

Written Testimony of Jennifer Pitt
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Hearing on Status and Management of Drought in the Western United States
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Chairman Kelly, Ranking Member Hyde-Smith and members of the subcommittee, thank you for holding this important hearing on drought in the West, it is an honor to testify before you today.

My name is Jennifer Pitt, I serve as the Colorado River Program Director for the National Audubon Society (Audubon), and I have more than 20 years of experience working on water issues in the Colorado River basin. Audubon is a leading national nonprofit organization representing more than 1.8 million members. Since 1905, we have been dedicated to the conservation of birds and the places they need, today and tomorrow, throughout the Americas using science, advocacy, education, and on-the-ground conservation. Audubon advocates for solutions in the Colorado River basin that ensure adequate water supply for people and the environment.

As you consider options to support drought management in the West, it is important to recognize the consequences of severe drought in the Colorado River basin. The myriad rivers, wetlands, and lakes of the Colorado River basin have extraordinary value, economically, culturally, ecologically, and spiritually. While these freshwater-dependent resources cover only 2% of the landscape, they support 40% of all breeding birds. Water year 2021 is now the worst year on record for many farmers and ranchers, wildlife managers, and businesses and communities who rely on water supply from the basin, putting these irreplaceable resources at risk.

In the Colorado River basin, like other places across the arid West, climate change and drought are already worsening impacts on freshwater-dependent habitats long starved for water. While we cannot completely stop the impacts that are already occurring, with coordinated efforts and smart investments, we can avoid losing key habitats, and promote a stronger, more resilient basin for the future. In order to avoid the worst outcomes for birds and other species, Audubon has worked to ensure that water infrastructure does no additional environmental damage, worked with water managers to dedicate flows for the environment, and supports investing in habitat restoration.

Federal Investment Needed to Help Manage Drought Impacts

Federal leadership is needed to provide the resources necessary to address this challenge. Congress should use all available options to invest in immediate and long-term solutions to mitigate current disasters and enhance the climate resilience of states affected by historic drought conditions. Audubon supports immediate disaster relief for communities hit hardest by compounding issues of drought, fire, COVID-19, and historic inequalities. Funding for a suite of common-sense strategies including natural infrastructure that creates distributed storage, forest management and wildfire mitigation, ecosystem restoration, upgraded agricultural irrigation infrastructure, binational water conservation and habitat restoration, water recycling and improved science will provide the means to help enhance overall

climate resilience for people, wildlife, and economies throughout the Colorado River basin. Audubon's federal funding priorities include:

Emergency Drought Response: Emergency drought relief funding is needed to respond to the historic drought conditions affecting tens of millions of Americans. There is no funding provided for immediate emergency response in the Infrastructure Investment and Jobs Act, so additional investment is needed.

USGS Monitoring and Research: Federal investment in monitoring and science, including Open ET, will allow water managers to replace and add new stream gages, comprehensively forecast, model and track water availability throughout the basin.

Reclamation's binational program: Minute 323 carries forward the cooperative approach originally forged in Minute 319, and includes binational agreement to invest in agricultural infrastructure improvements in the Mexicali Valley that result in water conserved in Lake Mead and improvements to riparian habitats. Binational investments have proven effective since the United States and Mexico initiated the cooperative process 15 years ago, but much more needs to be done. With conservation opportunities and ecosystem restoration projects demonstrating the wisdom of the initial pilot projects, it is time to increase the scale of our binational investments. All Colorado River water users would benefit from additional investment in binational water conservation and habitat restoration. By doing so, we would continue to see the benefits in the water levels of Lake Mead and help slow the decline of these essential reservoirs. Without this cooperative process, governments and water leaders on both sides of the border would be investing precious time and energy to try to create the system we have in place today. With Minute 323, our existing binational framework for cooperation, water conservation and environmental restoration, it is time to increase investments to meet the challenges of drought and climate change that threaten the Basin.

