U.S. House of Representatives Committee on Natural Resources
Subcommittee on Water, Oceans and Wildlife
March 11, 2021 Oversight Hearing: "Building Back Better: Building Resilience for the Economy, Climate and Ecosystems"
Questions for the Record Submitted to Mr. Dan Keppen

Answers from Dan Keppen 3/29/2021

Questions from Representative González-Colón

In your testimony you discussed some of the water supply and management problems faced by our fellow Americans in the Western states, including recurring droughts, and the need for the federal government to invest in water infrastructure and other policies to mitigate these issues.

In Puerto Rico, although not a Western state, we can relate to many of these concerns. We've long faced water efficiency and reliability issues. For example, is estimated that 55% of our water authority's produced water is lost in distribution, mainly due to pipe ruptures, leakages, and aged infrastructure.

Our water challenges are further complicated by Puerto Rico's vulnerability to droughts. In 2015, extreme drought conditions on the Island resulted in water rationing for 1.2 million people and over $14 million in agricultural losses. Last year we also faced a drought that forced the state government to implement water rationing measures impacting over 140,000 households, right in the middle of the COVID pandemic.

Question 1a: Based on your experience, can you briefly elaborate on the need to invest in water conservation measures in order to mitigate some of these problems and build resiliency in our economy?

Answer:

As stated in my recent testimony, 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. While there has been and will always be a need to invest in better water conservation technologies and methodologies to help build resiliency in our economy, 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.

The water shortage problems we all face vary by region, topography, climate, soil conditions, hydrology, and crop. These problems have some elements in common, including inadequate or

deteriorating water storage infrastructure, inflexible or outdated operational requirements, and regulatory conditions on operations. Solutions also vary by state or by region, but they, too, are characterized by certain common elements, including creativity, flexibility and balance.

The Family Farm Alliance report, "*Innovations in Agricultural Stewardship: Stories of Conservation & Drought Resilience in the Arid West*,"[1] focuses on case studies that profile producers across the Colorado River Basin and beyond who – with curiosity, creativity and seasons of trial and error – are conserving resources while enhancing productivity. The Alliance teamed up with the National Young Farmers Coalition on this report with the aim of elevating the voices of farmers and ranchers who are employing smart solutions to build drought resilience, steward water and grow good food.

Some of the farmers highlighted in the Alliance report are integrating efficient irrigation technology with soil health to increase both productivity and water savings. Others are navigating conservation within constraints outside of their control, such as the operations of the ditches which deliver water to farms. To paint a fuller picture of the complexities and nuances of agricultural water conservation in the West, the Alliance worked with the engineering firm Applegate Group to create a water balance for three of the case studies. These water balances utilize a technical, objective approach to assess the producers' water rights, current conservation efforts, and barriers or opportunities for future conservation. They underscore the reality that conservation practices are different on every operation and unique from farm to farm.

As the pressures of climate variability and drought increase, farmers and ranchers are at the forefront of our national adaptation strategy. Producers are coming together to help one another, but they also need support from consumers, policy makers, scientists, and service providers. The Alliance hopes that these case studies will provide policy makers and other stakeholders with a more nuanced understanding of the diversity and complexity of western agricultural water conservation and an appreciation of what continuing to take agricultural lands out of production might mean.

Question 1b: What specific policies can Congress adopt in an upcoming infrastructure package to improve the reliability and resilience of water supplies, in the West and across the rest of the Nation?

Answer:

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 in dealing with these water supply challenges and become more resilient to drought and water shortages. Planning for water shortage in the West must look to the long-term in meeting the needs 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

[1] https://www.youngfarmers.org/wp-content/uploads/2015/05/NYFC-template-FINAL_lowNew.pdf

land use planning, and water system improvements. New infrastructure and technologies can help stretch water for all uses and boost the economies of Western rural communities.

As noted in my written testimony, on December 28, 2021, an omnibus appropriations legislation was signed into law that 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
- Aquifer Recharge Flexibility Act
- WaterSMART Extension & Expansion
- Cooperative Watershed Management Program
- Aquatic Ecosystem Restoration
- Snow Water Supply Forecasting
- Water Technology Investment

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 in my testimony. We also believe it necessary to extend or reauthorize the Reclamation title in the Water Infrastructure Investment for the Nation (WIIN) Act (P.L. 114-322), which is 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 or in the planning stages over the next several years.

We further urge Congress to:

1. Give high priority to authorizing and providing sufficient resources to maintain, restore, modernize, and upgrade federal water, weather and climate observation and research programs, with a primary focus on improving coordinated data collection and dissemination.

