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

Thank you for the opportunity to testify before you today on finding ways to build resilience for the economy, climate and ecosystems. 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 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.

SUMMARY

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. The Alliance believes we must look to several solutions in order to maintain food security for the nation and economic wellbeing of the Western landscape:

- Invest in Western water infrastructure – new water storage and improved conveyance facilities, groundwater recharge, water conservation, water management improvements, water reuse and desalination can all help alleviate the stress on our existing water supplies, especially for agriculture in the growing West;
- Invest in technology – we must manage our water supplies better – more efficiently and effectively use technology to improve the modeling and predicting weather patterns, snowpack, and runoff forecasting, as well as using technology to manage our water distribution to improve efficiencies in utilizing our precious water resources; and,

- Improve regulatory processes at the federal level to expedite permitting and get projects to construction within a reasonable period of time at a reasonable cost, as well as create collaborative partnerships between federal, state and local entities interested in finding solutions to our water-climate problems through adaptive strategies that can work on the ground.

Congress has helped this past year by including the Bureau of Reclamation provisions in the *Consolidated Appropriations Act of 2020* (omnibus) last Congress. The creation of an aging infrastructure account in Treasury for loans to local water user entities will help fund and affordably finance improvements and rehabilitation of our aging facilities, some of which are over 100-years old. Broadening WaterSMART grants, authorizing a new collaborative program for snowpack monitoring and runoff forecasting, and improving the efficiency of authorities for the use of federally owned facilities for aquifer recharge will be extremely helpful in managing impacts to water resources from climate change in the West.

But we have more to accomplish in this Congress, including:

- Reauthorizing and funding federal programs to partner on new federal and non-federal water storage and groundwater recharge projects (such as extending provisions in the WIIN Act of 2016 – P.L. 114-322);
- Providing funds to the aging federal infrastructure account created last year; and
- Partnering with Western water organizations through collaborative solution-oriented programs and using new technology to improve the management of water supplies for agriculture, cities, and the environment.

What we do not need is more federal regulatory red tape and added environmental requirements for new federal programs.

We have advocated for new water infrastructure projects that clearly can help mitigate the impacts of climate-driven hydrologic changes on the environment, in addition to being so critically important to Western farms, ranches, and rural communities. For example, multi-benefit fish and wildlife habitat restoration projects on the Sacramento River in northern California and in the Yakima River Basin in central Washington State have been led by irrigators who want to improve fisheries for the long-term in order to protect their irrigation water supplies. However, we fear new mandatory environmental strings (over and above current environmental hurdles, which are daunting, at best) can further increase costs, disincentivize voluntary approaches, and quickly render an otherwise viable water project as infeasible.

INTRODUCTION: ANOTHER DRY YEAR IN THE WEST

With the exception of parts of the Pacific Northwest, much of the rest of the Western U.S. is dealing with significant hydrologic drought conditions.

In New Mexico, more than half of the state is locked in the worst category — exceptional drought. The recent light precipitation in New Mexico and eastern Arizona was not enough to offset spotty summer

rains. Flagstaff, Arizona marked its second consecutive driest monsoon season on record in 2020. What is frightening about the lack of rainfall in the region is the fact that water users in the Southwestern U.S. count on the monsoon season to augment water supplies, especially irrigated farming and ranching, because they are not getting their normal water supply from the snowpack. If they do not get a good monsoon season, farmers and ranchers fall further behind in their irrigation water supplies. We have water user members in New Mexico that may receive no surface water allocations at all this year.

According to the U.S. Drought Monitor, after several weeks of light to moderate snow events in the Central Plains, drier weather has returned to the region. Farther north, even though precipitation is normally low during the fall and winter seasons, it has been extremely dry during the past 3-4 months, leading to a lack of any snow cover in parts of Montana and the Dakotas. In contrast, additional precipitation along parts of the Wyoming-Colorado border boosted mountain snow water equivalent as of Feb. 23 closer to normal.

In the Pacific Northwest, La Nina conditions continue to drive an active Pacific storm track that benefits parts of Washington, Oregon, and northern California, along with most northern and central mountains in the West. Still, conditions in the Klamath Basin - where I live - have not substantially benefitted from these conditions, which appear to have skirted the upper areas of the Klamath River watershed. Precipitation is more than 11 inches below normal over the past 18 months, and the soil profile in my neighborhood is extremely dry and exacerbated by recent high winds. Flows into Upper Klamath Lake, the primary source of supply for Klamath Project irrigators and to meet the requirements of biological opinions intended to protect endangered suckers and threatened coho salmon in California, are the lowest on record over the past 40 years.

The Bureau of Reclamation last month announced an initially low 2021 water supply allocation for California's Central Valley Project (CVP) contractors amounting to just 5% for agricultural water service contractors north and south of the Sacramento-San Joaquin River Delta. Over the last 10 years, South-of-Delta agricultural repayment and water service contractors have received a 100% allocation of water only once and have received a 0% allocation twice. This is devastating news for farmers and communities across the Central Valley that rely on water from the CVP and jobs created by irrigated agriculture. Recent studies have shown that reductions in surface water availability in the Central Valley can cause approximately 194,000 acres of land to be taken out of production, more than $1.3 billion in lost crop revenue and thousands of job losses[1]. Lack of surface water also increases reliance on groundwater and can have negative impacts on drinking water availability and quality- particularly in disadvantaged communities, as well as the unintended consequences of land subsidence due to over-pumping in certain areas of the Central Valley.

[1] The University of California, Davis, Center for Watershed Sciences, produced reports in 2014, 2015, and 2016 quantifying, among other things, the amount of groundwater that was pumped in each year. The total for the three years was 13 million acre-feet at a cost of $1.35 billion. The pumping costs to keep land in production during the drought reduced the full economic impact that would have occurred if all of the land without surface supplies had been taken out of production.

