

TESTING ALTERNATIVE HAY AND PASTURE CROPS



Photo Source: Hannah Holm, American Rivers

WHAT THIS PROJECT DOES

Farmers, ranchers, and researchers across western Colorado are testing whether different forage species may do well under dry conditions and serve as more resilient alternatives to the thirsty grass and alfalfa hay that account for a large share of water use in the Upper Colorado River Basin. Field trials are taking place at research stations and on private lands at different elevations in western Colorado. Three test crops were chosen for their potential to produce high-quality hay and pasture while supporting soil and water conservation. Sainfoin, a legume with similar nutritional characteristics to alfalfa, is showing particular promise with respect to drought, pest resistance, and avoiding cattle bloat. The Kernza® variety of intermediate wheatgrass also produces grain that can be used in baking and beer brewing. Silphium, a sunflower that can be grown as an oilseed and as a forage, has been tested on a more limited basis due to a small seed supply, but has shown good production under low-water conditions. Partners have identified best practices for establishing these crops and are in the midst of drought resilience trials and water use monitoring.

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 grass 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-3 &
CO-2

Project Cost: \$1,054,978

Funding Award:
Phase 1: \$287,885
Phase 2: \$490,818

Funding Program: Colorado
Water Conservation Board
Colorado Water Plan grants

Partners: Farmers and
ranchers, Colorado State
University, The Land
Institute, Trout Unlimited,
American Rivers, and The
Nature Conservancy

PROTECTING THE COLORADO RIVER AND THE COMMUNITIES THAT DEPEND ON IT

The Colorado River is a resource for 40 million people. It provides drinking water, as well as critical food and energy production. It's an engine for local economies, an irreplaceable habitat for native birds, fish, and wildlife, and an essential part of the Western way of life. But it's on the brink of collapse.

The river is over-allocated, and its two largest reservoirs have fallen to roughly one-third capacity. Decades of drought and rising temperatures threaten the reliability of future water supplies in Colorado River Basin states, putting crucial infrastructure in jeopardy and increasing risks to communities from natural disasters like wildfires and floods.

INVESTING IN THE COLORADO RIVER BASIN'S FUTURE

In order to ensure that the Colorado River can continue to be a reliable source of clean water for communities and agriculture throughout the Basin, we need long-term, sustainable state and federal funding for strategies that make the river more resilient, conserve water, and protect communities from increasingly severe fires, floods, and drought.

HOW TO CREATE A MORE RESILIENT COLORADO RIVER BASIN



Improve forest health using management and restoration strategies designed to protect the forested areas in the Colorado River Basin, such as thinning overgrown areas, removing invasive plant species, and conducting prescribed burns.



Restore wetlands, high-elevation mountain meadows, and riverside habitat to help improve the health of rivers and streams across the Basin, reduce sediment in downstream reservoirs and water infrastructure, improve water security, and enhance forage. Strategies include implementing wood and rock structures to slow river flows, reestablishing native plants, and replenishing groundwater to help protect clean water supplies and restore degraded rivers and streams.



Increase agricultural efficiency and enable farmers to develop strategies that work for them, like supporting on-farm water conservation methods, alternative crops that use less water, and investing in infrastructure upgrades like lining canals.



Boost municipal water conservation by expanding what is already working, like water-efficient plumbing and appliances, leak detection systems, water reuse, replacing thirsty lawns with drought-tolerant landscaping, and incorporating water planning into urban development and growth decisions.

Contact: Hannah Holm,
hholm@americanrivers.org



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