2. Include irrigation modernization and support for agricultural infrastructure in Congressionally authorized infrastructure packages.

3. Support robust and reliable funding for the Environmental Quality Incentives Program (EQIP), the Regional Conservation Partnership Program (RCPP), and the Watershed Protection and Flood Prevention program (P.L. 566).

4. Encourage agricultural producers to work together with each other and with many applicable federal and state agencies in a strategic, coordinated fashion. Compel all federal agencies to collaborate in a partnership-based manner with the farmers, ranchers and water managers who are tied to watersheds sharing a federal footprint. Source water protection entails partnership-based, landscape-scale restoration of our forests and watersheds in the Western US – and

ultimately requires a shift in the policies and mechanisms that the federal government uses to budget and implement treatments and incentivize industry to get the work done.

5. Support incentive funding for land and water management activities on lands to provide flyway habitat benefits in support of activities like those in the Central Valley of California and the Intermountain West Joint Venture (IWJV)[2], especially multi-benefit flood control and/or water conservation projects.

6. Promote the coordination of regulatory agency permitting to improve the timing and cost of permitting habitat and water conservation projects.

7. Look for opportunities to improve the federal regulatory process by streamlining regulatory processes, improving coordination, reducing duplication, and increasing transparency. Many of our members continue to face challenges with trying to figure out ways to work through and around the different agency processes associated with appraisals, NEPA compliance and other requirements. There are daunting bottlenecks and inefficiencies that occur when funds are coming from multiple federal agencies and are attached to differing mechanisms and approval processes. Clarity on rule development and better coordinated federal permitting processes would reduce permitting timelines and save taxpayer dollars without compromising environmental protections.

8. Find ways to improve coordination of WaterSMART and other water management programs at Reclamation with other similar existing programs, like the conservation programs at the USDA's NRCS. This would lead to more effective federal investments in on- and off-farm water management improvements.

9. Direct Reclamation to make maximum use of existing financing tools for project beneficiaries, including direct loans for extraordinary and emergency maintenance at Reclamation projects, such as those authorized by the Aging Infrastructure title of P.L. 111-11. Efforts must continue to compel Reclamation and the Office of Management and Budget to fund and implement the Aging Infrastructure Account authorized in the omnibus spending bill in 2020, and to investigate opportunities to develop similar loan programs that can also help fund new water storage infrastructure projects.

10. Create at Reclamation an affordable financing program for large non-federal projects, similar to the EPA's Water Infrastructure Finance and Innovation Act (WIFIA) loan program included in the WRRDA 2014. New tools like this will be needed to assist in financing major

[2] IWJV's "Water 4" initiative aims to achieve conservation that provides multiple benefits to people and wildlife. A deep understanding of different perspectives, needs, and approaches to habitat delivery is necessary to ensure effective, lasting, and community-based conservation. Science further informs and focuses Water 4 in landscapes that have high value to migratory birds, wetland habitat abundance, partnership synergy, and partner investments. For more information, please go to: https://iwjv.org/water/

improvements to aging water infrastructure in the coming years. This can help ensure that farmers and ranchers who benefit from these upgrades can afford repayment terms.

11. Direct the DOE to research, develop and demonstrate the value of irrigation modernization, specifically focused on developing new technologies, optimizing and integrating energy resources sited in irrigation districts, better understanding the nexus of water and energy security, and how the agency can utilize their resources to accelerate the pace and scale of irrigation modernization.

Question 2a:

As you point out in your testimony, last Congress we worked in a bipartisan manner to extend and broaden WaterSMART Grants. I was proud that my bipartisan bill, the Puerto Rico WaterSMART Grants Eligibility Act, was included in this effort, thus making the Island an eligible applicant location for this program. That means that now WaterSMART Grants are available in the 17 Western states and in all noncontiguous states and territories (Alaska, Hawaii, Puerto Rico, and the four smaller U.S. territories).

Can you briefly discuss the importance of WaterSMART Grants as we seek to build resilience? Specifically, how does this program help us finance investments to upgrade the Nation's water infrastructure and mitigate the impact of droughts and other water supply issues?

Answer:

WaterSMART is a program that many of our members utilize, appreciate and support. Probably the only consistent complaint we have heard about WaterSMART is that it is underfunded and oversubscribed. Through WaterSMART cost-shared grants, Reclamation works cooperatively with states, tribes, and local water delivery entities to plan for and implement actions to increase water supply through investments to modernize existing infrastructure and attention to local water conflicts. The Bureau of Reclamation reports that recent WaterSMART projects have conserved about 100,000 acre-feet of water. Clearly, the WaterSMART program is accomplishing what it was intended to do: modernizing infrastructure and helping local water users become more resilient and better respond to future water conflicts. The program is working and will continue to work on an even bigger scale with more federal dollars behind it.

