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Chairman Huffman, Ranking Member Bentz, and members of the Subcommittee, thank you for giving me the opportunity to testify today. My name is Gene Shawcroft. In January 2021, Governor Spencer Cox appointed me as Utah's Upper Colorado River Commissioner and Basin State Representative. I also serve as the Chair of Utah's newly formed Colorado River Authority of Utah. This new Authority was formed by Utah's State Legislature in response to the need we saw to expand and focus additional resources on improved Colorado River water management in Utah. Governor Cox appointed me to this position, in part because since 2010, I have served as the General Manager of the Central Utah Water Conservancy District. The District is the state sponsor of the Central Utah Project (CUP) which oversees the construction, operation, maintenance, and management of the project facilities. The District is also the largest single diverter of Colorado River water in Utah. Our project delivers water for agriculture, municipal and industrial water users in eight counties from the border of Colorado stretching west to the two largest counties along the Wasatch Front which includes the Salt Lake City metropolitan area.

The Colorado River provides over one third of Utah's water supply and is fundamental to its economy, growth, and prosperity. With such reliance on the river, the precipitous, and unprecedented drop in mainstem reservoir storage and river flows that has occurred since 2000, and particularly over the last year, is alarming. On March 17, 2021, Governor Spencer Cox declared a state of emergency due to drought conditions and urged all Utahns to save water. In

response, Utah increased efforts with a long existing statewide "Slow-the-Flow" campaign that includes significant increases in incentive programs for water efficiency programs and projects. Utah is committed to use funding from the American Rescue Plan Act of 2021, including nearly $100 million, towards improving water management to reduce consumption.

The effectiveness of Utah's state-wide drought response is promising, including significant reductions by districts, municipalities and other water purveyors reaching as high as a 32% reduction of use over this time last year. While gains have been made additional work must be done. Nowhere is this more important than in the Colorado River Basin where temperature and precipitation trends corroborate the message that we have heard for years: extreme conditions, like we experienced this year, will become more frequent further straining a system that is nearing a breaking point. Urgent action is needed now to avoid catastrophic failures in the system.

In anticipation of such a situation, the State of Utah, along with our sister states, signed onto the 2019 Drought Contingency Plans (DCP). The Upper Basin plan includes a commitment by the Upper Division States to evaluate the feasibility of a temporary, voluntary, and compensated demand management program to reduce consumptive water use within the Colorado River basin. Utah has begun to evaluate the feasibility of such a program within our state by investigating the applicability of demand management on a measurable scale within Utah. The western water law doctrine of prior appropriation coupled with State laws governing water rights complicates our ability to protect conserved water in the Upper Basin for system benefits. Further, we need to develop better tools to monitor variable hydrologic conditions and improve our current water use measurement infrastructure.

The second element of the Upper Basin DCP--the Drought Response Operating Agreement (DROA) is also being actively implemented in the Upper Basin. The DROA provides for actions by the Federal Government, in conjunction with Upper Basin States, when Lake Powell elevation projections reach a certain threshold. This agreement governs the release of storage water from

Colorado River Storage Project Act Initial Units upstream of Lake Powell, once operational adjustments at Lake Powell have been considered. Since early 2021, we began holding routine monitoring meetings, and by late spring, conditions had deteriorated such that the second trigger had been actuated requiring an action plan be developed and implemented. Utah has been an active participant throughout the process, and remains committed to working with our sister states, and the Bureau of Reclamation in completing the Drought Response Operating Plan by the end of 2021, for implementation thereafter. However, the process of developing the Drought Response Operating Plan has made it clear that its use as a drought response tool is extremely limited, and may only be effective under unique, short-term circumstances. We need a more comprehensive, long-term response if we are going to get through this difficult challenge.

Utah and the other Upper Division States have watched our available water supplies dwindle as the prolonged drought has continued. North facing mountains used to store snow through late summer keeping our mountain streams flowing year-round. Today the mountains are bare and many streams flow at a trickle. Like the Lower Basin in 2022, the Upper Basin has routinely taken shortages, however these "cuts" in water supply are not measured by reducing diversions from reservoirs. Rather, Upper Basin shortages are measured by the significant reductions in water that is available for use by the system.

As General Manager of the Central Utah Water Conservancy District (District), I have overseen the implementation of the largest water conservation program of Colorado River water in the state. Section 207 of the Central Utah Project Completion Act (CUPCA - Public Law 102-575), required statutory "Water Management Improvements" to conserve up to 80,100 acre-feet annually by 2033. The District has aggressively pursued dozens of water efficiency projects and today we conserve nearly 140,000 acre-feet per year, 50% more than our statutory requirement. This has been achieved at a combined local and federal cost of nearly $230 million in both agricultural and municipal projects. This 140,000 acre feet of conserved water annually is 30,000 acre-feet more than the District's total trans-basin diversion from the Colorado River of 101,900

acre-feet per year. Without this conservation effort over the past 30 years, Utah would be severely handicapped. The District has pivoted its attention to development of a 100 percent locally funded water efficiency measured including low water use landscapes, turf removal, flip your strip, and other water conservation incentive programs.

