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**Testimony for the Hearing Record of Patrick O’Toole  
On behalf of  
Family Farm Alliance**

**Submitted to the United States Senate  
Committee on Environment and Public Works**

**Legislative Hearing on “Water Resources Development Act of 2020”  
September 18, 2019**

Good morning, Chairman Barrasso, Ranking Member Carper and Members of the Committee:

On behalf of the Family Farm Alliance (Alliance), thank you for the opportunity to present this testimony on the 2020 Water Resources Development Act (WRDA). My name is Pat O’Toole, and I have served as President of Board of Directors of the Alliance for over 14 years. As you know, WRDA is a biennial piece of legislation that is the main vehicle for authorizing water projects to be studied, planned and developed by the U.S. Army Corps of Engineers (Corps). It is also the legislative vehicle for implementing policy changes with respect to the Corps’ water resource projects and programs. As such, this legislation is very important to the rural communities of the Western United States.

**About the Family Farm Alliance**

The Alliance is a grassroots organization of family farmers, ranchers, irrigation districts, and allied industries in 16 Western states. The Alliance is focused on one mission: To ensure the availability of reliable, affordable irrigation water supplies to Western farmers and ranchers. We are also 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.

**Personal Background and Experience with Water Development**

I have served on the Family Farm Alliance’s Board of Directors since 1998 and was named as the organization’s President in 2005. I am also a former member of Wyoming’s House of Representatives. I presently serve on the Advisory Committee for AGree, a national agricultural

policy group, and work closely with both the Intermountain Waterfowl Joint Venture and Partners for Conservation.

My family has a strong background in irrigated agriculture and our 125-year old ranch (Ladder Ranch) located near Savery, Wyoming produces cattle, sheep and hay. My family and Ladder Ranch were the recipients of the distinguished 2014 Wyoming Leopold Environmental Stewardship Award. Our ranch straddles the Wyoming-Colorado border and has long afforded me the opportunity to view some unique water issues first-hand. I have testified before Congressional committees several times, where, among other things, I have highlighted the permitting challenges I have encountered in building the Little Snake Supplemental Irrigation Supply Project (High Savery Project) in Wyoming. That project was built in less than two years, but it took more than 14 years to permit. That reservoir is now delivering water that benefits multiple uses on the Little Snake River.

## Overview

Water challenges in the West are significant and daunting. These challenges are not unique to any one state; rather they impact every state west of the 100<sup>th</sup> Meridian. Despite wet conditions this winter, the Colorado River Basin has experienced the longest dry spell in recorded history and one of the driest in the past 1,200 years.<sup>1</sup> According to research evaluating tree rings, hydrological conditions in California in the mid-2010s were the worst to hit the region since the 13th century.<sup>2</sup> Drought conditions in the Pacific Northwest over the last half-decade have been severe. Just this year, heavy rains and snowmelt overwhelmed parts of the Platte-Missouri River system. When we do have good water years, there is insufficient storage available to take advantage of mother nature's generosity in the dry years that inevitably follow.

All of these examples underscore the critical importance of having sufficient infrastructure in place to optimize water supplies. The need is obvious, and this belief is shared by many in the West. Earlier this year, the Family Farm Alliance – working with the California Farm Bureau Federation and Western Growers Association – transmitted letters signed by over 100 national and Western agriculture and water organizations, calling upon Members of Congress to develop an infrastructure package that addresses water infrastructure needs for storage and conveyance.

Water is the lifeblood of our nation. Without reliable and affordable water supplies, every sector of our economy would suffer – from agriculture, to manufacturing and high-tech, to local community needs. Food cannot be grown, businesses cannot operate, and homes and schools cannot be built or operate without water. Critical water infrastructure must be maintained and modernized to ensure the delivery of water today and for future generations. As Congress considers

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<sup>1</sup> "Lingering Colorado River Drought Could Lead to Water Shortages," John Fialka, E&E News, 6 Sept 2018. Available: <https://www.scientificamerican.com/article/lingering-colorado-river-drought-could-lead-to-water-shortages/>

<sup>2</sup> Evidence Suggests California's Drought is the Worst in 1,200 Year, Woods Hole Oceanographic Institution, News Release, Dec. 14, 2014 found at <http://www.whoi.edu/news-release/California-drought>.

an infrastructure package, it is of paramount importance that maintenance, rehabilitation and development of water infrastructure is a high priority.