Salton Sea Restoration: Funding will help mitigate the environmental and public health crisis caused by the receding shoreline of California's Salton Sea.

Indian Health Service Sanitation and Construction Support: Tribal members suffered the highest rates of covid-19 infection and mortality of any ethnic group in the United States, and the fact that thousands of homes on tribal reservations do not have water service is unconscionable.

Reclamation Water Settlement Fund: Tribal water settlements are urgently needed to address long-overdue promises, to allow tribes to benefit from their water rights, and to reduce the uncertainty that unsettled rights imposes on all Colorado River water users.

WaterSMART grants, including the Cooperative Watershed Management Program, with a set-aside for natural infrastructure projects: Community resilience to climate change can be improved with funding for nature-based solutions for restoring rivers and wetlands. Natural infrastructure, including irrigated wetlands and restored high-elevation meadows, can build adaptive capacity in ecosystems and ranching operations to cope with ongoing climate shifts. These investments could also mitigate climate change by reducing and sequestering greenhouse gas emissions and increase economic resilience by providing cost-effective mechanisms to restore degraded working lands, improving land value and profitability of operations.

Reclamation's Water Recycling and Reuse programs: Technologies are available to help municipal water systems stretch available water supplies through investments in recycling and reuse infrastructure. Federal funding to maximize water recycling and reuse can help maintain the trend already established among municipalities that use Colorado River water whereby population growth is decoupled from water demand.

Reclamation Aquatic Ecosystem Restoration Program: Beyond the funding in the Infrastructure Bill, additional funding is needed to restore imperiled ecosystems, especially ecosystems facing significant negative impacts caused by historic drought conditions.

Reclamation multi-benefit projects to improve watershed health: Beyond what was included in the Infrastructure Bill, robust funding is needed to improve watershed health and resiliency, especially for watersheds facing significant negative impacts from historic drought conditions.

Ecosystem restoration funding for the U.S. Forest Service and Department of the Interior: Well-managed forests provide numerous benefits, including preventing soil erosion; supporting water filtration and increasing runoff yields; regulating snow melt and water supply; improving water quality; lowering water treatment costs; capturing carbon; and benefiting wildlife habitat and fisheries. Implementing best practices in forest management and forest restoration can help maintain these benefits and mitigate against watershed degradation, severe wildfire, and other climate change impacts. Forest management and restoration can also help in adapting to climate shifts as conditions in the basin change, such as regulating snowmelt runoff and increasing economic resilience through job creation and reduced emergency costs, among other benefits.

Reclamation funding for Aging Agricultural Infrastructure: Ensuring that agricultural infrastructure and operations are up to the challenges of higher temperatures and reduced flows will sustain the economic resilience of rural communities. Improving agricultural infrastructure and operations can reduce pressure on existing water supplies by making operations more efficient, reducing the potential for over-diversion from streams and rivers, and potentially reducing consumptive use. Improvements can also help the basin's agriculture become more resilient to the effects of climate change such as reduced stream flows and higher temperatures.

Other Federal Government Leadership Opportunities

The need for immediate action is urgent and the basin no longer has the privilege of time. Concerted action by all Colorado River partners must be taken now and in concert with continuing efforts to develop 21st Century operational guidelines to respond to and overcome the jeopardy that drought and climate change bring to the basin right now.

The federal role is significant in its own but all stakeholders need to work together. Leadership by the federal government is important, as a convener, a guardian of process that is transparent and inclusive, carrying out the federal trust responsibility with tribes, as a science provider, and as a funder. Federal leadership must continue emphasizing commitment to collaboration and promoting the creative thinking that has characterized the basin. These are scary times. Federal leadership is urgently needed to avoid fear from spreading among all who depend on the Colorado River, for fear will force people to want to protect themselves, and can lead to winners and losers. Yet when losses are borne by one location in the Colorado River basin, or one class of stakeholders, the entire basin loses. Federal

leadership is needed to ensure Colorado River stakeholders overcome fear so they can work together to address the challenge or our time.