These dry conditions and the water management challenges that come with prolonged drought underscore the need to advance a suite of actions intended to maximize management flexibility, modernize aging water infrastructure facilities, and in some places, expand existing water infrastructure to help keep up with growing demands and extreme hydrology. As stated earlier, the Alliance is focused on one mission: to ensure the availability of reliable, affordable irrigation water supplies to Western farmers and ranchers. Because of the relatively narrow focus of our mission, we believe we can provide some useful observations and recommendations to consider as you further develop your plans to tackle economic recovery, environmental protection and climate change challenges.

A PHILOSOPHY OF COLLABORATION

The Alliance is seen by many water resource stakeholders across the West and in Washington, D.C. as an important player in the context of Western water resource management and how this important function is impacted by implementation of federal laws and regulations.

The Alliance has worked diligently in the creation of the Western Agriculture and Conservation Coalition (WACC), a collaborative effort to improve the environment, protect Western irrigated agriculture, and keep farmers and ranchers in business. Members of the WACC include Audubon, The Nature Conservancy, California Farm Bureau, Environmental Defense Fund, Public Lands Council, Western Growers Association, Wyoming Stockgrowers, and the California Agricultural Irrigation Association, to name a representative few. I am pleased today to participate in this hearing with my good friend Laura Ziemer from Trout Unlimited, who, along with the Family Farm Alliance, helped lead initial efforts to form the WACC over ten years ago. We actively seek opportunities to partner with these collaborative, solution-oriented organizations, and shun those who use dueling science, litigation, and negative press to assign blame to family farmers for various global environmental impacts.

The threats to a viable and sustainable rural West are numerous, complex, and varied. The Alliance and the farmers and organizations we work with are dedicated to the pragmatic implementation of actions that sustainably balance environmental protection and economic prosperity. The foundation for collaborative solutions will be driven from the constructive “center”. These solutions steer away from the conflict that can ensue from the extremes of grassroots activism intended to resist any changes to existing environmental and natural resource laws, regulations, and policies. Similarly, they will not be driven purely by economics, unfettered by reasonable environmental protection.

ECONOMIC RECOVERY

We are encouraged that Congress appears intent on mobilizing the American people to move towards economic recovery through several means. We provide our observations and recommendations relative to economic recovery below.

Mobilize American manufacturing and innovation to ensure that the future is made in America, and in all of America.

This mobilization should include the Western irrigated agriculture industry.

The American West's farmers and ranchers responded to COVID-19 by developing new ways to grow the nation's food supply while protecting workers on the frontlines, and keeping the nation fed. But the COVID-19 crisis, as for all industries, has revealed weaknesses in agriculture that must be addressed. The West's essential workers deserve our highest praise for helping to ensure the nation's food supply is processed, shipped and stocked on local grocery store shelves everywhere. Their essential work starts with the farmer and rancher, who produce the food and fiber that form the first critical link in the long and essential supply chain that ends on the grocery store shelf or in our restaurants.

Unlike other essential industries, farmers and ranchers work on nature's schedule. They must start planning production operations a year in advance. Farmers' crops must be planted, watered, tended, and harvested based on the seasons. Farmers cannot speed up the growth of lettuce, tomatoes, corn, or oranges. Unlike other manufacturing industries, there is no way to "catch-up" if fewer crops are planted this year. What is planted this spring is the food supply this fall and next year.

To ensure next year's food supply keeps grocery store shelves full without increasing international imports and the resulting increase in supply chain carbon emissions, it is essential that Western farmers and ranchers have all the tools they need to grow the crops they are planting and livestock they are raising now. Reliable irrigation water supplies are at the top of that list. Unfortunately, competition for water supplies is driving Western farmers off the land at a time when American food production in general should be increased. We must not allow our Nation's food production to follow other industries "off-shore" in search of lower costs, where controls on carbon emissions and other factors like food safety are far less stringent than ours.

Meanwhile, Americans are spending, on average, less than 8 percent of their disposable income on food. To put this into perspective, just 70 years ago that figure was more than 25 percent. While more, better, and safer food is being produced by American farmers today, these same farmers continue to feel the pinch of increased regulation, reduced allocations of irrigation water, and restrictive and complicated federal environmental policies. It is only a matter of time before that pinch translates into higher costs and diminished supply at the supermarket.

Food security is an issue everyone should be taking more seriously. We cannot wait until the supermarket shelves are empty to do something about protecting our ability to feed ourselves and much of the rest of the world.

Farming and ranching are huge economic drivers for Western states, particularly in rural communities. Given the magnitude of the food security issue to national security and to the rural economic wellbeing, Congress must make protecting irrigated agriculture a higher priority.

Mobilize American ingenuity to build modern infrastructure.

As you consider further measures to help our country recover economically from the ravages of the COVID-19 pandemic, including boosting federal funding for infrastructure, we urge that you consider critically needed investments that address the shortcomings of our aging Western water supply and delivery infrastructure. As we state above, the COVID-19 pandemic underscores the importance of the safety and stability provided by domestic food production. For farmers and ranchers to survive, and for food to continue to be produced here in the American West, a stable water supply is a necessary part of any conversation about our national food security.

As a result, we believe it is critical that our country continues to invest in the aging Western water infrastructure necessary to meet current and future demands for water. Our existing water infrastructure in the West is getting older and is in desperate need of rehabilitation and improvement. Most of the federally backed water infrastructure projects that continue to benefit large cities, rural communities and small farms in the West were built over 50 years ago.

Some are much older. In fact, some Reclamation projects, including the Klamath Project (where I live), Nevada's Newlands Project, and others originally authorized by the Reclamation Act of 1902 are now more than 100 years old. Derby Dam, Reclamation's first structure in the Newlands Project, was built in 1905. Elephant Butte Dam in New Mexico - at one time the largest and highest structure in the United States – was authorized in 1906 and completed in 1916.