Many communities in the semi-arid and arid West – as well as the farms and ranches they are intertwined with – owe their existence, in large part, to the certainty provided by water stored and delivered by the U.S. Bureau of Reclamation (Reclamation) and other state and local water storage projects. The Corps also has a presence in the West, although more irrigated acreage is supplied by projects constructed by Reclamation. The Corps provides outdoor recreation opportunities to the public, and provides 24% of U.S. hydropower capacity. Their most visible missions include planning, designing, building, and operating navigation locks and dams; other civil engineering projects include flood control, beach nourishment, and dredging for waterway navigation; design and construction of flood protection systems through various federal mandates; and environmental regulation and ecosystem restoration. Clearly, the federal government plays an enduring role in Western water supply, flood control and waterway navigation infrastructure maintenance, rehabilitation and development. They do so consistent with state water laws, including working with local water interests in support of their efforts to manage water resources.

It is critical that water infrastructure for agricultural water providers is recognized as nationally important and qualified as such in potential infrastructure legislation. Qualifying projects should include water conveyance, surface water storage, aquifer recharge, and other water supply enhancement opportunities. Infrastructure legislation should address aging water infrastructure as well as the development of new infrastructure.

Western water managers face significant regulatory and policy-related challenges. Water infrastructure that was built early in the last century is aging. Meanwhile, less progress has been made at the federal level towards developing new and improved water infrastructure to keep up with the growing water demands of agriculture, expanding cities, energy production, and other needs.

While water conservation, water efficiency, and water transfers can be important tools for addressing certain water supply challenges, these tools are limited and do not yield the quantities of water that storage facilities do. Adequate water supplies for the future require supply enhancement measures – new and expanded water storage projects - that provide long-term solutions across the West.

For farmers to survive and for food to continue to be produced in America, a stable water supply must be available. In many areas of the West, water resources are available, and projects are waiting to be developed. However, the policies of the federal government make development of that water nearly impossible. Water wars are being fought throughout the West simply because we have not had the vision to develop new, dependable sources of water for our collective future.

Given the magnitude of the food security issue to the nation’s economic and social wellbeing, policy makers must prioritize protection, enhancement and further development of our water supplies. This economically critical infrastructure is aging and needs improvement.

Such aging infrastructure presents a further challenge because it requires ever increasing maintenance and replacement investments. For example, as of 2013, the replacement value of the U.S. Bureau of Reclamation’s infrastructure assets was \$94.5 billion. Investing in this infrastructure on the front end will save taxpayers’ money in the long run and allow us to preserve it, and the many benefits it provides, for future generations.

We appreciate this opportunity to discuss conceptual ideas for the 2020 WRDA. The following “wish list” assumes that the Senate WRDA under consideration will not necessarily be a Corps-centric bill, but could provide a vehicle to address other national and Western water resources challenges, as well. This has happened past Congresses, with the passage of the Water Infrastructure Improvements for our Nation (or WIIN) Act of 2016 and America’s Water Infrastructure Act (AWIA) of 2018. We believe a Western water title of the bill could provide a vehicle for several other water bills currently being considered in Congress. There are other ideas and legislative proposals that could also be included in such a title, as described further below.

### **Considerations for 2020 Water Resources Development Act: Related Western Water Legislation**

As you know, several water bills have been introduced in this Congress that would be appropriate to include in a Western water title of WRDA 2020. These bills are summarized below.