Question 3a:

You also discussed that, beyond financial assistance, the federal government should consider streamlining regulations and permitting processes for water projects.

Can you elaborate on why this is needed? Based on your professional experience, is it possible to streamline regulations and expedite permits without compromising or hurting the environment?

Answer:

In many parts of the West, litigation stemming from citizen suit provisions of environmental laws including the ESA and Clean Water Act (CWA) is producing federal court decisions (or court approved "settlements") that direct federal agency "management" of state water resources. Congress should recognize that this type of litigation and resulting settlements can actually harm the overall health and resilience of landscapes and watersheds, for instance, by focusing on single species management under the ESA. We should seek solutions that reflect a philosophy that the best decisions on water issues take place at the state and local level. Finding ways to incentivize landowners to make the ESA or the CWA work is far more preferable than the ESA being used as a means of "protecting" a single species (such as the Sacramento-San Joaquin River Delta smelt in California, or the spotted frog, in Oregon) without regard for other impacts, including those on other non-listed or state-listed species.

Droughts occur routinely in the West; that is why Reclamation made such important investments in water supply infrastructure over the past century. However, this infrastructure was never designed to meet the burgeoning demands of growing populations and environmental needs in the West, while continuing to support the initial beneficiaries of these projects, like farmers, ranchers, and rural communities, during periodic droughts. Unfortunately, future droughts in the West are predicted to be deeper and longer than we have historically experienced in the 20th century. We believe Congress should provide federal agencies with more flexibility under environmental laws and water management regulations to respond to drought conditions when they arise. And where such flexibility currently exists, Congress should demand that agencies use such flexibility promptly and with a minimum of bureaucratic delay.

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. By streamlining the regulatory processes and providing more transparency and stability to regulatory actions, operating, maintaining, and improving our aging water infrastructure can be improved for the betterment of society. protecting both our food producing capabilities and the environment.

Questions from Representative Garrett Graves

Mr. Keppen, your testimony speaks to many of the challenges the nation is facing as it relates to water supply and food security and provides several solutions for addressing those challenges, one of those solutions is to invest in technology. I am a big believer in the power of American innovation and our ability to utilize technology to overcome those challenges. Another challenge the nation is facing is how to address greenhouse gas emissions.

Question: Can you tell me about what technologies the U.S. agricultural industry is utilizing to reduce emissions and how those practices compare to international farming practices?

Answer:

The Family Farm Alliance membership is limited to the 17 Western states, and the water-focused nature of our mission limits our engagement on international climate change matters. So, I will respectfully have to refrain from commenting on international farming practices.

Much of our recent work in the domestic 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.

I can confidently state that American farmers and ranchers are the most technologically savvy producers in the world, and the skills and tools they have applied to tremendous food-producing capacity are also being applied tackle impacts associated with climate change. SfL Co-Chair Fred Yoder - an Ohio farmer and past president of the National Corn Growers Association – points out that, across much of the Great Plains and the Corn Belt, there is potential to sequester carbon by no longer disturbing the soil with tillage. When cover crops are added, excess nutrients are scavenged and are saved for the next crop, reducing the need to add more. Herbicides can also be reduced by crowding out the growth of weeds. Soil health is improved with each growing crop and soil loss no longer has to be accepted as a given. By growing specific cover crops such as legumes that can produce nitrogen, some farmers can also reduce the application of synthetic nitrogen, saving money twice over.

SfL is broadly expanding its mission to combat the interconnected threats the world now faces, ranging from food and nutrition security, sustainable livelihoods, and climate change to the COVID-19 pandemic. The special initiative seeks to enable farmers to be valued and rewarded for delivering solutions to the United Nations Sustainable Development Goals, which collectively call for action by all countries – developed and developing –to work together and create strategies to end hunger, improve health and education, reduce inequality, and spur economic growth, all while tackling climate change and protecting ecosystems.

Many Western producers utilize farm management software to keep track of planting and harvesting schedules, nutrient applications, input costs and inventory, among other farm functions. They also use GPS technology and precision equipment to farm effectively while managing resources and his farm's environmental impact. Some have grain systems powered by solar arrays and have converted propane-powered driers to electricity-run units.

These are just a few examples of technology and innovation advances and needs. I recommend that you check out the Food and Agriculture Climate Alliance website for additional information: https://agclimatealliance.com/