As hydrological conditions in the West continue to change and populations expand, failure to address water security has become increasingly critical. Failing to improve our aging water infrastructure and develop new sources of usable water supply will inevitably result in additional conflict as pressure grows to 'solve' urban and environmental water shortages. Moving water away from Western irrigated agriculture to meet these growing needs will surely contribute to the decline of rural communities dependent on farming, as well as negatively impact our Nation's food security.

We believe that investments in improving water conservation, water recycling, watershed management, conveyance, desalination, water transfers, groundwater storage, and surface water storage are all needed for a diversified, resilient, and successful water management portfolio. We are not alone on this platform. A national coalition of over 200 agricultural organizations and urban and rural water districts led by the Family Farm Alliance, Association of California Water Agencies, National Water Resources Association and Western Growers Association urged then President-elect Joe Biden and congressional leadership in early January 2021 to address aging Western water infrastructure in any potential infrastructure or economic recovery package[2]. The coalition includes organizations from 15 states that

[2] The coalition letter to Congressional leaders is attached as "Appendix A" to this testimony.

collectively represent $120 billion in agricultural production, nearly one-third of all agricultural production in the country, and tens of millions of urban and rural water users.

In separate letters to then President-elect Biden and your congressional leaders, the coalition said existing Western water infrastructure is in desperate need of rehabilitation and improvement. Without immediate attention, the coalition said, the Western water supply and delivery system will quickly prove inadequate to meet the needs of urban and rural users and the environment. The coalition encouraged the federal government to invest in a diversified water management portfolio that enhances water supply and quality for urban and environmental uses while keeping water flowing to Western farms. Specific recommendations include funding and support for:

- Water conservation.
- Water recycling, reuse, and desalination projects.
- New water storage facilities, both surface and groundwater.
- Watershed management, fish passage and recovery, and habitat restoration.
- Federal financing mechanisms (like WIFIA) for water projects.
- Loans for local districts operating and maintaining federally owned irrigation projects.
- Water quality improvement for rural communities.

Beyond financial support, the coalition also called on the federal government to ensure the timely construction of water projects by improving the efficiency and timeliness of federal regulation and permitting processes.

Water is the lifeblood of the West. Without reliable and affordable water supplies, every sector of our economy would suffer – from agriculture, to manufacturing and high-tech, to local community needs. As Congress and President Biden consider an infrastructure stimulus package, it is of paramount importance that maintenance, rehabilitation and development of water infrastructure is made a high priority. As you are already aware, water infrastructure investments not only provide immediate short-term economic benefits and create jobs that are vital to a nation facing massive job loss, they are the foundation the economy will need for the foreseeable future. If and when additional infrastructure funding is discussed as part of a larger economic stimulus package, we need your help to ensure that federal dollars flow, and timely improvements are constructed to our nation's critical aging water infrastructure needs. We look forward to working with you to address this critical need and national security interest.

ENVIRONMENTAL PROTECTION

Forest Management and Watershed Health

The number of acres burned by wildfire in the U.S. last year broke a modern record, according to data published by the National Interagency Fire Center, as extreme heat and dryness fueled major conflagrations across many populated areas in the West. Wildfire burned over 10.3 million acres in 2020, breaking the calendar-year record of 10.1 million acres, set in 2015. More than 40% of the wildfires in

2020 burned in California. This marks the third year that wildfire has burned more than 10 million acres in the U.S., according to fire center records going back to 1983. All three of those years have been since 2015.

Increasingly fierce Western wildfire disasters are becoming an annual occurrence and underscore the importance of improving on-the-ground management actions that can lead to improved forest health. Improving the condition of our nation's forested lands is of primary importance to water providers. National Forest lands are overwhelmingly the largest, single source of water in the U.S. and, in most regions of the West, contribute nearly all of the water that supplies our farms and cities. In addition, our already fragile water infrastructure can be severely damaged or rendered useless by fire and post-fire flooding and debris flows. The unhealthy state of our national forests, which were initially reserved specifically to protect water resources, has led to catastrophic wildfires that threaten the reliability, volume, and quality of water for tens of millions of Americans, along with the wildlife, recreational, and multi-purpose values of these lands.

The Family Farm Alliance believes 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 health forest conditions, and protect species and habitats. 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 fire events in the future.

It appears that there is growing recognition that improved funding and agency cooperation are needed to tackle this critical problem. However, even in the region I live in, it is still not clear how this policy recognition is translating to action taken in Western forests. We have members in Northern California who report that the fuel load in many forests is staggering, and Forest Service efforts to even access downed trees in burned riparian areas - such as the Forest Glen area on the South Fork of the Trinity River - are moving too slow.

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 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.

Environmental Rulemaking

We are hearing calls from some to modify or revoke some of the federal environmental rulemaking actions taken by the previous Administration. In our view, many of the changes made to decades-old federal environmental laws, including the Endangered Species Act (ESA), the National Environmental Policy Act (NEPA) and the Clean Water Act, helped bring them into the modern era. They did so by focusing on important process improvements that allows for more efficient, informed, and transparent

regulatory and infrastructure permitting decisions without impacting the effectiveness of environmental or species protection measures.

As noted in the opening section of this testimony, a major concern of many of our members is the possible legislative condition that a storage project demonstrate additive environmental benefits over and above current requirements which are daunting in and of themselves. Again, one would assume that the requirement for a "federal benefit" in the definition of eligible projects would include any ecosystem benefits. The additional requirement for a benefit above and beyond the definition of a "federal benefit" actually appears to be at odds with the idea that storage projects shall have "multiple" benefits.