The U.S. Bureau of Reclamation plays many roles in the Colorado River basin, but the magnitude and urgency of the Colorado River crisis requires a whole-of-government approach. The Federal Interagency Drought Task Force should identify opportunities for increased assistance and coordination in the Colorado River basin. The Task Force should prioritize streamlining access to federal funding in a meaningful way for states, tribes, water users and stakeholders on the ground.

Collaborative solutions are possible in the Colorado River basin

Freshwater-dependent habitats can be restored with effort and investment, and in some cases, restoration may be the key to reaching consensus in binational Colorado River shortage-sharing agreements. Audubon has been instrumental– and as acknowledged by both Nations –in helping the United States and Mexico craft water sharing agreements over the past decade. Minutes 316, 319, and 323 are implemented by the International Boundary and Water Commission in partnership with Reclamation, under the auspices of the 1944 Colorado River Treaty with Mexico. The contribution of non-governmental organizations (NGOs) were essential to establishing goals for Colorado River Delta restoration dating back to Minute 306 in 2000. NGOs helped to forge Minutes 316, 319 and 323, water-sharing agreements that also include binational investments in water conservation, and binational and NGO commitments to restore habitat in the Colorado River Delta.

As part of the Raise the River coalition, we have helped to restore more than 1500 acres of native habitat and restore periodic flows to the river with extraordinary results for nature and people. After one of these pulse flows in 2014, priority bird species increased by 42% and abundance increased by 20%. Delta habitat restoration supports birds that are United States’ threatened and endangered birds, and in doing so reduces pressure on the Lower Colorado River Multi-Species Conservation Program (a program providing Endangered Species Act compliance), which aims to protect the very same species. When the river flowed in 2014 and again in 2021, local residents flocked to the banks to reconnect with a river that had been missing for most years in the past half-century, reminding us that the river has recreational, cultural, and spiritual value.

Notably, these successes are the result of language that was critical to ensuring Mexico could voluntarily commit in the Minutes to improving agricultural infrastructure and sharing in shortages along with water users in the United States. Without Mexico’s commitments to share in shortages, consensus among the Colorado River basin states and Reclamation on water allocation and management would be threatened, and Lake Mead would be even lower than it is today. We need to continue to work together with Mexico to ensure that the efforts of both nations are properly focused on strategies to stretch the declining supplies of the River.

Audubon and our members have engaged at the Salton Sea for decades, working with partners to address the shrinking Salton Sea through restoration and mitigation projects to control dust, provide habitat, improve community access, and contribute to the health, quality of life, and economies of the local communities. While the State of California has the responsibility to lead efforts at the Salton Sea, federal partnership is a necessary for success. Audubon supports funding and additional authorities for the Bureau of Reclamation to accelerate projects and partnerships to address needs at the Sea. We are currently working under a federal grant to assist directly with stabilization, restoration and

enhancement of wetlands near the town of Bombay Beach on the Salton Sea, an area that hosts a number of “emergent wetlands” formed by flows from nearby springs. These incidental wetlands and brackish pools have become home to species including the Yuma Ridgway’s Rail, American Avocet, Northern Pintail, and possibly Desert Pupfish. The first phase of the project, expected to take two years, includes habitat and dust control project design, scientific monitoring and data collection, and community engagement in planning design. Following successful completion of this planning phase, construction would start in 2023.

Imperial Valley water users, who enjoy senior rights to 20% of all Colorado River water, have expressed their desire to see increased federal funding and leadership for dust and habitat mitigation at the Salton Sea, and those investments are prerequisite to further conversations about how they might participate in new solutions to reduce Colorado River water use.