#### **S. 2044 – The Water Supply Infrastructure Rehabilitation and Utilization Act**

S. 2044, sponsored by Senator McSally (R-ARIZONA) includes provisions to deal with extraordinary maintenance challenges and is designed to amend the aging infrastructure section of a 2009 law (P.L. 111-11) that was created, in part, to help prevent future disasters of the type that occurred in 2008, when the Truckee Canal failed near Fernley, Nevada. S. 2044 – introduced just before the July Fourth recess - is another bill that gives local operators of federally owned facilities the tools they need to maintain and improve aging water infrastructure in a timely manner. Alliance Advisory Committee Member Wade Noble (ARIZONA) testified on behalf of the Alliance in July before the Senate Energy and Natural Resources Committee in support of this bill. This bill contains two important provisions.

The first provision deals with extraordinary maintenance challenges and is designed to amend the aging infrastructure section of P.L. 111-11, which contains provisions that many Western water interests pushed for following the Truckee Canal failure in 2008. P.L. 111-11 authorizes Reclamation to finance extraordinary maintenance on reserved and transferred works up to 50-years with Treasury rate interest rates – but appropriated funding is needed up front for these

provisions to work. Unfortunately, Reclamation rarely budgets for these non-federal obligations. This bill requires Reclamation to take requests from water users who require federal funding and long-term financing terms to make these improvements possible and to report those requests to Congress for their consideration in the appropriations process.

S. 2044 also includes provisions that create a pilot project for entities who operate Reclamation facilities to request a re-evaluation of their Corps water control manuals. Water managers are faced with greater stresses on available supplies and continue to seek to balance reservoir benefits for water supply, fisheries, and flood protection. The Corps has traditionally operated dams and reservoirs for flood control purposes. In some cases, operation might be constrained by limited on-the-ground water information or existing flood guide rule curves that were developed decades ago, before the advent of modern precipitation forecasting technology. There are opportunities to work with the Corps to demonstrate the feasibility of new technology like Forecast Informed Reservoir Operations (FIRO). Applying FIRO with deviations from past rules could allow for more proactive, rather than reactive, reservoir operations.

### **S. 1932 – The Drought Resiliency and Water Supply Infrastructure Act**

The Alliance in June supported a bipartisan Western drought and water supply bill introduced in the Senate by Senators Dianne Feinstein (D-CALIFORNIA), Cory Gardner (R-COLORADO), Martha McSally and Kyrsten Sinema (D-ARIZONA). The *Drought Resiliency and Water Supply Infrastructure Act* (S. 1932) builds on Senator Feinstein’s 2016 California drought legislation that was included in the WIIN Act. S. 1932 extends funding under the WIIN Act for an additional five years, including \$670 million for surface and groundwater storage projects, and supporting conveyance; \$100 million for water recycling projects; and \$60 million for desalination projects. It creates a new loan program for water agencies at 30-year Treasury rates (currently about 2.6 percent) to spur investment in new water supply projects. Repayment can be deferred until five years after completion of the project. This bill also authorizes \$140 million for habitat restoration and environmental compliance projects, including forest, meadow and watershed restoration and projects that benefit threatened and endangered species.

### **H.R. 2473 - Securing Access for the Central Valley and Enhancing Water Resources Act**

This bill, sponsored by Rep. Harder (D-CALIFORNIA) provides a broad approach to addressing water issues facing California’s Central Valley, home to many Family Farm Alliance members. It does this by increasing storage opportunities, spurring innovation, and making investments in our aging infrastructure. The bill also leverages federal resources to identify prime locations for groundwater storage and recharge in California and across the Western United States. This bill requires Reclamation to expedite feasibility studies for four specific storage projects in the Central Valley, including: Sites Reservoir, Del Puerto Canyon Reservoir, Los Vaqueros and San Luis Reservoirs and provides \$100 million in storage funding. The bill also invests in water reuse and recycling by increasing funding for WaterSMART programs from \$50 million to \$500 million and extending the program's authorization. It establishes a water infrastructure and drought resolutions

fund to provide \$300 million for water surface and groundwater storage, reclamation and reuse, and WaterSMART program projects. The bill would also create an innovating financing program which would provide low-interest federal loans to fund local water infrastructure projects, and would reauthorize the Rural Water Supply Act.

