

TEN STRATEGIES FOR CLIMATE RESILIENCE IN THE COLORADO RIVER BASIN



Stretching along the spine of the Rocky Mountains, across the Colorado Plateau, and within the Sonoran and Mojave Deserts, the Colorado River Basin has experienced ongoing declines in stream flows, record-setting heat, some of the driest years ever recorded, and previously unimaginable catastrophic fires. The scale and pace of climate-related changes pose an increasing risk to the reliability of water supplies that support humans and the environment.

The recently released report *Ten Strategies for Climate Resilience in the Colorado River Basin* offers an integrated path to increase water-related climate resilience and to spark action towards proactive, coordinated, and results-oriented watershed scale projects. The ten investment strategies shift the focus from managing water supply and demands in the context of drought, to implementing actions that directly adapt to, respond to, and mitigate the steady, compounding, and extreme risks of climate change to economies, communities, landscapes, and the water resources that support them.

The strategies were chosen for their potential to address two or more of the following resilience questions.

1. Could the investment strategy help the Basin *adapt to on-going climate shifts*?
2. To what extent would the investment strategy *reduce pressure on existing water supplies*?
3. Would the investment strategy help *mitigate climate change*?
4. Could the investment strategy *strengthen economic resilience in communities*?

Three near-term next steps to moving the ten investment strategies forward include:

1. **Demonstration Projects & Investments.** Identifying and implementing shovel-ready projects and investments that generate place-based and regional benefits and build knowledge on the applicability, scalability and co-benefits of each investment.
2. **Financing.** Designing a financing strategy for a diversified and coordinated project portfolio to support the implementation and monitoring of on-the-ground projects within each of the strategies.
3. **Research.** Developing an action-oriented research scope that monitors and tracks projects to explore potential outcomes for the ten strategies including water supply gains, adaptation benefits, and climate mitigation potential.

As on-the-ground projects and implementation experience continue to inform how the strategies can provide cost-effective and meaningful results, developing cross-sector partnerships and basin-wide funding for such investments will be necessary to implement the strategies at a scale commensurate to the challenge.

adapt**reduce****mitigate****strengthen****Summary of Ten Investment Strategies and Benefits**

Strategy		Benefits for Climate Resilience
Forest Management & Restoration	Prioritize forest management and restoration to maintain system functionality and biodiversity	<p>Regulate snow melt runoff</p> <p>Sequester carbon</p> <p>Create jobs and reduce emergency costs</p>
Natural Distributed Storage	Restore degraded natural meadow systems to improve local aquifer recharge and water retention, reconnect historic floodplains, and support productive meadows and riparian ecosystems	<p>Build resistance to and support recovery from extreme weather events</p> <p>Sequester carbon</p> <p>Improve land value and ranch economics</p>
Regenerative Agriculture	Promote farming and ranching principles and practices that enrich soils, enhance biodiversity, restore watershed health, and improve overall ecosystem function and community health	<p>Build resistance to extreme weather events</p> <p>Enhance water-holding capacity of soils</p> <p>Sequester carbon</p> <p>Improve farm and ranch economics</p>
Upgrading Agricultural Infrastructure & Operations	Upgrade diversion, delivery, and on-farm infrastructure and operations, including irrigation systems	<p>Increase water efficiency</p> <p>Reduce consumptive use</p> <p>Sequester carbon or reduce greenhouse gas emissions</p> <p>Improve farm economics</p>
Cropping Alternatives & New Market Pathways	Develop on-farm operational shifts, as well as market and supply chain interventions, to incentivize water conservation, e.g. shifting to lower water-use crops	<p>Provide options for producers experiencing impacts to crop productivity</p> <p>Reduce consumptive use</p> <p>Reduce greenhouse gas emissions</p> <p>Improve economic viability of farms</p>
Urban Conservation & Reuse	Incentivize conservation technologies, indoor and outdoor conservation programs, and direct and indirect potable reuse	<p>Increase water efficiency</p> <p>Reduce consumptive use</p> <p>Reduce greenhouse gas emissions</p> <p>Create jobs and limit rate shocks and impacts of water shortages</p>
Industrial Conservation & Reuse	Incentivize modifications and upgrades to reduce water use and increase energy efficiencies	<p>Increase water and energy efficiency</p> <p>Reduce consumptive use and/or offset water use</p> <p>Reduce greenhouse gas emissions</p> <p>Support water-smart economic development</p>
Coal Plant Retirement Water	Purchase or reallocate water rights from closed or retiring coal plants to be used for system or environmental benefits, or other uses	<p>Dedicate water to system or environmental benefit</p> <p>Repurpose water (e.g. drinking water)</p> <p>Reduce greenhouse gas emissions</p>
Reducing Dust on Snow	Improve land management practices to reduce the dust on snow effect—which controls the pace of spring snowmelt that feeds the headwaters of the Colorado River	<p>Improve snowmelt and runoff dynamics</p> <p>Improve water yields</p>
Covering Reservoirs & Canals	Implement solutions to reduce evaporation from reservoirs and conveyance systems	<p>Reduce system loss and improve system efficiency</p> <p>Increase water supply availability</p> <p>Create cost savings</p>

Access the full report at: www.tenstrategies.net