We recognize that moving forward in the Colorado River basin progress will only be achieved by working together with the other basin states, Federal government, Colorado River Tribes, and other stakeholders. Not unlike others in the basin, we face challenges in supplying water to a state with explosive growth, even as the supply diminishes. Overcoming these challenges is a tall order we must tackle together. Utah needs to work with all water users and stakeholders, including tribes to find new and innovative ways to conserve water. Not unlike California and Arizona, a significant amount of Utah's Colorado river water is used in agriculture. We can learn from our Lower Basin colleagues to find ways to improve efficiencies within the important agriculture industry without undermining our agricultural heritage through buy-and-dry scenarios. There are no simple solutions to these challenges, but we live in a time when technological advancements in modeling, measurement and water application make it possible to optimize the use of our shared water resources. Three considerations important to drought mitigation planning in the Colorado River Basin include:

1) **Continued improvements to system modeling tools used to inform operations and planning, and consensus in application of these tools by basin states and the Federal Government.** The Bureau of Reclamation has developed modeling tools that are fundamental to Colorado River management. These tools have served the basin well, but as aridification stresses the system, more is being asked of them. Increased investment by the Federal Government including staffing will be necessary to support, improve, and modify these tools to meet a new set of demands, including accounting for shortages in the Upper Basin, Drought Response Operations under the Drought Contingency Plans, drought mitigation measures through reductions in consumptive use, and the evaluation of curtailment implementation in the Upper Basin.

2) **Acquisition and implementation of new technology.** Effective management of water resources has its roots in measurement throughout the lifecycle of a drop of water. Utah supports and is committed to the development and use of new technology to aid in forecasting and measurement of diversions, use, and depletions. One particularly important platform using remote sensing for measurement of depletions is OpenET. This will allow for evaluation of water use as frequently as satellite imagery is available and will be a valuable tool for water managers and water end users in managing water resources. I appreciate Chairman Huffman (D-Calf), Congresswoman Susie Lee (D-NV) and Congressman Chris Stewart (R-Utah) for their leadership by introducing the Open Access Evapotranspiration Data Act in the House of Representatives. This bill establishes a program under the Department of the Interior (DOI) that uses publicly available data from satellites and weather stations to provide estimates of evapotranspiration (ET), a critical measure of the water that is consumed and removed from a water system. This allows water managers, farmers, ranchers, and other decision makers to be able to access consistent and accurate data as we make decisions about water resource management. Continued support of such work, especially as it shifts from the research to application arena is necessary. Further, use of such tools will allow for consistent determination of depletions across all the Colorado River Basin States, which is necessary where management of the river is a function of the measurement of consumptive uses.

3) **Increased investment in Agricultural Water Efficiency programs for Upper Colorado River Basin states for drought mitigation.** Recognizing roughly 80 percent of Utah's water is applied to agricultural uses, the state legislature created Utah's Agricultural Water Optimization Task Force in 2018. It has identified further opportunities for making Agricultural water use more efficient, and apply to Agricultural water use broadly, including varying methods of application and quantity, testing crops of varying drought tolerance, and evaluating the impacts of fallowing. Implementation of these optimization measures at a meaningful scale will require additional research and Federal funding.

Congressional support for rural water infrastructure investment, conservation programs, outreach, education, and research is critical.

Utah is rapidly updating its statewide Colorado River Drought Mitigation Plan and is already investing in new drought mitigation measures. We hope to apply lessons learned from our successes and failures as we move forward. These measures are critical to our future success as we build on a history of significant water efficiency efforts within the state of Utah.

I grew up on a farm in South Central Colorado. As a boy, when other kids my age would describe the most exciting day of the year as Christmas, I would say my favorite day was the day the snowmelt began, and water was turned into the canals. Water in the canals meant we could eat, buy things, and live comfortably. It also meant we had to work hard to achieve these things. I learned early on that water is a finite, shared and common resource. When it comes to the Colorado River, we can be encouraged by the bridges that have been built to deliver us to where we are today. The most effective solutions for the future must be collaborative. As we work to enhance the tools to understand the long-term hydrology and conserve the availability of Colorado River water, each of the Basin States are bound together by a common goal, which is to utilize this precious water resource in a responsible way that honors governing law and allows us to meet the needs and priorities of our communities.