### **S. 1570 – The Aquifer Recharge Flexibility Act**

The legislation – introduced by Senator Risch - aims to improve aquifer levels in Idaho and across western states by expanding the ability for aquifer recharge through federal lands and facilities. It would apply to all Western states except for California (because of existing Central Valley Project Improvement Act recharge authority) and would allow Reclamation-owned facilities to be used to recharge aquifers in the West. Currently, such recharge projects need to go through an approval process that requires easements and congressional authorization. Some restrictions would still apply in the bill, such as that water or power service contracts for Reclamation projects and existing obligations to fish, wildlife or water quality protection aren't affected. S. 1570 has a House companion bill sponsored by Rep. Fulcher (R-IDAHO).

### **H.R. 1621 Water Supply Permitting Coordination Act**

This bill – introduced again by Rep. McClintock (CALIFORNIA) would authorize the Secretary of the Interior to coordinate Federal and State permitting processes related to the construction of new surface water storage projects on lands under the jurisdiction of the Secretary of the Interior and the Secretary of Agriculture and to designate the Bureau of Reclamation as the lead agency for permit processing, and for other purposes. This bill would establish a framework in which federal agencies with permitting responsibilities for the construction of new surface water storage projects must work together, coordinate their schedules, share data and technical materials, and make their findings publicly available.

All of these bills are supported by the Family Farm Alliance, and would appropriate to include in a Western water title of the 2020 WRDA. We urge that you coordinate with your colleagues on the Senate Energy and Natural Resources (ENR) Committee to investigate opportunities to use WRDA 2020 as a vehicle to advance these provisions in a Western U.S. and/or Reclamation title.

## **Considerations for 2020 Water Resources Development Act: Other Concepts**

The following recommendations primarily consist of issues we have advanced in recent WRDA and Western drought legislative initiatives. Also, the recent flooding in the Midwest could provide a catalyst to address some of the concerns your committee heard at the field hearing in Iowa a few months back. Here are some recommendations, in no order of priority:

## **WIIN Act Extension**

We support efforts to extend the Water Infrastructure Improvements for our Nation (or WIIN) Act, which is set to expire in 2021. As you know, the WIIN Act provides a much-needed streamlined process for the review, approval and funding of water infrastructure projects – both federal and non-federal. Our members in several Western states have benefited from this program, and more are sure to see value from this in the future. The aforementioned S. 1932 would update and/or replace some of the water supply development provisions in the WIIN Act.

## **Pilot Project to Adjust Flood Control Curves**

The 2018 AWIA authorized the Corps to receive and expend funds from an owner of a non-Federal reservoir to formulate, review, or revise operational documents for any non-Federal reservoir to prescribe regulations for the use of storage allocated for flood control or navigation. Some of our members report that reviewing and adjusting Corps flood control curves can be a steep challenge. Water users who have been working with the Corps in some cases have found it a difficult process, with the Corps very cautious about making such changes. It may be helpful to provide some guidance to the Corps to return to Congress with a report identifying recent projects where storage capacity in a reservoir(s) has been reallocated or the Flood Control Manual has been altered to periodically allow for additional storage.

## **Water Supply Permitting Coordination**

We will continue to advocate for advancing Chairman Barrasso's initiative to streamline the current multi-agency permitting processes that can delay the construction of new or expanded surface water storage projects by creating a "one-stop permitting shop" process through Reclamation. Past legislation driven by the Chairman (similar to that introduced by Rep. McClintock - H.R. 1621, above) set a schedule and timelines for agencies to consult and cooperate to complete environmental compliance analyses on these projects. This would also allow third parties to pay the costs of such permit processing to speed things up. Congress provided similar authorities to the Corps in the 2014 Water Resources Reform and Development Act (WRRDA 2014), P.L. 113-121, a law that was passed in both the House and Senate on a bipartisan basis and was signed into law by President Obama.