CLIMATE CHANGE

The challenges facing agricultural water users in a world of climate change are further magnified in the Western United States. In the arid American West, drought and climate variability are colliding with population growth, spiking the demand for food and fresh water. As we experience predicted warming in the West, according to the Western Governors Association (WGA), we can expect to see the following general effects and impacts: 1) Smaller snowpack and earlier snowmelt; 2) More rain than snow; 3) Extreme flood events; 4) Prolonged droughts and higher temperatures; and 5) Extreme wildfire—in frequency and behavior – caused by a complicated combination of factors, including climate change and our limited ability to manage federal forest lands.

A WGA report and other studies suggest that more spring runoff, coming off the mountains in a shorter timeframe is the general predicted impact associated with a changing climate in the West. Water resources experts throughout the West realize that new surface and subsurface water storage projects will be necessary to capture more rapidly melting snowmelt or water from other sources.

The Family Farm Alliance Board of Directors in 2007 established a subcommittee to develop a white paper that addresses the important issue of climate change, and its possible impact on Western water supplies and irrigated agriculture. The board sought to develop recommendations on how to plan and provide stewardship for this change. That document - titled *"Water Supply in a Changing Climate: The Perspective of Family Farmers and Ranchers in the Irrigated West"* - marked one of the first published reports on climate change by a national agricultural organization. Our report showed that climate change could further strain fresh water supplies in the American West. Even then – over 13 years ago – our report concluded that we must begin to plan for that now, and not wait until we are forced to make decisions during a crisis. We must make efforts to adapt our water storage and conveyance systems to our changing climate and hydrology in parallel with (and we would argue with a higher level of urgency) efforts to control and decrease the carbonization of our atmosphere.

Below, we offer the following observations and recommendations in four key areas in which far-reaching investments can be made to address Western climate change challenges and make our water supplies more resilient.

1. Water Infrastructure

Modern, integrated water storage, conveyance and distribution systems can provide tremendous physical and economic flexibility to address climate transformation and population growth. Increasing usable water supplies through the expansion of existing dams and reservoir facilities and building new off-stream and groundwater storage can provide the additional flexibility to adapt to our changing hydrology and climate with little impact to the environment. The Alliance believes new water storage will be essential to the wellbeing of irrigated agriculture, municipal and industrial uses, and the environment in the predicted hotter and drier climate. We must capture the early snow melt and better prepare for lower stream flows by increasing water storage as a means of creating a more resilient West.

As noted previously, the flexibility and resiliency provided by the development of new water infrastructure can be limited by legal, regulatory, or other institutional constraints, which often take longer to address than the actual construction of the physical infrastructure. The often time-consuming federal regulatory permitting process can be a major obstacle to the realization of projects and actions that are necessary to improve the reliability and resiliency of water supplies to serve the diverse needs of the West, particularly in the context of a changing climate. Compounding the problem, an uncertain and lengthy approval processes often cause water managers to abandon good projects during the planning process due to the regulatory risk, leaving fewer tools on the table to respond to changing conditions.

2. Power Opportunities

Often overlooked in the discussion to find ways to generate clean, carbon-pollution free energy is the role of hydropower. Hydropower, as the largest source of renewable electricity generation in the United States, must continue to be a major part of our energy solution.

In 2013, President Obama signed a pair of bills (introduced in this subcommittee) that were endorsed by the Family Farm Alliance aimed at promoting hydropower development by streamlining the federal regulatory process for certain types of projects. The two bills - *"The Hydropower Regulatory Efficiency Act",* and *"The Bureau of Reclamation Small Conduit Hydropower Development and Rural Jobs Act"* - authorized and streamlined permitting for Federal Energy Regulatory Commission (FERC) regulatory actions on small non-federal conduit hydroelectric projects, and authorized and streamlined permits for small non-federal conduit hydroelectric projects on Reclamation-owned canals, respectively. By signing those bills, then President Obama took an important step that is already helping Western irrigated agriculture. Many of our members operate existing irrigation canals and ditch systems that may provide opportunities to develop in-canal, low-head hydroelectric projects that have tremendous potential for collectively producing significant amounts of renewable energy with virtually no negative environmental impacts.

The actions surrounding the enactment of P.L. 113-23 and P.L. 113-24 have elevated the importance and highlighted the possibilities of low-head hydropower development in Western states. While there continues to be development of FERC licensed projects, the bottom line is that low-head hydro opportunities are being re-examined with renewed interest across the West. We hope that a focused

interest on hydropower development will continue in your Subcommittee. Capitalizing on the power potential of existing dams, pipes and conduits is the kind of practical thinking our country needs to generate more renewable energy and cut our energy carbon footprint.

3. Innovation

While technological development will certainly contribute to clean energy improvements, human capital is what drives that innovation. In the West, given the many challenges facing the future viability of water supplies, water managers now must operate as if every year is a drought year. For irrigated agriculture to exist into the future, we need to look to innovative technology to more efficiently enhance the management and delivery of water supplies. We must also maximize the benefits from the water we have available to meet multiple needs. For instance, it is surprisingly easy to install and apply innovative technologies in water management to improve both food production and fish and wildlife habitat.

In October 2019, we prepared extensive written testimony for a Senate Energy and Natural Resource Water and Power Subcommittee oversight hearing on Western water innovation and technology. That document provided multiple real-life examples showing that water managers, ranchers and farmers are technologically-savvy, innovative, resourceful, and creative individuals. These innovators and their projects, by example, should be actively solicited and replicated by federal water policymakers in resolving the water conflicts of the West.

One example cited in our Senate testimony focuses on the efforts of the Northern California Water Association (NCWA) in the Sacramento Valley. NCWA is part of a diverse coalition of conservation organizations, farmers, local governments, water suppliers and academic institutions have come together to advance a new model for water management, fish and wildlife habitat restoration, and land use that seeks to reactivate historic floodplains in the Central Valley. This innovative, sweeping program is intended to upgrade California's aging water and flood infrastructure while simultaneously enhancing the function of river ecosystems for the benefit of fish and wildlife populations. This innovative strategy implements and improves dynamic conservation strategies designed to create, retain and enhance habitat in temporary and adaptable ways. This will reinforce the value of floodplains and help species thrive in a changing world. Developing and deploying dynamic conservation strategies is especially important for migratory species–both birds and salmon - and will also become increasingly important for biodiversity conservation.

