COLORADO RIVER RESILIENCE

TESTING ALTERNATIVE FORAGE CROPS FOR THE INTERMOUNTAIN WEST

Photo Source: Joshua Duplechian/Trout Unlimited

WHAT THIS PROJECT DOES

Farmers and ranchers are participating in a multi-state research project that is testing alternatives to the thirsty grass and alfalfa hay that account for a large share of water use in the Upper Colorado River Basin. A group of partners, which includes public universities and conservation groups, are conducting field trials at research stations and private lands at different elevations in Western Colorado to better understand whether different forage species may be able to flourish and hold up better under dry conditions. Three test crops were chosen for their potential to produce high-quality hay and pasture while supporting soil and water conservation. One of the forages being tested, the Kernza® variety of intermediate wheatgrass, also produces grain, which can be used in beer brewing. Partners are currently focusing on identifying best practices for establishment of the three crops. Future phases will assess water use and drought tolerance.

PROJECT BENEFITS

Long-term drought and rising temperatures are reducing water supplies throughout the Upper Colorado River Basin and putting increasing pressure on agricultural producers and communities. This project aims to develop solutions to these water scarcity challenges by providing growers with information on what options they have to sustain their operations in the face of a hotter, drier future. It also builds on existing conservation efforts, including fallowing and reducing irrigation of high-water use hay and alfalfa, by providing additional opportunities to conserve water. Ultimately, this effort will address key questions of whether these three crops are economically feasible in the region, if they use comparatively less water, and whether they can be grown at the scale needed to address water scarcity challenges.

PROJECT DETAILS

Project Location: CO-CD2

Project Cost: $450,286

Funding Award: $287,885

Funding Program: Colorado Water Conservation Board Colorado Water Plan grant

Partners: Farmers and ranchers, Colorado State University, New Mexico State University, Utah State University, American Rivers, The Nature Conservancy, Trout Unlimited, The Land Institute, and the U.S. Department of Agriculture

WHAT IS RESILIENCE IN THE COLORADO RIVER BASIN?

The Colorado River is a resource for 40 million people. It provides drinking water, food and energy production, recreation, and irreplaceable habitat for rare and native birds, fish, and wildlife. But it's on the brink of collapse.

To avert a crisis, we must begin to implement durable solutions and increase investment in water-related climate resilience to protect all who depend on the Colorado River.

WHAT IS RESILIENCE?

Resilience is the ability for the Colorado River Basin to prepare for and adapt to climate shifts and extremes, including rising temperatures, increased drying, and variability in precipitation. Resilience means identifying, piloting, and implementing durable strategies to avoid or mitigate climate-related risks to the Colorado River community.

HOW TO IMPROVE RESILIENCE IN THE COLORADO RIVER BASIN

Enhance forest health through focused forest management and forest restoration strategies such as clearing surface fuels, restoring river and stream channels, removing invasive plant species, and conducting prescribed burns.

Restore the wetlands, meadows, riparian areas, and connected floodplains that comprise healthy watersheds across the Colorado River Basin. Use methods like beaver-related restoration and hand-built wood and rock structures to slow river flows, recharge groundwater, and re-establish natural storage.

Improve agricultural efficiency and enable growers to thrive with less water by supporting regenerative agriculture practices, alternative crops, and investing in infrastructure upgrades like lining canals with concrete.

Boost municipal water conservation by expanding what is already working, like low-water-use appliances, leak detection systems, replacing thirsty lawns with waterwise landscaping, and incorporating water in development and growth decisions.

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