Water conservation can be implemented with sensitivity to the species that depend on irrigated habitats. On the Upper Colorado River in Kremmling, Colorado, ranchers have partnered with several conservation organizations to demonstrate voluntary, temporary, and compensated reductions in water use. Irrigated farms and ranches often serve as surrogate habitat for birds in landscapes where they replaced naturally occurring wetlands. Audubon is in the field conducting avian surveys to develop a data-driven understanding of how birds respond in different landscapes such as uplands and valley bottoms, aiming to develop best practices to support birds and other wildlife in connection with efforts to increase the efficiency of irrigated ranching and farming practices.

Sensible water policies and state-level investments can help improve western watersheds and water supplies, and leverage federal funding. Today, creative and flexible approaches to water management can enhance water security for communities, improve the profitability of farms and ranches, and support keeping water in rivers. By working directly with lawmakers, water leaders, agricultural partners, other environmental nonprofits, hunters, anglers, and more, Audubon is helping western states adopt improved policies and state funding that can match federal funding. For instance, in the 2021 Colorado legislative session, Audubon supported \$15 million in state funding to implement the state water plan and three bills to help Colorado’s ranchers and farmers struggling through yet another dry year, with new funding and programs to address agricultural drought resilience and improved soil health. In Arizona, Audubon supported a bipartisan bill to give irrigators like farmers an incentive to conserve water on their property, for example by switching to less thirsty crops or upgrading irrigation systems, and be confident that any water saved will not be subject to the “use it or lose it” provision, or the loss of water rights based on non-use. This legislation, which passed unanimously in the state legislature, protects irrigators who voluntarily submit a water conservation plan to the Arizona Department of Water Resources from losing their water rights for use in the future. This will keep more water in Arizona’s rivers because water users can more effectively manage their water, and the entire river system will benefit. In one last example, Audubon worked alongside other key stakeholders in Utah’s legislature to develop solutions to increase Utah’s flexibility in managing water resources, including the Water Banking Act authorizing a 10-year pilot program to allow water rights holders the opportunity to temporarily and voluntarily lease their water rights included in a water bank. These provisions are intended to facilitate sustainable agricultural production, meet municipal demands, and help meet water quality standards and provide for a healthy and resilient natural environment.

We are all in this together, and cooperation and collaboration are critical. Though the Colorado historically earned a reputation as the most litigated basin in the world, the past twenty years have seen extraordinary cooperation and collaboration, between the United States and Mexico; between the seven basin States; and between cities, agricultural water users, and conservation NGOs. As climate change and drought impacts pile up on freshwater-dependent habitats, and as water users in cities and rural areas experience unprecedented shortages, we all need to continue work together on solutions. The 30 federally recognized tribes in the Colorado River basin have entered into water-sharing partnerships to help cities and farmers, as well as habitats, but they have not always been welcomed at the negotiating table where decisions are made about the Colorado at the basin scale, and that needs to change. While the foundations of the Law of the River were written at a time and by people who could not have imagined tribes and conservation organizations playing a role in water management, the benefits from including these interests are today well-documented. Moreover, the parties making decisions about the Colorado River basin's management need to get to work a lot faster than we might previously have expected, to ensure the basin is best situated for the conditions it is currently facing and likely to confront in the future.

Why Action is needed now: drought has launched the Colorado River into crisis, and climate change means this is not a temporary condition

Climate change has come barging through the front doors of the Colorado River basin. The Colorado River has lost 20% of its historic flows in the past 20 years. Fifteen years ago, water managers pointed to drought, which has recurred periodically over the past century. Today it is clear – and Colorado River water managers understand – that the shrinking water supply is largely due to climate change, with increased temperatures accounting for 33% of the 21st century decline.¹ In 2021, the Colorado River basin snowmelt measured 90% of average, but runoff – the snowmelt that filled the rivers – was only 30% of average. That discrepancy demonstrates an impact of climate change between the ridgetops and the valley bottoms: warm temperatures that drive evaporation, soil desiccation, and increased water use by every living thing.