Farther north, as part of Washington State's Yakima Basin Integrated Plan, a watershed-wide integrated collaborative approach to managing water resources for multiple benefits, the Tributary Supplementation Program (TSP) is now in its fourth year since its inception. The TSP uses the Kittitas Reclamation District (KRD) canal to augment flows to six upper Kittitas County tributaries that are intersected by the main and south branch KRD canals. Sections of these tributaries to the Yakima River historically have dried up during summer and fall due in part to human-caused changes in flow regimes, such as irrigation diversions, resulting in loss of literally miles of spawning habitat for native fish species, including some protected as threatened or endangered species under the Endangered Species Act (ESA). Dry sections of these tributaries are supplemented with river water delivered through KRD irrigation canals,

reconnecting the lost spawning habitat to the river. KRD has lined about four miles of canals, resulting in conserved water and canal efficiencies that allow for the TSP to occur without impacting irrigation deliveries. Recent spawning surveys have detected Chinook salmon redds (nests) in the newly reopened tributary spawning beds.

Irrigators and their local water agencies have responded to the recent Western droughts with determination, resourcefulness, and innovation. They also are bringing those attributes to bear in planning for a future where "drought" may be a long-term or even permanent condition. Some of these actions are intended to address the immediate crisis while others have been implemented as part of the broad portfolio of actions that successful farmers are employing to stay profitable in today's fierce economic and regulatory climate. There are many positive lessons to be learned from how farmers and ranchers in how they are dealing with current water resource challenges. Learning from these lessons will likely lead to better management of water for food production, economic purposes, and environmental uses.

4. Agriculture and Conservation

Through the Alliance' involvement on the Steering Committee of the North American Climate Smart Agriculture Alliance (NACSAA), we have been monitoring United Nations global climate talks over the past two years and bringing the voice of North American food and fiber producers and land managers to the discussion table. NACSAA believes public policy should provide incentives for climate-friendly and common-sense farm improvements.

Our organization is also represented on the inaugural "Producer Circle" of the Ecosystem Services Market Consortium (ESMC). The goal of the ESMC is to launch a fully functioning national scale ecosystem services market conceived and designed to sell both carbon and water quality and quantity credits for the agriculture sector by 2022.

Much of the Alliance's recent work in the climate arena is accomplished through our involvement with Solutions from the Land (SFL), which was created seven years ago as an ambitious undertaking to advance land-based solutions to global challenges. SFL's vision is that, by 2030, America's farms, ranches and forests will be at the forefront of resolving food system, energy, environmental and climate challenges and achieving global sustainable development goals.

This background should serve to demonstrate that our organization supports ways to improve and expand climate-smart agriculture, resilience, and conservation measures. Our focus in recent years has been to encourage expanded development of market-based mechanisms for carbon sequestration and water quality. With this said, before Western farmers and ranchers can begin to employ creative ways to manage their on-farm water, they first need to ensure that reliable, affordable irrigation supplies are available. As noted above, critical problems remain to be solved in this regard.

Concluding Observations on Climate Change

The impacts of climate change on sensitive Western water supplies, while not totally understood today, will soon significantly challenge all water users in the West – municipal, industrial, agricultural, and environmental. Preparation requires adaptation, innovation, and investment in the future management of Western water supplies. To meet these challenges, our efforts need to begin today – before crises, before conflict, and before there are winners and losers.

RECENT ENCOURAGING DEVELOPMENTS IN WASHINGTON, D.C.

Former President Trump on December 28, 2021 signed omnibus legislation which put into effect a wide range of energy and environmental provisions that were negotiated in the closing days of the lame duck session of the 116th Congress. The massive package included water related appropriation provisions that will benefit Western water users:

- **Bureau of Reclamation Aging Infrastructure Account -** Establishes an aging infrastructure account in Treasury to fund and finance Reclamation's existing maintenance program at reserved and transferred works.
- **Aquifer Recharge Flexibility Act -** Provides greater flexibility for Reclamation to use its facilities for aquifer recharge (applicable west-wide, except California; the Central Valley Project already has a similar authority in place).
- **WaterSMART Extension & Expansion -**Increases the authorization ceiling for the WaterSMART program by $170 million, expands project applicant eligibility to nonprofit conservation organizations, and makes modifications to project eligibility, prioritization, and cost sharing, including "nature-based" infrastructure and prioritizing projects developed through a collaborative process among water users and other stakeholders that enhance drought resilience by benefitting ecosystems and water supplies.
- **Cooperative Watershed Management Program -** Reauthorizes Reclamation's Cooperative Watershed Management Program, which provides grant funding to watershed groups to encourage diverse stakeholders to form local solutions to address their water management needs, for 5 years and adds representatives from disadvantaged communities as eligible participants of a watershed group.
- **Aquatic Ecosystem Restoration -** Establishes an aquatic ecosystem restoration program at the Department of the Interior at $15 million annually for 5 years that will help fund projects to improve the health of fisheries, wildlife, and aquatic habitat in Reclamation states.
- **Snow Water Supply Forecasting -** Authorizes $15 million for a Snow Water Supply Forecasting program at the Department of the Interior, including Airborne Snow Observatory (ASO) programs that can provide more accurate data about expected runoff to benefit improved water system operations.
- **Water Technology Investment -** Increases the authorization for desalination research at Reclamation from $3 million to $20 million annually to provide additional resources to study brine management.

We look forward to working with the 117th Congress and the Biden Administration to find the funding to put these new authorities to work, which could substantially address many of the "asks" advanced in the infrastructure discussion presented earlier in this testimony. We also believe it necessary to extend the Reclamation title in the Water Infrastructure Investment for the Nation (WIIN) Act (P.L. 114-322), which are set to expire this year. Hundreds of millions of dollars will be needed to complete several important surface and groundwater storage and conveyance, water recycling, and desalination projects that are already underway over the next five years.

