

**COMMITTEE ON NATURAL RESOURCES SUBCOMMITTEE ON WATER, OCEANS, AND
WILDLIFE REMOTE OVERSIGHT HEARING**

October 20, 2021 11:00 a.m. ET

Oversight Hearing on “*Colorado River Drought Conditions and Response Measures – Day Two.*”
Questions for the Record for Ms. Taylor Hawes, Colorado River Program Director, The Nature Conservancy

Questions from Rep. Joe Neguse, CO

1. *Your work on-the-ground to improve environmental conditions along the Colorado River and its tributaries has included partnerships with water users and agricultural producers to conserve water for the benefit of species and overall river health.*
 - o *How can increased federal investments in drought relief lead to resiliency for ecosystems and agriculture alike?*

The Nature Conservancy (TNC) actively engages with water users and agricultural producers to find win-win-win projects that support our communities and agricultural producers while also benefiting nature and river health. Environmental non-governmental organizations (NGOs), like TNC, can play a critical role in facilitating projects on the ground, but these projects need funding for all project phases, from development through construction and implementation. Often NGOs serve as a liaison and fiscal agent to our partners who are not familiar with managing grants from the federal government. Before describing ways that federal investments can lead to resiliency in the region, it is worth highlighting that it is very important that NGOs are able to apply for and manage these federal funds that come from federal agencies. The Consolidated Appropriations Act of 2021 made changes to Bureau of Reclamation (Reclamation) grant programs to make NGOs eligible applicants for the first time. Going forward, Congress should ensure NGOs, like TNC, are eligible to the maximum extent practicable for federal drought relief and resilience funding.

Turning to ways the federal government might invest in resilience, the new report *Ten Strategies for Climate Resilience in the Colorado River Basin* (developed by a coalition of conservation organizations, including TNC and available at www.tenstrategies.net) highlights a number of potential strategies that could help the region adapt to climate change-driven drought and aridification while reducing pressure on existing water supplies. Examples of the strategies outlined in the report include forest management to improve water retention, agricultural practices to enhance soil health, natural infrastructure to enhance water retention and groundwater recharge, and exploring opportunities with energy companies to help communities transition in a way that also considers water security. Funding scientific research and demonstration projects is essential in the short term to determine which strategies can best increase resilience.

Continuing to support the recovery programs for endangered species throughout the Basin is another example of how federal investments can support species, river health and water users. In the Upper Colorado River, the recovery programs implement many measures to improve habitat or conditions for endangered and threatened fish species while also providing Endangered Species Act compliance for more than 2,500 water users in the region. These programs need support through annual appropriations as well as passage of your legislation H.R. 5001, the Upper Colorado and San Juan River Basins Recovery Act.

Finally, there is a critical need for investment in agricultural operations and infrastructure through both Reclamation and U.S. Department of Agriculture (USDA) programs. These programs can help agricultural producers adapt to a hotter and drier future, and if done in accordance with environmental considerations, there can be significant benefits to irrigators and river health. For example, investments from the Environmental Water Resources Program at Reclamation can stimulate multi-benefit projects. Reclamation’s WaterSMART program can also fund improvements to irrigation infrastructure to better measure and manage water resources, collaborative watershed planning efforts to address drought resilience, and the exploration and creation of water marketing solutions to address limited water supplies. USDA programs like the Regional Conservation Partnership Program (RCPP) and PL-566 can also provide important funding for irrigation infrastructure and watershed scale activities. Federal investments like these need to minimize or prohibit increasing consumptive use

of water using federal funds, because increasing consumptive use in over-allocated river basins like the Colorado River will exacerbate future drought impacts and water supply imbalances.

Below are several examples where TNC and partners are successfully using federal investments to support agriculture and ecosystems.

- Through the Recovery Program, TNC has helped the Grand Valley Water Users Association (GVWUA) make important upgrades to their irrigation system, including the installation of seven check structures in their main irrigation canal that allow the GVWUA to maintain agricultural water deliveries with less water in the canal, saving tens of thousands of acre-feet in reduced diversions annually. The saved water has been used to improve flows for endangered fish in the 15-mile reach of the Colorado River, which is considered Critical Habitat for the fish.
- Through WaterSMART and state funding, TNC worked with the Maybell Irrigation District to line portions of an old earthen canal to reduce seepage losses and install check structures for improved operations, allowing Maybell to meet the same irrigation demand with reduced diversions. The project increases flows in the Yampa River for endangered fish and recreation while benefitting local producers.
- USDA and PL-566 funding are supporting work in the Price River in Utah to rehabilitate [Olsen Reservoir](#), which will store and release water to meet environmental flow targets in the Price River. The Carbon Canal Company plays a critical role in managing water deliveries to the reservoir and federal dollars have helped improve measurement and water control in the canal to enable this.
- RCPP funding for the [Virgin River](#) in Washington County, Utah is modernizing the irrigation system to reduce seepage losses and helping agricultural producers convert from flood to sprinkler irrigation to improve efficiency. The project will benefit local producers and water managers and improve flows and water temperatures in the Virgin River to support fish and wildlife.
- In Arizona, TNC and other partners are using federal funds to help protect critical habitat, agricultural production and scenic open space through conservation agreements. TNC is also [working closely with agricultural water users](#) to help improve water use and restore stream flows on the Verde River. The installation of efficient [automated ditch systems](#) combined with financial incentives for conservation have resulted in less water being diverted and increased flows along 20 river miles in the Verde Valley and in the Wild and Scenic reach between Camp Verde and Phoenix. The project received a federal grant of \$2.8 million from NRCS's RCPP program.

