

Commentary: Defunding science for the Colorado River has consequences

I once held a Colorado Pikeminnow in my hands. It was freshly caught by biologists who were searching for this species of fish in the silt-laden Colorado River. Water dripped off the fish's silver scales as it moved back and forth in my hands, trying to free itself. I stared down at it, remembering that less than a hundred years ago this fish species had been six feet in length with a powerful body that propelled it hundreds of miles down the Colorado River to the Gulf of California and, incredibly, back again. The squirming fish in my hands was less than a foot long, but that it was here, in southern Utah's Cataract Canyon, despite tremendous ecological changes to the Colorado River over the last hundred years, was no less incredible.

The Colorado Pikeminnow is one of four federally endangered fish species whose presence in our rivers is far from assured. Hydropower dams, water development and use, non-native fish species, riparian habitat loss and previous management actions have dramatically reduced the native fish populations. Since the early 1990s, significant effort has gone into recovering these endemic fish, funded in a large part by hydropower dam revenues. Recovery and scientific research programs such as the Upper Colorado River Endangered Fish Recovery Program, the San Juan River Basin Recovery Implementation Program and the Grand Canyon Monitoring and Research Center have used those funds and the best available science to maintain and, in some case, increase the numbers of these fish, which evolved to withstand the tremendous and turbulent flows of our Southwestern rivers.

Despite the recent successes and the ecological benefits of maintaining diverse aquatic ecosystems, the White House Office of Management and Budget has ordered that \$23 million of hydropower revenue, intended for

native fish and riparian research and recovery programs, be redirected to the U.S. Treasury beginning October 1 of this year. This removal of previously consistent funds for science and recovery places our rivers at risk for detrimental or unwanted ecological changes. Loss of these programs may result in continued imperilment of our native fish species and the discontinuation of valuable data collection in Colorado River ecosystems spanning back decades. The importance of continuous long-term data is underscored by a changing climate, increasing water demands, and altered waterways, all of which need to be managed into the future. Without continued long-term data informing our understanding of how these river systems respond to change, we will be managing our changing rivers blind.

Back alongside the river, I studied the color and form of the rarely seen fish in my hands. I then lowered the Colorado Pikeminnow into a bucket of river water, leaving it to the capable biologists recording the weight and size of this locally evolved fish with an uncertain future. Imagine our collective loss if, in future visits to that remote section of Cataract Canyon, no Colorado Pikeminnows are found. That future may be preventable if we continue to prioritize funding for science and recovery in our local ecosystems. Collectively, we can make it known that we value science and adaptive management that maintains the resiliency of our riparian systems.

Currently, all four Upper Basin State governors and all House and Senate representatives from Colorado River Basin states are calling for the reversal of this order, to little avail. Our voices and persistence are needed to ensure our ecosystems receive the necessary funding to function as we want them to. With hard work and the restoration of science funding, we might continue to see the tenacious Colorado Pikeminnow beneath the towering walls of Cataract Canyon.

Kristina Young is an ecologist living in Moab, UT and is the host and producer of the regional science radio show *Science Moab* on KZMU