NEXT STEPS AND CONCLUSIONS

The Alliance' long-term goal is to find solutions to Western water conflicts that protect our Nation's ability to feed ourselves, export food to others, and continue to lead the world in agricultural production. At the same time, we must find ways to accommodate the water supply needs of growing urban areas, energy development, recreation, and environmental preservation. Fair, balanced, and long-lasting solutions will not come easily – they never have. Such solutions require visionary leadership and a firm commitment to sensible, workable policies.

Federal water policy in the past has often reflected a "one size fits all" approach. Farmers, ranchers, and many conservationists know that the best water solutions are unique and come from the local watershed and state level. They know we need policies that encourage agricultural producers, NGOs, other stakeholders, and state and federal agencies to collaboratively work together in a strategic, coordinated fashion.

We must modernize and rebuild parts of the institutional water supply and delivery infrastructure now in place, so that Western water resources can be managed specifically, not generically, and create the water supply resiliency to drought and climate change that this Subcommittee explores today. We must get a handle on changing weather patterns and assess how the agricultural landscape and water security will be impacted due to a changing climate. And, we must develop a clear understanding of how the resulting limitations on our farmers' ability to feed this Nation and the world is impacted when we take domestic agricultural lands out of production to move water elsewhere.

Western irrigated agriculture is a strategic and irreplaceable national resource. It must be valued and preserved by the federal government in the 21st Century – this is our opportunity to build Western irrigated agriculture back better than ever.

The Alliance looks forward to working with your Subcommittee to address the issues we have identified in this testimony and those we have not. We will continue our efforts to ensure irrigated agriculture is able to successfully continue to play a vital role in feeding our Nation while keeping our rural communities and our environment healthy.

Thank you for this opportunity to present this testimony today.

Encl. "Appendix A": January 11, 2021 Western Stakeholder Letter to Congressional Leadership

Appendix "A": Western Stakeholder Letter

January 11, 2021

The Honorable Chuck Schumer
The Honorable Nancy Pelosi
The Honorable Mitch McConnell
The Honorable Kevin McCarthy

Dear Speaker Pelosi, Leaders Schumer, McConnell, and McCarthy:

As you consider further economic stimulus measures during the 117th session of Congress to help our country recover from the negative impacts of COVID-19, we urge that you address the shortcomings of our aging Western agricultural and rural water infrastructure in any future infrastructure or recovery package. We represent thousands of Western farmers, ranchers, water providers, businesses and communities who provide the food our nation relies upon through use of millions of acres of productive land, as well as many of the local and regional public water agencies that supply water to over fifty million Western urban, suburban and rural residents. Our organizations collectively believe that federal investment in a diversified water management portfolio is essential. Such a portfolio MUST be included as essential infrastructure in the next infrastructure or recovery package.

The American West's farmers and ranchers have responded to COVID-19 by developing new ways to grow the nation's food supply while protecting workers on the frontlines, and keeping the nation fed. But the COVID-19 crisis, as with all industries, has revealed weaknesses in agriculture that must be addressed. Our nation clearly needs a stable domestic food supply that both nourishes Americans and safeguards national security. Food security is an issue everyone should be taking more seriously. We cannot wait until the supermarket shelves are empty to take action to protect our ability to feed ourselves and much of the world.

Our nation's water suppliers are also critical service providers. Agricultural and municipal water providers have worked tirelessly throughout the COVID-19 crisis to provide uninterrupted water service and wastewater treatment for irrigation, major cities, at risk communities, and businesses.

To ensure that food can continue to be safely and affordably produced in the West, and that communities, large and small, continue to have access to the water critical to their economies and their health, our organizations believe that critical water supply and wastewater treatment reliability improvements must be included as a necessary part of any federal infrastructure investment. Providing a stable water future for the West will also strengthen our rural communities who often struggle to address water quantity and quality challenges. Beyond longer-term impacts to the West, these infrastructure projects would also bring vital construction jobs which will greatly benefit rural communities impacted by COVID-19 in their efforts to recover. Nationwide, we believe American jobs will also benefit as equipment and materials for these water projects will be provided by American firms.

It has never been more critical that our country prioritize the initial and continual investment in Western water infrastructure necessary to meet current and future demands. Existing water and wastewater infrastructure in the West is aging, as most of the federal water infrastructure projects that benefit our Western communities, from the largest cities to the smallest farms, were built more than 50 years ago. Now, they are in desperate need of rehabilitation and improvement.
In addition, as hydrological conditions in the West change and populations expand, the impacts from our failure to address aging water infrastructure has become increasingly acute, raising serious questions about the system's continued viability without immediate attention. By investing in improvements to water infrastructure and expanding useable supplies today, we believe the nation can prevent a breakdown in the water supply and irrigation systems across the landscape, which could avoid further shortening of supplies and the potential for increased conflict over water supplies.

Pressure is growing to 'solve' current urban and environmental water shortages by simply moving water away from Western irrigated agriculture. If this continues, we will see rising conflict between agricultural, rural, urban and environmental stakeholders, as well as a further decline in our national food security. A visionary bipartisan federal infrastructure package should seek to bolster our aging water infrastructure to keep water flowing to our nation's farms and ranches simultaneous to making improvements for cities and the environment.

Our organizations collectively believe that federal investment in water conservation, water recycling, watershed management, conveyance, desalination, water transfers, groundwater storage, and surface storage is urgently needed for a diversified water management portfolio and that such a portfolio MUST be included as essential infrastructure in the next infrastructure or recovery package. Specific recommended actions include:

- Water conservation, one of the most cost-effective actions that can positively affect water supply stability, needs to continue to be aggressively pursued in conjunction with new water storage and other actions.