These provisions would direct the Secretary of the Interior (through Reclamation) to serve as a central hub for all federal permits, approvals, and decisions required related to new water storage projects. This includes permits for Clean Water Act (CWA), National Environmental Policy Act (NEPA), and Endangered Species Act (ESA) compliance, among the others. In carrying out this task, Reclamation would be directed to identify all federal agencies with permitting responsibilities or authority, notify them of pending applications, and set a schedule by which all cooperating agencies must complete and submit their reviews and permits. Cooperating agencies would be required to adhere to the coordinated schedule and use one unifying document for all environmental reviews. These provisions would be intended to significantly reduce the time, cost,

and inefficiencies associated with the existing multi-track, multi-agency NEPA analyses. Currently, each reviewing agency compiles its own data and reviews it separately in a vacuum.

These provisions should also allow willing states to participate as cooperating agencies. By allowing states to be involved at their discretion, the review process could include state developed science, data, and technical materials. This section should also require that, consistent with existing law, all relevant project data be made publicly available online. Finally, in order to help make multi-purpose surface storage projects more viable in an era of tightened federal budgets, this section of the bill should include a mechanism in which non-federal public entities are allowed to contribute financially to help defray the costs of the "one-stop shop" permitting review process.

An "opt-out" provision should be provided that would allow local project sponsors to proceed on a different project implementation path that has historically provided successful outcomes with another federal agency in the lead role. Meeting the challenge of expanding and modernizing the West's aging water infrastructure will require highly qualified professionals serving in both the public and private sectors. Very rarely are there "one size fits all" templates that apply to management of Western water resources challenges.

In many cases, local water agencies have long-time relationships with local and regional Reclamation engineers and managers that have led to successfully completed projects, such as the ongoing collaborative work in the Yakima Basin in Washington State, where successful water and environmental projects are being completed with Reclamation functioning as the lead federal agency. In other cases, local entities have developed close working relationships with other federal water agencies such as the Corps. In these cases, local entities should be able to continue to work with the federal agency they successfully worked with in the past for projects of this nature. To cover this range of possibilities, the "opt-out" section should provide flexibility for local project sponsors to either 1) engage with Reclamation in the facilitated permitting process articulated in this bill; or 2) opt-out, and proceed on a project implementation path that has historically provided successful outcomes with another federal agency such as the Army Corps in the lead role.

We believe provisions should be included that require the Secretary of the Interior to submit to the non-federal entity an estimate of the total cost of the federal administrative permitting process for the proposed projects and to provide a scheduled update on the actual administrative costs with an appropriate explanation of any major cost differences.

This section should also include language with a specific reference to non-federal state and local water supply projects that could be integrated with the operation of federally owned facilities. We want to ensure Reclamation is the lead agency in the case of permitting a non-federally built storage project that has a direct federal nexus with a Reclamation project – i.e. Sites Reservoir (California)– where it will be integrated into the operation of the Central Valley Project (as proposed by the local Joint Power Authority) but remain a non-federally developed and owned



facility. We would be happy to work with Committee staff to prepare specific language that would address this concern.

### **Water Rights Protection**

The Alliance has long advocated that solutions to conflicts over the allocation and use of Western water resources must begin with recognition of the traditional deference to state water allocation systems and laws. We have previously testified in support of the Water Rights Protection Act (WRPA), introduced in past Congresses, and in this Congress, it was introduced by Rep. Tipton (COLORADO) as H.R. 579. WRPA-like provisions would protect communities, businesses, recreational opportunities, farmers and ranchers as well as other individuals that rely on privately held state-based water rights for their livelihood from federal takings. Specific language should prohibit the Department of the Interior (Interior) and U.S. Department of Agriculture (USDA) from conditioning any permit, lease, or other use agreement on the transfer of a non-federally held water right to the U.S. and directs federal policy to be consistent with state water law for surface water and groundwater resources.

Our farmers and ranchers rely on their vested water rights to secure operating loans in order to irrigate and produce crops and water livestock. Federal agencies should not be able to leverage those private water rights against farming and ranching families who have long depended upon federal permits and leases to support actions like grazing.