In addition to examples of projects, I have also included some more general considerations below for federal investment to support work that can benefit both people and nature.

- Federal funding from USGS for initiatives like OpenET and supporting a robust stream gaging system is essential for understanding how much water we are currently using. We can't manage what we can't measure and if we want to be resilient in the face of drought and declining supplies, we need to know how much water we are using and where.
- Funding for the development of projects needs to include all phases of project implementation, including initial hydrologic modeling, design, and engineering, and not just construction costs. Federal funding programs need to expand to meet the full funding needs of innovative projects, that in the long run, can benefit multiple water use sectors/stakeholders.
- Water management infrastructure projects that provide multiple benefits, such as erosion control, sediment reduction, water quality improvement, aquifer recharge to increase groundwater supplies, and/or aquifer recharge to sustain flowing rivers, should be prioritized for federal funding over projects that only provide singular benefits.
- Funding for watershed health and forest management can also provide many co-benefits to all water users while supporting benefits to nature. Most stakeholders and the public in the West support improved forest management to avoid catastrophic wildfires, but there is sometimes disagreement about the best approach to forest management. While clear-cutting might help avoid catastrophic wildfires, it might actually

exacerbate the challenges to our shrinking water supplies. TNC is currently researching how forest management can provide ecological and river benefits while also minimizing fire risk.

2. The Nature Conservancy has been actively involved in a decades-old program working to recover four endangered fish species in the Upper Colorado River Basin. The Upper Colorado River Endangered Fish Recovery Program and its counterpart for the San Juan River, a major tributary to the Colorado, brings together tribes, water providers, environmental groups, and state and federal agencies for the benefit of recovering these species. o

- o Can you tell us more about these recovery programs and the impacts of drought on river ecosystems, and why continuing the programs is so important?*

The Upper Colorado River Endangered Fish Recovery Program and the San Juan River Basin Recovery Implementation Program (the “Programs”) take a balanced approach to recovering four endangered and threatened fish species in Wyoming, Utah, Colorado and New Mexico by implementing a range of basin-wide strategies, including improved management of federal dams and irrigation infrastructure, river and floodplain habitat improvement, fish stocking, and management of non-native fish species. These programs are working to recover four species of endangered and threatened Colorado River fish while still allowing water uses to continue in our communities. Since 1988, the two Programs have provided Endangered Species Act (ESA) Section 7 compliance without litigation for over 2,500 federal, tribal, state, and privately managed water projects across the Upper Colorado River basin, including projects that provide water to agriculture, industry, and municipalities such as Denver, Colorado Springs, and Salt Lake City.

Over the last 30 years, in addition to allowing for ESA compliance to water users, conservation actions have improved conditions in many areas of the Colorado River Basin that supported these species historically. As a result of these actions, the razorback sucker has been proposed for down-listing, and the humpback chub is being down-listed. Both steps demonstrate the continued success and progress of these collaborative, partnership-informed approaches to conservation that benefit both people and native species.

While we have seen forward progress to recover the fishes, the challenges confronting the Upper Basin have increased. Since 2000, the average annual flows in the Colorado River have declined by 20%. More than half of that decline has been attributed to warming temperatures. Scientists predict that this trend will continue, as we expect to lose an additional 3-5% of annual flows with every degree of temperature increase. Low precipitation, reduced snowpack, and increasing temperatures severely impact the health of the Colorado River and its tributaries, because there are often no alternatives to mitigate effects. Fish and wildlife cannot survive without water. Low flows reduce, or in some cases eliminate, available habitat, limit the ability of fish to move up and down the river, increase predation on the fish, and increase temperatures, making it more and more difficult for the fish to get enough oxygen. Low water levels can also accelerate the spread of invasive non-native species, which is one of the most significant challenges the endangered and threatened fish species face. Finally, opportunities to augment low flow conditions are further complicated as claims to and demands on ever-more limited water supplies increase.

TNC strongly supports your Upper Colorado and San Juan River Basins Recovery Act (H.R. 5001), which allows the Recovery Programs to continue to operate through fiscal year 2023 and provides time for actions that were delayed due to the pandemic. We appreciate your leadership on this issue and urge Congress to pass this legislation as soon as possible.

These two Programs will also require reauthorization in 2023 in order to continue the important work of recovering the fish as well as to continue ensuring compliance with the ESA and will require continuing federal support. Without full implementation of the Upper Colorado and San Juan recovery programs, the 2,500 federal and non-federal, tribal and private water and power projects are likely to lose ESA compliance—which could halt ongoing water uses throughout the region. The legal and regulatory consequences would result in tremendous uncertainty regarding the ability of these projects to provide municipal, agricultural, and industrial water supplies in accordance with state water law and interstate compacts approved by Congress.

The two programs must also continue, in order to ensure recovery actions can be responsive to the changes we are experiencing in the Basin. The programs use adaptive management, meaning that management adapts to incorporate new information as it becomes available. We are constantly learning about the fish and what they need—and what they need is changing along with the climate of the basin—so there is still important work for these programs to do. Bringing species back from the brink of extinction takes time – it doesn’t happen overnight. Even though we have seen successes with two of the fish, we are still learning what it will take to fully recover all four species. We have to find solutions to existing and emerging challenges and then put those creative ideas into action. The partners are already talking about what the programs could look like after 2023.

Both of these programs are important to maintaining the four endangered and threatened species, especially as their habitat conditions become drier, and both of these Programs rely on state and federal resources. We hope Congress will continue to support these programs as well as drought resilience programs that will allow us to meet the needs of people and nature in a more arid future.