- New funding will be needed to kick-start new water recycling, reuse and desalination projects currently being studied or that are ready for construction.

- Additional funding should support new reservoir facilities and operations at existing dams to address climate change risks.

- Programs that fund water conservation and management improvements, fish passage and recovery, and habitat restoration - all in support of water project operations in the Reclamation states of the West, are in need of additional funding to accelerate construction of this "ready-to-go" infrastructure. Bipartisan legislation, including the *Drought Resiliency and Water Supply Infrastructure Act*, among others, lay out a comprehensive vision for how multiple objectives like this can be achieved.

- Environmentally and hydrologically sound investments in new water storage – both surface water and groundwater in order to adapt to a changing hydrology and develop usable and sustainable supplies to meet growing demands for water. We believe that water storage projects should be geared to local circumstances and needs. In some cases, storage projects will be above ground, in others they will be below ground. Additionally, some will be traditional construction using American steel and concrete, while others will be 'green' natural infrastructure projects - all dependent on the wide variety of local needs in place across the West.

- The federal government must remain an active financial partner and expand its involvement in finding 21st century solutions to these water problems in the West. It can do so, either through direct funding to help meet these needs or by developing and expanding federal financing mechanisms (such as the EPA's *Water Infrastructure Finance and Innovation Act*) that have a very low cost to the Treasury and to taxpayers. Future tax legislation should preserve tax-exempt financing and also restore the ability to issue tax-exempt advance refunding bonds.

- Additional federal funding for affordable long-term loans from the Bureau of Reclamation to local districts operating and maintaining federally-owned irrigation projects. These local entities are in need of affordable financing for immediate extraordinary repairs and rehabilitation on their federally-owned canals and water delivery structures as was highlighted in the bipartisan *Water Supply Infrastructure Rehabilitation and Utilization Act*. Most, if not all, of these major construction projects are ready to proceed if direct financing was made available. In short, water resource infrastructure investments should be made more attractive and affordable for the non-federal entities responsible for maintaining these critical facilities.

- Water quality challenges are also critical factors in many communities across the rural West. Many of these challenges can be positively impacted by the proposals above. As an example, an increase in water supply flowing to rural communities can help stabilize water needs. New supplies can be recharged into aquifers, which can help improve underlying water quality. This is especially important in rural areas where groundwater aquifers have been significantly depleted and water levels are critical. Often those communities are faced with the twin challenge of not having enough water for their needs and the water they have being of poor quality. Enhanced water supplies, environmental projects and new conveyance systems can help provide water as well as help recharge depleted aquifers, which in turn help improve rural communities' water quantity and quality over time.

- Beyond monetary assistance, the federal government should also bring forward policy changes that help ensure that water projects are built in a timely fashion. Making funding available for projects is useless if projects take decades to be approved. In the past, Congress has, on a bipartisan basis, put forward significant efforts to improve the efficiency of environmental regulation and permitting processes for other types of infrastructure development. Water infrastructure should not be treated any differently and any infrastructure package should address this concern by streamlining the regulations and permitting processes for water

projects. Commonsense process improvements were included in the *American Recovery and Reinvestment Act of 2009* and can be used as a model for success, as well as others, to ensure timely construction of projects.

- Finally, in order to respond to current and future water shortages, Congress must also encourage federal agencies to implement a more cooperative approach toward achieving multiple goals under existing environmental laws and regulations. And, where such approaches are currently in law, Congress should encourage these agencies to use any and all flexibilities under the law to act with the urgency and promptness that this crisis demands.

As you are already aware, water infrastructure investments not only provide immediate short-term economic benefits and create jobs – vital to a nation facing massive job loss – they are the foundation that the economy will need for the foreseeable future.

If and when additional infrastructure funding is discussed as part of a larger economic stimulus package, we need your help to ensure that federal dollars flow and timely improvements are constructed to our nation's critical aging water infrastructure needs.

We look forward to working with you to address this critical need and national security interest.

Sincerely,

A&B Irrigation District (ID)
Agribusiness & Water Council of Arizona
Almond Alliance of California
American AgCredit
American Agri-Women
American Farm Bureau Federation
American Farmland Trust
Arnold Irrigation District (OR)
Arizona Cattle Feeders Association
Arizona Cotton Growers Association
Arizona Farm and Ranch Group
Arizona Farm Bureau
Association of California Water Agencies
Biggs-West Gridley Water District (CA)
Black Canyon Irrigation District (ID)
Boise-Kuna Irrigation District (ID)
Browns Valley Irrigation District (CA)
Butte Water District (CA)
California Agricultural Irrigation Association
California Alfalfa & Forage Association
California Apple Commission
California Association of Wheat Growers
California Avocado Commission
California Bean Shippers Association
California Blueberry Association
California Blueberry Commission
California Cattlemen's Association
California Citrus Mutual
California Cotton Alliance
California Cotton Ginners & Growers Assoc.
California Farm Bureau
California Farm Water Alliance
California Fresh Fruit Association
California Grain & Feed Association
California Seed Association
California State Beekeepers Association
California State Floral Association
California Walnut Commission
California Warehouse Association
California Water Alliance
California Water Service
California Women for Agriculture
Carlsbad Irrigation District (NM)
Central California Irrigation District
Central Arizona
Irrigation and Drainage District