### **Permits for Water Transfers**

The Supreme Court a few years back declined to review a George W. Bush-era rule exempting water transfers from Clean Water Act permits, leaving in place a lower-court decision that reinstated the policy. The U.S Environmental Protection Agency (EPA) issued the Water Transfers Rule in 2008 that excludes inter-basin water transfers from permitting requirements. Such systems are common in drinking water, irrigation, flood control and power generation infrastructure throughout the country. The rule formalized EPA's longstanding position that water transferred from one body of water to another via a pipe, tunnel or pumping station doesn't require a CWA National Pollutant Discharge Elimination System (NPDES) permit as long as there wasn't an industrial, municipal or commercial use along the way.

We support including provisions in 2020 WRDA that codify the existing CWA NPDES exclusion for the conveyance of waters of the U.S. when the transferred water is not subject to intervening industrial, municipal or commercial use. This would effectively limit any potential new level of regulation, permitting and certain litigation that could be put into place by another future Administration that could effectively hamstring the economies of states like Arizona, California, Colorado, Wyoming and other Western states, where millions of acre-feet of water are delivered through inter-basin transfers every year.

## **Missouri River Flooding**

Farmers in the lower Missouri River have voiced serious concerns system about 1) impact of ecosystem priorities on traditional flood control responsibilities of the Corps; and 2) the need for more storage in the lower part of the system, below the big dams on the Missouri River system in the Dakotas and Montana. With the attention on the recent flooding in the Midwest, WRDA could provide a forum to tackle some of the problems that have surfaced, there, which your Committee has been tracking in recent hearings.

## **Reclamation Fund**

Aging Reclamation infrastructure is a critical concern, as evidenced in Chairman Barrasso's own state of Wyoming. In the early morning hours of July 17, an underground tunnel collapse on the Fort Laramie Canal caused water to back up and the canal bank to breach, leaving 104,000 acres dry as repairs are planned and completed. The Fort Laramie Canal provides irrigation water to 104,000 acres in Wyoming and Nebraska served by the Goshen and Gering-Fort Laramie Irrigation Districts and two ditch companies. More than 400 farms in Wyoming alone rely on it.

In California's Central Valley, subsidence is threatening the integrity of hundreds of miles of canals – such as the Friant-Kern Canal - and other irrigation conveyance and storage structures. More disasters of this type loom on the horizon, and we need to apply the highest levels of creativity to find funding and financing resources to tackle aging water infrastructure challenges now.

The House Natural Resources Oversight and Investigations Subcommittee held a hearing in July 2019 to review the Bureau of Reclamation's infrastructure funding, including review of current balances in the Reclamation Fund at Treasury. The Reclamation Fund was established to help pay for construction and maintenance of those water projects in the West, but receipts to the fund have exceeded its annual appropriations, leading to a surplus balance of almost \$17 billion.

Earlier this year, the Alliance supported legislation that would extend the Reclamation Water Settlement Fund, which allows for direct access to the Reclamation Fund. The Alliance supported this legislation, since tribal water rights settlements will continue to move forward, with or without the Fund. Future settlements that are authorized by Congress will hit Reclamation's budget even harder. However, that support was conditioned with a request that Congress apply a similar approach in addressing and modernizing aging water structures utilizing existing balances in the Reclamation Fund. We were pleased to see the House subcommittee seriously address this concern with a hearing.

## **Green Project Reserve for the Clean Water State Revolving Fund**

The Green Project Reserve (GPR) is a fund that is currently included in annual appropriations, where not less than 10 percent of the funds made available to each state for Clean Water State Revolving Fund (CWSRF) capitalization grants are set aside to address green infrastructure, water or energy improvements, or other environmentally innovative activities (those that demonstrate new and/or innovative approaches to delivering services or managing water resources in a more sustainable way). These four categories of projects are the components of the GRP.

Congress' intent in enacting the GPR was to direct state investment practices in the water sector to guide funding toward projects that utilize green or "soft-path" practices to help utilities enhance water and energy conservation, among other objectives. The EPA WaterSense program defines water efficiency as the use of improved technologies and practices to deliver equal or better services with less water.

