4. Invest in Western Water Infrastructure**

Planning for water shortage in the West must look to the long-term in meeting the needs of agriculture, energy, cities and the environment. The federal government should partner with Western water users in promoting collaborative solutions, more flexibly implement environmental laws to meet multiple uses and species and use existing funds to efficiently and effectively invest and partner in Western water infrastructure. This will give farmers the tools necessary to deal with these complex challenges and still grow food for a hungry nation. We must be thinking in terms of “Re-Reclaiming the West”, with a focus on adapting our existing infrastructure to meet new hydrologic challenges, now that we know our water comes into our systems in different ways than it did historically. Creativity, thinking outside the box, and the federal government’s recognition of the national interests at stake must all converge to create a new path forward for western irrigators who feed our Nation.

New infrastructure and technologies can help stretch water for all uses and boost the economies of Western rural communities. We urge Congress to maintain priority funding and in the new Farm Bill allow more flexible utilization of the Watershed and Flood Prevention Operations Program (WFPO) – administered by the USDA’s Natural Resources Conservation Service (NRCS) and also known as P.L. 566 – for watershed enhancements. This funding could be used for a variety of critical drought response and resilience projects including irrigation modernization, development of rural water supply sources, erosion and sediment control, and fish and wildlife habitat enhancement. It is also critical for supporting the modernization of irrigation water delivery infrastructure at scale. This is a program that Alliance members have put to use to replace leaking, open canals with pressurized pipes, and overall improving agricultural water security. The program’s funding is becoming increasingly competitive because of the scale of need in modernizing agricultural infrastructure.

The NRCS awarded all \$500 million that the IJA allocated to WFPO in two rounds of announcements in 2022. The NRCS’ announcement recognized that “[t]he amount provided to protect our watersheds is historic and highlights the priorities set by Secretary Vilsack to address the effects of climate change, ensure equity, and create a path toward climate resiliency.” Unfortunately, the “path toward climate resiliency” created by the funding awards is overwhelmingly dedicated to feasibility studies (94% of awards) for small dam construction (59% of feasibility studies) to address flooding concerns in the eastern U.S. This decision raised two concerns with our membership: 1) Several Western irrigation modernization projects which have already developed watershed plans and are in the cue, moving towards implementation, were not funded; 2) It is uncertain how many of the feasibility studies for the new projects will ultimately be implemented. If those feasibility studies ultimately support implementation of small new dam projects, the available funding for a program that is already oversubscribed and underfunded will become even more strained.

### **5. The Western Drought’s Silver Lining**

Perhaps the only silver lining is that this unprecedented drought crisis is that it drew public and political attention to Western agriculture’s critical role in providing a safe and reliable food supply, boosting the national economy, and continuing the country’s stature as the world’s premier food basket. Certainly, the drought helped drive Congressional action in the past year, where the Infrastructure Investment and Jobs Act signed into law in November 2021 by President Biden included \$8.3 billion for Western water infrastructure. The



Inflation Reduction Act signed into law last year included another \$4 billion to address the Western drought, with priority placed on Colorado River challenges. We can only hope that further political attention leads to necessary, reasonable policies that support farmers and investment in rural communities, including water infrastructure and increased water-storage capacity. The Family Farm Alliance and other Western agriculture and water organizations believe the drought – followed by the recent series of “atmospheric rivers” that have largely restored California’s mountain snowpack - underscores the urgent need to take immediate action to help better manage impacts to water resources from drought in the West.

## CONCLUSION

In order for irrigated agriculture to exist into the future, we need to look to enhance management of water supplies and delivery and we must maximize the benefits from the water we have available to meet multiple needs. Growers across the West are stepping up, at their own expense and in partnership with federal funding programs, to provide solutions for the viability of their basins and the communities those basins serve. In many cases, that means senior water rights holders are voluntarily making water supplies available to junior water users, preventing cuts otherwise required. There are other collaborative efforts underway to fund on-farm conservation projects that are helping reduce demand. Urban, agricultural, and environmental water users would all benefit from such efforts in the short and long term.

What does not help is the relentless finger-pointing by non-agricultural water agencies and critics of agriculture, saying that farmers aren’t doing enough and what they are doing is killing fish. Critics of irrigated agriculture continue to shame farmers for growing crops, such as alfalfa, saying they should fallow their fields or switch to crops that use less water, which fixes nothing. The Western agricultural system was built on local supply of feed and food. Shifting production to other states adds additional food delivery miles, greenhouse gas emissions from transportation, and ultimately higher costs and/or emptier shelves at the grocery store. Locally grown food for humans, dairy and animal proteins results in lower costs to producers and consumers.

Many agricultural regions of the West do not have an economic base that can absorb additional unemployment, business closures, and the loss of tax revenue that come with fallowing. Agricultural regions, such as the central valleys of California and Arizona, are facing a future of dwindling and unsustainable groundwater supplies as they look to replace potential shortages from traditional sources like the Bay-Delta and the Colorado River. Entire communities are at risk of closing, bankrupting their populations.

Are we going to wake up and realize the world has drifted far from the stability we have known for our lifetimes and make required course corrections? Or do we remain committed to our own demise and continue on a crash course with what may likely be the greatest food shortage in global history? We have some decisions to make. Fallowing Western farmland means increased reliance on food production in other countries with lower or non-existent production standards. Fallowing any land during a time of crisis should be temporary, or we risk losing control of our ability to provide a reliable and safe U.S.-grown food supply.

Agricultural production in the West is an irreplaceable, strategic national resource that is vital to U.S. food security, the ecosystem, and overall drought resilience. The role of the federal government in the 21<sup>st</sup> Century should be to protect and enhance that resource by doing whatever it can to ensure that water remains on farms. At a time of unprecedented change, one certainty holds firm and true – our nation’s most valuable natural resource must be preserved. The Alliance looks forward to working with you to address the issues we have identified in this testimony and those we have not.

Thank you for this opportunity to present this testimony today. I stand ready to answer any questions you may have.