Central Oregon Irrigation District
Central Nebraska
Public Power and Irrigation District
Central Utah Water Conservancy District
Central Valley Project Water Association (CA)
Charleston Drainage District (CA)
City of Shasta Lake (CA)
CoBank
Colorado Farm Bureau
Colorado
Fruit & Vegetable Growers Association
Colorado Potato Administrative Committee
Colorado River
Energy Distributors Association
Colorado River District (CO)
Colorado Water Congress
Columbia Basin Development League (WA)
Columbia Canal Company (CA)
Del Puerto Water District (CA)
Deschutes Basin Board of Control (OR)
Dolores Water Conservancy District (CO)
Dunnigan Water District (CA)
Eagle Field Water District (CA)
East Columbia Basin Irrigation District (WA)
Eastern Municipal Water District (CA)
Electrical District #3 of Pinal County (AZ)
Elephant Butte Irrigation District (NM)
Elsinore Valley Municipal Water District (CA)
Family Farm Alliance
Family Water Alliance (CA)
Farm Credit Council
Farmers Conservation Alliance (OR)
Farwell Irrigation District (NE)
Far West Equipment Dealers Association
Fremont-Madison Irrigation District (ID)
Fresno Madera Farm Credit, ACA (CA)
Friant Water Authority (CA)
Garrison Diversion Conservancy District (ND)
Glenn-Colusa Irrigation District (CA)
Groundwater Management Districts Assoc.
Grower-Shipper Association of Santa Barbara and San Luis Obispo Counties (CA)
Hawaii Farm Bureau
Idaho Dairymen's Association
Idaho Farm Bureau
San Luis & Delta-Mendota
Water Authority (CA)
Idaho Potato Commission
Idaho Water Resources Research Institute
Idaho Water Users Association
Imperial Irrigation District (CA)
Imperial Valley
Vegetable Growers Association (CA)
Irrigation & Electrical Districts Association of Arizona
Kansas Bostwick Irrigation District
Kansas Water Congress
King Hill Irrigation District (ID)
Kings River Conservation District (CA)
Kittitas County Farm Bureau (WA)
Kittitas Reclamation District. (WA)
Kittitas County Timothy Hay
Growers & Suppliers (WA)
Klamath Irrigation District (OR)
Klamath Water Users Association (OR)
Lindsay-Strathmore Irrigation District (CA)
Little Snake River Conservation District (WY)
Little Snake River
Water Conservancy District (WY)
Maricopa-Stanfield
Irrigation & Drainage District (AZ)
McKinleyville
Community Services District (CA)
Mercy Springs Water District (CA)
Meridian Farms Water Company (CA)
Modesto Irrigation District (CA)
Montana Farm Bureau
Montana Water Resources Association
Monterey One Water (CA)
Monterey Peninsula
Water Management District (CA)
National Cattlemen's Beef Association
Nampa & Meridian Irrigation District (ID)
National Onion Association
National Pecan Federation
National Water Resources Association
Natomas Mutual Water Company (CA)
Nebraska Farm Bureau
Nevada Farm Bureau Federation
Nevada Irrigation District (CA)

New Magma
Irrigation and Drainage District (AZ)
New Mexico Chile Association
New Mexico Farm and Livestock Bureau
Niobrara Conservation District (WY)
North Dakota Water Users Association
Northern California Water Association
Northern Water (CO)
North Side Canal Company (ID)
North Unit Irrigation District (OR)
Ochoco Irrigation District (OR)
Olive Growers Council of California
Orange Cove Irrigation District (CA)
Oregon Association of Nurseries
Oregon Farm Bureau
Oregon Potato Commission
Oregon Water Resources Congress
Orland Unit Water Users Association (CA)
Pacific Egg and Poultry Association
Panoche Drainage District (CA)
Panoche Water District (CA)
Patterson Irrigation District (CA)
Pioneer Irrigation District (ID)
Portneuf Irrigating Company (ID)
Pot Hook Water Conservancy District (CO)
Princeton-Codora-Glenn Irrig. District (CA)
Provident Irrigation District (CA)
Public Lands Council
Queen Creek Irrigation District (AZ)
Quincy-Columbia Basin I.D. (WA)
Reclamation District No. 108 (CA)
Reclamation District 1500 (CA)
Regional Water Authority (CA)
Richvale Irrigation District (CA)
River Garden Farms (CA)
Rocky Mountain Farmers Union
Roza Irrigation District (WA)
Roza-Sunnyside Joint Board of Control (WA)
Rubicon Water (facilities in CA and CO)
Sacramento River
Settlement Contractors Corporation (CA)
San Carlos Irrigation and Drainage Dist. (AZ)
San Joaquin River Exchange Contractors
Water Authority (CA)
San Juan Water District (CA)
San Luis Canal Company (CA)
San Luis & Delta-Mendota Water Authority
Salt River Project (AZ)
Sargent Irrigation District (NE)
Solano Irrigation District (CA)
South Columbia Basin Irrigation District (WA)
Southeastern Colorado
Water Conservancy District
Southwestern Water Conservation Dist. (CO)
Southwest Kansas
Groundwater Management District No. 3
South Valley Water Association (CA)
South Yuba Water District (CA)
Sunnyside Division Board of Control (WA)
Sunnyside Valley Irrigation District (WA)
Sutter Extension Water District (CA)
Sutter Mutual Water Company (CA)
Swalley Irrigation District (OR)
Tehama Colusa Canal Authority (CA)
Truckee-Carson Irrigation District (NV)
Tulare Lake Basin Water Storage District (CA)
Tulelake Irrigation District (CA)
Tumalo Irrigation District (OR)
Turlock Irrigation District (CA)
United Potato Growers of America
United Water Conservation District (CA)
Utah Farm Bureau
Ventura County Agricultural Association (CA)
Washington Farm Bureau
Washington State Potato Commission
Washington State Water Resources Association
WateReuse Association
Weber Basin Water Conservancy District (UT)
Wellton-Mohawk
Irrigation and Drainage District (AZ)
Western Agricultural Processors Association
Western Canal Water District (CA)
Western Growers Association
Western Municipal Water District (CA)
Western Urban Water Coalition
Wyoming Farm Bureau
Yakima Basin Joint Board (WA)
Yakima-Tieton Irrigation District (WA)
Yosemite Farm Credit (CA)
Yuba Water Agency (CA)