Water efficiency encompasses conservation and reuse efforts, as well as water loss reduction and prevention, to protect water resources for the future. This includes retrofitting or replacement of existing agricultural irrigation systems to more efficient agricultural irrigation systems.

Energy efficiency is the use of improved technologies and practices to reduce the energy consumption of water quality projects, use energy in a more efficient way, and/or produce/utilize renewable energy. This would include renewable energy projects such as wind, solar, geothermal, micro-hydroelectric, and biogas combined heat and power systems (CHP) that provide power to a Publicly Owned Treatment Works. It also includes micro-hydroelectric projects involve capturing the energy from pipe flow.

Over time, GPR projects could enable utilities to take savings derived from reducing water losses and energy consumption, and use them for public health and environmental enhancement projects. EPA expects that green projects will help the water sector improve the quality of water services without putting additional strain on the energy grid, and by reducing the volume of water lost every year.

The GPR sets a new precedent for the CWSRFs by targeting funding towards projects that States may not have funded in prior years. We would like your Committee to include provisions in 2020 WRDA to make the GRP "permanent".

### **Principles to Consider**

The Congress and the federal government certainly cannot change the hydrology of the West, but there is a role it can play to support family farmers and ranchers. As the Committee continues its efforts to develop policies to improve water management in the long-term, we ask that you consider the following observations and principles:

- One size does not fit all. The best solutions come from the local level, and program funding and implementation criteria should be flexible to best apply to and fall within the context of what local watershed interests are doing.
- State water laws, compacts and decrees must be the foundation for dealing with shortages.
- Water use and related beneficial use data must be accurately measured and portrayed.
- Benefits of water use must reflect all economic / societal / environmental impacts.
- Water conservation can help stretch water supplies, but has its limits in certain situations.
- Public sentiment supports water remaining with irrigated agriculture, and developing strategic water storage as insurance against shortages.
- Technologies for water reuse and recycling are proven effective in stretching existing supplies for urban, environmental and other uses.
- Planning for water shortage in the West must look to the long-term in meeting the goals of agriculture, energy, cities, and the environment.
- A successful water shortage strategy must include a “portfolio” of water supply enhancements and improvements, such as water reuse, recycling, conservation, water-sensitive land use planning, and water system improvements. New infrastructure and technologies can help stretch water for all uses.
- Unintended consequences associated with reducing productive agricultural land/groundwater recharge/riparian habitat benefits should be avoided and, if unavoidable, minimized and fully mitigated.

It is critically important for policy makers to understand the dynamics of how streams work, and how important the role of upstream water storage is to provide balanced irrigation components downstream. Our members have a demonstrated track record of implementing projects to improve water use efficiency. However, there are other areas of the West where well-managed flood irrigation operations provide multiple critical benefits: food production, groundwater recharge, and wetlands habitat hundreds of species of wildlife. Snowpack-driven systems feed wetlands in Western intermountain areas. While 70 percent of the land in the West is owned by the federal government, 70 percent of the wetlands occur on the 30 percent of the land in private ownership. Wetland resiliency comes from senior water agricultural water rights remaining functional and lucrative. Irrigated working lands provide multiple environmental and societal benefits.

## **Conclusion**

Extreme hydrologic events – marked by drought on one end, and floods on the other – will require everyone in the West to adopt a new paradigm, one that truly promotes wise management of this limited and valuable resource. This new paradigm will also mean additional investment in technology, conservation and new water storage and management infrastructure in order to deal with the uncertainties that lay before us. We are confident that your Committee will once again show a strong commitment to existing and future water infrastructure, recognize the unique challenges faced by rural communities, and take strong strides to address those challenges.

The public infrastructure challenges our Nation is currently facing are daunting, and they will require innovative solutions. The infrastructure investments made by prior generations have benefited this country for over a hundred of years. Now it is this generation's responsibility to invest in our water infrastructure for future generations.

Thank you again for the opportunity to testify on this important legislation. The Family Farm Alliance and our members stand ready to assist you in your efforts to begin assembling the 2020 WRDA. I will answer any questions you may have.