What we do know is stark: Climate change and aridification are permanently changing our landscapes, threatening our way of life, jeopardizing our ability to produce hydropower and placing further strain on our communities. The possibility of severe declines at Lakes Mead and Powell should be a wake-up call to anyone who wants their children or grandchildren to be able to survive and thrive in the West.

Drought is devastating Colorado River habitats and the wildlife that depends on them

Because freshwater-dependent resources in the Colorado River basin support 40% of all breeding birds, these birds, like the proverbial canary in the coalmine, are telling us that the basin is in trouble. Birds like the Yellow Warbler and Summer Tanager, once familiar sights along the Colorado River, have experienced significant regional declines. The outlook for Yuma Ridgway's Rail, Western Yellow-billed Cuckoo, and Southwestern Willow Flycatcher, all listed as federally endangered, is especially bleak if current trends continue.

¹ Udall, B. and J. Overpeck (2017), The twenty-first century Colorado River hot drought and implications for the future, Water Resources Res., 53.

Today, rivers in the basin suffer from reduced flow and changed seasonality of flows, resulting in a diminished river, and in loss of much of the native forest that flourished on the river's banks. The loss of aquatic and riparian habitats has had devastating impacts on wildlife, particularly fish and birds.

The combination of drought and heatwaves – as witnessed this summer – can push birds to their physiological limits, leading to lethal dehydration. In drought times, birds may also congregate at remaining, dwindling water spots, causing conditions ripe for the spread of disease.

At the Salton Sea, declining inflows in the wake of the 2003 Imperial Valley to San Diego transfer is resulting in exposed playa, which creates significant air quality problems for communities that already suffer high asthma rates. The shrinking lake impacts wildlife too: colonial seabirds began abandoning nesting sites en masse in 2013, and shallow, marshy habitat areas at the sea's edge have begun to rapidly vanish. As less water flows into the Sea, it is becoming more saline and inhospitable to birds, fish, and insects. In the Colorado River Delta, the near complete elimination of flows resulted in an 80% reduction of what had been an expansive, 1.5 million acre ecosystem of wetlands and riparian forests.

In the past couple of years, we have gotten a glimpse of how climate change impacts will compound with shattering consequences for the environment. With the increase in hot, windy, and dry days, fire season has more than doubled since 1973 in many parts of the West.² Forests devastated by 20 years of beetle kill, drought stress, and low soil moisture have burned at record rates. In 2020, Colorado's Grizzly Creek Fire burned more than 32,000 acres on the Colorado River above Glenwood Springs, and in 2021 rainstorms over the burn area triggered mudslides, repeatedly closing Interstate 70 in Glenwood Canyon, interrupting travel and trade, and choking the Colorado River, clogging fish breeding grounds and dumping untold volumes of ash and sediment into the water supply.

2021 river temperatures up to 80° F impacted numerous recreational fisheries leading to voluntary and mandatory closures. Warm rivers also boost populations of non-native bass and pike, which prey on protected Colorado River native fishes including the razorback sucker and humpback chub. 2021 also saw rivers like the Dolores go completely dry, which is not friendly habitat for any kind of fish.

This is a sobering and scary time for everyone and everything that depends on the Colorado River.

Conclusion

As Congress considers priorities and funding opportunities, Audubon supports increasing federal investments and leadership for the Colorado River Basin and natural resources across the West. After this year's historic drought and catastrophic wildfires, we urge Congress to ensure that federal agencies receive critically needed resources to prepare now for the effects of climate change by promoting nature-based solutions for restoring watersheds and ecosystems. In addition, Congress has several pending bills with bipartisan support that respond to the many needs of tribal communities and western states' water supply needs that we are supporting, including access to clean water and water settlements. It is imperative that our communities have the resources they need to prepare for and respond to the drought crisis that touches every living thing.

Thank you very much for the opportunity to testify and I would be happy to answer your questions.

² Fire Weather, A Climate Central Report. August 25, 2021
<https://medialibrary.climatecentral.org/uploads/general/FireWeatherReport2021.pdf>